





# MEMORANDUM.

THE birth and death-returns from the principal Municipalities in Bengal furnish the following results for the week ending 11th June 1887.

1. That births and deaths were registered at the rates, respectively, of 17·1 and 21·7 per 1,000 of population, as opposed to 15·9 and 19·8 per 1,000, respectively, during the preceding week ending 4th June, indicating a sensible improvement in the registration of both the events.

2. That these events were returned at the highest rates by the following Municipalities:—

| <i>Births.</i> |                  | <i>Deaths.</i> |                  |
|----------------|------------------|----------------|------------------|
|                | Ratio per mille. |                | Ratio per mille. |
| Arrah          | 78·9             | Puri           | 52·5             |
| Comillah       | 46·2             | Bhagulpore     | 44·4             |
| Purneah        | 31·1             | Gya            | 41·7             |
|                |                  | Beaulah        | 31·5             |
|                |                  | Arrah          | 29·9             |

3. That in comparison with the results of the preceding week, there was a noticeable enhancement of mortality from cholera; and only small differences in the casualty-rates from the rest of the death-causes, *vide* figures given below:—

|                  |     |     |     |     | Ratio per mille during the weeks ending— |                |
|------------------|-----|-----|-----|-----|--|----------------|
|                  |     |     |     |     | 11th June 1887.                          | 4th June 1887. |
| Cholera          | ... | ... | ... | ... | 3·3                                      | 2·3            |
| Small-pox        | ... | ... | ... | ... | ·2                                       | ·1             |
| Fever            | ... | ... | ... | ... | 8·4                                      | 8·5            |
| Bowel-complaints | ... | ... | ... | ... | 2·9                                      | 2·1            |
| Injuries         | ... | ... | ... | ... | ·3                                       | ·2             |
| Other causes     | ... | ... | ... | ... | 6·6                                      | 6·3            |

4. That of the diseases abovenamed, cholera, fever and the maladies coming under the head of "Other causes" proved conspicuously fatal in the following Municipalities, and small-pox only in the Puri town, where the death-rate from it stood at 6·3 per 1,000 of population:—

| <i>Cholera.</i>     |                  | <i>Fever.</i> |                  | <i>Other causes.</i> |                  |
|---------------------|------------------|---------------|------------------|----------------------|------------------|
|                     | Ratio per mille. |               | Ratio per mille. |                      | Ratio per mille. |
| Puri                | 14·7             | Beaulah       | 23·6             | Gya                  | 21·9             |
| Bhagulpore          | 11·8             | Bhagulpore    | 19·9             | Serampore            | 15·7             |
| Arrah               | 8·1              |               |                  | Puri                 | 14·7             |
| Monghyr             | 6·3              |               |                  | Bhagulpore           | 11·8             |
| Suburbs of Calcutta | 4·8              |               |                  |                      |                  |
| Gya                 | 4·8              |               |                  |                      |                  |
| Mozufferpore        | 3·6              |               |                  |                      |                  |
| Patna               | 2·9              |               |                  |                      |                  |

5. That the mortality in relation to *Sex*, *Class* and *Age*, stood as noted below—

| <i>According to Sex.</i>                        |                  | <i>According to Class.</i> |                  | <i>According to Age.</i> |                  |
|---|------------------|----------------------------|------------------|--------------------------|------------------|
|   | Ratio per mille. |                            | Ratio per mille. |                          | Ratio per mille. |
| Males   | 23·2             | Christians                 | 4·3              | Under 1 year             | 17·9             |
| Females   | 20·1             | Hindus                     | 22·7             | 1 and under 5 years      | 42·7             |
| Ratio of male deaths to every 100 female deaths | 130              | Mahomedans                 | 20·0             | 5 " " 10 " "             | 17·9             |
|   |                  |                            |                  | 10 " " 15 " "            | 10·9             |
|   |                  |                            |                  | 15 " " 20 " "            | 11·0             |
|   |                  |                            |                  | 20 " " 30 " "            | 10·7             |
|   |                  |                            |                  | 30 " " 40 " "            | 15·0             |
|   |                  |                            |                  | 40 " " 50 " "            | 13·0             |
|   |                  |                            |                  | 50 " " 60 " "            | 26·2             |
|   |                  |                            |                  | 60 years and upwards     | 38·4             |

R. LIDDERDALE, M.D., *Deputy Surgeon-General,*  
*Sanitary Commissioner for Bengal.*

The 2nd July 1887.



[illegible]

## MEMORANDUM.

DURING the week ending 18th June 1887, births were registered in the principal Municipalities in Bengal at the rate of 17·3 per 1,000 of population, as opposed to very nearly the same proportion, viz. 17·1 per 1,000 in the preceding week ending 11th June, and deaths at 18·0 per 1,000 against 21·7 per 1,000, indicating a considerable falling off in the registration of the latter events.

2. The following Municipalities returned the highest proportions of births and deaths:—

| <i>Births.</i> |     |     |                  | <i>Deaths.</i> |     |     |                  |
|----------------|-----|-----|------------------|----------------|-----|-----|------------------|
|                |     |     | Ratio per mille. |                |     |     | Ratio per mille. |
| Arrah          | ... | ... | 74·2             | Puri           | ... | ... | 44·1             |
| Chittagong     | ... | ... | 37·6             | Gya            | ... | ... | 36·2             |
|                |     |     |                  | Bhagulpore     | ... | ... | 29·0             |

3. The following table indicates that, as compared with the outcome of the preceding week, there was a diminution of mortality, to a more or less extent, from every death-cause, excepting fever, which exhibited a sensible enhancement, and small-pox and injury, the death-rates from which remained stationary:—

|                  |     |     |     | Ratio per mille during the weeks ending— |                 |
|------------------|-----|-----|-----|--|-----------------|
|                  |     |     |     | 18th June 1887.                          | 11th June 1887. |
| Cholera          | ... | ... | ... | 2·4                                      | 3·3             |
| Small-pox        | ... | ... | ... | ...                                      | ·2              |
| Fever            | ... | ... | ... | 7·0                                      | 8·4             |
| Bowel-complaints | ... | ... | ... | 2·9                                      | 2·9             |
| Injury           | ... | ... | ... | ·3                                       | ·3              |
| Other causes     | ... | ... | ... | 5·9                                      | 6·6             |

4. Of the diseases above indicated, cholera, bowel-complaints and the maladies returned under the head of "Other causes" proved conspicuously fatal in the following Municipalities:—

| <i>Cholera.</i>     |     |                  | <i>Bowel-complaints.</i> |                  | <i>Other causes.</i> |                  |
|---------------------|-----|------------------|--------------------------|------------------|----------------------|------------------|
|                     |     | Ratio per mille. |                          | Ratio per mille. |                      | Ratio per mille. |
| Puri                | ... | 16·8             | Puri                     | 10·5             | Gya                  | 17·1             |
| Gya                 | ... | 6·1              |                          |                  | Midnapore            | 9·3              |
| Durblanga           | ... | 4·7              |                          |                  | Bhagulpore           | 9·1              |
| Chupra              | ... | 3·9              |                          |                  |                      |                  |
| Patna               | ... | 3·6              |                          |                  |                      |                  |
| Suburbs of Calcutta | ... | 3·3              |                          |                  |                      |                  |

5. Under the heads of *Sex*, *Class* and *Age*, the mortality of the week stood as follows:—

| <i>According to Sex.</i>                        |     |                  | <i>According to Class.</i> |                  | <i>According to Age.</i> |     |                  |
|---|-----|------------------|----------------------------|------------------|--------------------------|-----|------------------|
|   |     | Ratio per mille. |                            | Ratio per mille. |                          |     | Ratio per mille. |
| Males   | ... | 19·3             | Christians                 | 13·0             | Under 1 year             | ... | 157·8            |
| Females   | ... | 16·4             | Hindus                     | 19·0             | 1 and under 5 years      | ... | 27·0             |
| Ratio of male deaths to every 100 female deaths | ... | 133              | Mahomedans                 | 15·8             | 5 " 10 "                 | ... | 9·5              |
|   |     |                  |                            |                  | 10 " 15 "                | ... | 7·2              |
|   |     |                  |                            |                  | 15 " 20 "                | ... | 7·8              |
|   |     |                  |                            |                  | 20 " 30 "                | ... | 11·5             |
|   |     |                  |                            |                  | 30 " 40 "                | ... | 13·2             |
|   |     |                  |                            |                  | 40 " 50 "                | ... | 13·6             |
|   |     |                  |                            |                  | 50 " 60 "                | ... | 19·7             |
|   |     |                  |                            |                  | 60 years and upwards     | ... | 36·8             |

The 4th July 1887.

R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.



MORTALITY ACCORDING TO—

Class.

Age.

NAMES OF MUNICIPALITIES.

DEATHS AMONG—

RATIO PER 1,000 OF POPULATION PER ANNUM.

DEATHS.

RATIO PER 1,000 OF POPULATION PER ANNUM.

|                      | Christians. | Hindus. | Mahomedans. | Buddhists. | Other classes. | (Hindus, Mahomedans, Buddhists, and other classes.) | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and upwards. |
|----------------------|-------------|---------|-------------|------------|----------------|---|---------------|----------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|
| Burdwan              | 4           | 85      | ...         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Midnapore            | 9           | 180     | ...         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Hughli and Chinsurah | 8           | 131     | 152         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Serampore            | 5           | 103     | 168         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Utterpara            | 3           | 253     | ...         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Howrah               | 17          | 130     | 127         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Bali                 | 2           | 78      | 307         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Suburbs of Calcutta  | 63          | 219     | 254         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Kishoreganj          | 4           | 111     | ...         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Ranghat              | ...         | ...     | ...         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Santipore            | 1           | 23      | 58          | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Jessore              | ...         | ...     | 130         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Rampore Beantesh     | 5           | 202     | 159         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Darjiling            | 2           | 220     | ...         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Dacca                | 3           | 89      | 93          | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Naraingunge          | 8           | 247     | ...         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Chittagong           | 1           | 90      | ...         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Comillah             | 3           | 202     | 251         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Patna City           | 41          | 179     | 114         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Gya                  | 45          | 390     | 259         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Arrah                | 11          | 134     | 251         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Mosulapore           | 6           | 104     | 42          | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Darbhanga            | 24          | 258     | 206         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Chupra               | 5           | 101     | 43          | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Bhagalpore           | 25          | 327     | 211         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Mughayr              | 19          | 245     | 221         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Purneah              | 7           | 158     | 124         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Puri                 | 21          | 415     | ...         | ...        | ...            | ...   | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| TOTAL                | 385         | 130     | 108         | ...        | ...            | ...   | 42            | 57                   | 21                    | 16                     | 15                     | 40                     | 59                     | 42                     | 57                     | 351                   |

OF SANITARY COMMISSIONER FOR BENGAL,

R. LIDDERDALE, M.D. & Deputy Surgeon-General,

# PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statements showing quantities of Goods carried during the month of April 1887.

## ORISSA CIRCLE.

### TALDUNDAH CANAL SYSTEM.

LENGTH OF CANAL OPEN { TALDUNDAH CANAL 27 MILES.  
MACHGONG " 4 "

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |                     |                     |                   | PRIVATE.          |         | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|---------------------|---------------------|-------------------|-------------------|---------|----------|
|                           |                                   | Quantity—Tons.                |                     |                     | Value.<br>Rupees. | Quantity.         | Value.  |          |
|                           |                                   | Up.                           | Down.               | Total.              |                   | Tons.             | Rupees. |          |
| 22                        | 1. Grain ...                      | .....                         | 315                 | 315                 | 6,21              | 315               | 6,821   |          |
| .....                     | 2. Cotton ...                     | .....                         | .....               | .....               | .....             | .....             | .....   |          |
| .....                     | 3. Oilseeds ...                   | .....                         | .....               | .....               | .....             | .....             | .....   |          |
| .....                     | 4. Salt ...                       | .....                         | .....               | .....               | .....             | .....             | .....   |          |
| .....                     | 5. Piece-goods ...                | .....                         | .....               | .....               | .....             | .....             | .....   |          |
| 35                        | 6. Metal ...                      | .....                         | 386                 | 386                 | 318               | 386               | 318     |          |
| 17                        | 7. Building materials ...         | .....                         | 198                 | 198                 | 883               | 79                | 614     |          |
| 10                        | 8. Miscellaneous ...              | .....                         | 64                  | 64                  | 380               | 64                | 380     |          |
| 5                         | 9. Fuel ...                       | .....                         | 53                  | 53                  | 170               | 53                | 170     |          |
| 2                         | 10. Timber ...                    | .....                         | 21                  | 21                  | 180               | 21                | 180     |          |
| rafts                     | Do. ...                           | .....                         | 267 No.             | 267 No.             | 396               | 267 No.           | 396     |          |
| "                         | 11. Bamboos ...                   | .....                         | 28,900 "            | 28,900 "            | 484               | 28,900 "          | 484     |          |
| 11 & 3 rafts              | 12. Total ...                     | .....                         | 1,037<br>29,167 No. | 1,037<br>29,167 No. | 9,632             | 918<br>29,167 No. | 9,363   |          |
| 18 & 3 rafts              | 13. Total of same month last year | 15                            | 1,405               | 1,423               | 12,874            | 955               | 11,709  |          |

|  | Up.     | Down.   | Total.   |   | Rs. A. P. |
|--|---------|---------|----------|---|-----------|
| Total number of boats plying cargo No.     | .....   | 91      | 91       | Total tollage of month—<br>24 + 25 + 26 ...         | 510 2 6   |
| Total number of boats plying passenger No. | 18      | 19      | 37       | Total tollage of same month last year ...           | 881 7 7   |
| Total number of empty boats No.            | 86      | 6       | 92       |   |           |
| Total registered tonnage, cargo            | 556     | 1,752   | 2,308    |   |           |
| Total registered tonnage, passenger        | 510     | 397     | 907      | Memorandum of Tollage.                              |           |
| Ton-mileage                                | 8,758   | 24,364  | 33,122   |   |           |
| Estimated value of cargo Rs                | .....   | 8,752   | 8,752    |   |           |
| Number of passengers No.                   | 1,000   | .....   | 1,000    | 1. Balance not recovered on the 1st of the month .. | 112 8 9   |
| Rafts, bamboos c. ft                       | .....   | 801     | 801      | 2. Tollage per month ...                            | 510 2 6   |
| Do., bullahs "                             | .....   | 7,780   | 7,780    |   |           |
| Estimated value of rafts Rs.               | .....   | 880     | 880      |   |           |
| Tollage on boats "                         | 123-5-6 | 341-1-9 | 464-7-3  | 3. Total ...  | 622 11 3  |
| Compounded tollage on boats ... Rs.        | .....   | .....   | .....    |   |           |
| Tollage on rafts "                         | .....   | 45-11-3 | 45-11-3  | 4. Amount credited in the accounts of the month ... | 483 13 6  |
| Total tollage on boats per ton-mile ..     | .....   | .....   | 2-68 pic |   |           |

# SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 6, 1887.

## KENDRAPARA CANAL SYSTEM.

LENGTH OF CANAL OPEN, 75 MILES.

| No.   | DESCRIPTION.                  | TOTAL GOVERNMENT AND PRIVATE. |                    |                    | PRIVATE.  |                    | REMARKS. |
|-------|-------------------------------|-------------------------------|--------------------|--------------------|-----------|--------------------|----------|
|       |                               | Quantity—Tons.                |                    | Value.             | Quantity. | Value.             |          |
|       |                               | Up.                           | Down.              | Total.             | Tons.     | Rupers.            |          |
| 1.    | Grain ...                     | 841                           | 951                | 1,792              | 1,792     | 1,37,000           |          |
| 2.    | Cotton ...                    | .....                         | .....              | .....              | .....     | .....              |          |
| 3.    | Oilseeds ...                  | .....                         | 143                | 143                | 143       | 15,400             |          |
| 4.    | Salt ...                      | 131                           | 56                 | 187                | 187       | 19,130             |          |
| 5.    | Piece-goods ...               | .....                         | .....              | .....              | .....     | .....              |          |
| 6.    | Metal ...                     | .....                         | .....              | .....              | .....     | .....              |          |
| 7.    | Building materials ...        | .....                         | 812                | 812                | 203       | 6,510              | 3,840    |
| 8.    | Miscellaneous ...             | 1,180                         | 508                | 1,688              | 1,523     | 2,60,560           | 2,58,830 |
| 9.    | Fuel ...                      | 20                            | 3                  | 23                 | 23        | 70                 | 70       |
| 10.   | Timber No.                    | .....                         | 1,571 No.          | 1,571 No.          | 1,571 No. | 3,200              | 3,200    |
| 11.   | Bamboos ...                   | .....                         | 69,500 „           | 69,500 „           | 69,500 „  | 850                | 850      |
| & 12. | Total ...                     | 2,172                         | 2,473 & 71,071 No. | 4,645 & 71,071 No. | 4,42,720  | 3,871 & 71,071 No. | 4,38,320 |
| & 13. | Total of same month last year | 2,168 & 1,062 No.             | 2,338 & 83,042 No. | 4,506 & 84,104 No. | 3,37,645  | 3,593 & 84,04 No.  | 3,30,685 |

|   | Up.        | Down.      | Total.    |  | Rs. A. P.   |
|---|------------|------------|-----------|--|-------------|
| al number of boats plying cargo No.     | 278        | 290        | 568       | Total tollage of month—<br>24+25+26 ...  | 6,113 11 0  |
| al number of boats plying passenger No. | 38         | 45         | 83        | Total tollage of same month last year ...                                      | 6,316 2 6   |
| al registered tonnage, cargo            | 3,723      | 5,048      | 8,771     | <i>Memorandum of Tollage.</i>  |             |
| al registered tonnage, passenger        | 1,448      | 1,262      | 2,710     |  | Rs. A. P.   |
| -mileage                                | 1,38,555   | 1,57,133   | 2,95,688  | 1. Balance not recovered on the 1st of the month ...                           | 6,951 15 6  |
| mated value of cargo Rs.                | 2,47,180   | 1,91,490   | 4,38,670  | 2. Tollage per month ...   | 6,113 11 0  |
| number of passengers No.                | 1,563      | 1,563      | 3,098     | Amount due from Messrs. Bulloch and Co for hire of their steamer for last year | 350 0 0     |
| ts, bamboos c. ft.                      | .....      | 69,500     | 69,500    | Total ...  | 13,415 10 6 |
| „ timbers „                             | .....      | 1,571      | 1,571     |  |             |
| mated value of rafts Rs.                | .....      | 4,050      | 4,050     | 3. Amount credited in the accounts of the month ...                            | 5,967 11 1  |
| age on boats „                          | 2,814-15-4 | 3,085-3-10 | 5,930-3-2 |  |             |
| pounded tollage on boats ...            | .....      | .....      | .....     |  |             |
| ge on rafts Rs.                         | .....      | 183-7-10   | 183-7-10  |  |             |
| tollage on boats per a-mile ...         | .....      | .....      | 0-0-3-9   | 4. Balance due at the end of the month ...                                     | 7,507 15 5  |
| tollage on rafts per 0 cubic feet ...   | .....      | .....      | 0-4-1     |  |             |



## HIGH LEVEL CANAL, RANGE I.

LENGTH OF CANAL OPEN, 34 MILES.

| Description.                                 | TOTAL GOVERNMENT AND PRIVATE. |                    |                      |          | PRIVATE.             |          | REMARKS. |
|--|-------------------------------|--------------------|----------------------|----------|----------------------|----------|----------|
|  | Quantity—Tons.                |                    |                      | Value.   | Quantity.            | Value.   |          |
|  | Up.                           | Down.              | Total.               | Rupees.  | Tons.                | Rupees.  |          |
| 37 1. Grain ...                              | 492                           | 4                  | 496                  | 35,690   | 496                  | 35,690   |          |
| 12 2. Cotton ...                             | .....                         | 49                 | 49                   | 7,300    | 49                   | 7,300    |          |
| 32 3. Oilseeds ...                           | .....                         | .....              | .....                | .....    | .....                | .....    |          |
| 4. Salt ...                                  | .....                         | 263                | 263                  | 21,960   | 263                  | 21,960   |          |
| 5. Piece-goods ...                           | .....                         | .....              | .....                | ...      | .....                | .....    |          |
| 6. Metal ...                                 | .....                         | .....              | .....                | .....    | .....                | .....    |          |
| 31 7. Building materials ...                 | 187                           | .....              | 187                  | 3,620    | 130                  | 3,520    |          |
| 36 8. Miscellaneous ...                      | 444                           | 201                | 645                  | 25,300   | 645                  | 25,300   |          |
| 1 9. Fuel ...                                | 59                            | .....              | 59                   | 170      | 59                   | 170      |          |
| ts 10. Timber ...                            | 774 No.                       | .....              | 774 No.              | 1,850    | 774 No.              | 1,850    |          |
| 11. Bamboos ...                              | 350 "                         | 1,500 No.          | 1,850 "              | 20       | 1,850 "              | 20       |          |
| 9 12. Total ...                              | 1,182 &<br>1,124 No.          | 517 &<br>1,500 No. | 1,699 &<br>2,624 No. | } 95,910 | 1,642 &<br>2,624 No. | } 95,810 |          |
| 9 13. Total of same<br>2 month last year ... | 864 &<br>1,985 No.            | 295 &<br>3,800 No. | 1,159 &<br>5,785 No. | } 76,760 | 1,159 &<br>5,785 No. | } 76,760 |          |

|  | Up.      | Down.   | Total.  |  | Rs. A. P. |
|--|----------|---------|---------|--|-----------|
| al number of boats plying<br>cargo No.     | 320      | 99      | 419     | Total tollage of month—<br>24 + 25 + 26 ...                | 892 12 0  |
| al number of boats plying<br>passenger No. | .....    | 1       | 1       | Total tollage of same month<br>last year ...               | 980 1 9   |
| al registered tonnage,<br>cargo            | 2,448    | 83      | 3,283   | <i>Memorandum of Tollage.</i>                              |           |
| al registered tonnage,<br>passenger        | .....    | 4       | 4       |  |           |
| -mileage                                   | 24,20    | 8,425   | 32,626  |  |           |
| mated value of cargo Rs.                   | 47,420   | 46,620  | 94,040  |  |           |
| nber of passengers No.                     | .....    | 11      | 11      | 1. Balance not recovered<br>on the 1st of the<br>month ... | 113 10 3  |
| ts, bamboos c. ft.                         | 350      | 1,500   | 1,850   | 2. Tollage per month ...                                   | 892 12 0  |
| ts, timbers "                              | 774      | .....   | 774     |  |           |
| mated value of rafts Rs.                   | 1,854    | 16      | 1,870   | Total ...  | 1,006 6 3 |
| age of boats "                             | 557-12-6 | 283-4-6 | 841-1-0 |  |           |
| pounded tollage on<br>boats Rs.            | .....    | .....   | .....   | 3. Amount credited in<br>the accounts of the<br>month ...  | 393 14 6  |
| age on rafts "                             | 50-11-3  | 0-15-9  | 51-11-0 |  |           |
| l tollage on boats per<br>n-mile           | .....    | .....   | 0-0-5   |  |           |
| tollage on rafts per<br>0 cubic feet       | .....    | .....   | 1-15-6  | 4. Balance due at the end<br>of the month ...              | 612 7 9   |

**LENGTH OF CANAL OPEN, 12½ MILES.**

5 &  
afts.

200 1000 1000 ...

Rs. A. P.

462 6 0

647. 1.0

*Memorandum of Tollage.*

Rs. A.P.

64 1 6

462 6 · 0

526 13 6

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140 10 0

**HIGH LEVEL CANAL, RANGE III.**  
**LENGTH OF CANAL OPEN, 19 MILES.**

| Number of boats or rafts. | DESCRIPTION.                               | TOTAL GOVERNMENT AND PRIVATE. |        |          |  | PRIVATE.  |         |
|---------------------------|--|-------------------------------|--------|----------|--|-----------|---------|
|                           |  | Quantity—Tons.                |        |          | Value.   | Quantity. | Value.  |
|                           |  | Up.                           | Down.  | Total.   | Rupees.  | Tons.     | Rupees. |
| 56                        | 1. Grain ...                               | 168                           | 4      | 172      | 9,409  | 172       | 9,409   |
| .....                     | 2. Cotton ...                              | .....                         | .....  | .....    | .....  | .....     | .....   |
| 1                         | 3. Oilseeds ...                            | .....                         | 1      | 1        | 280  | 1         | 280     |
| .....                     | 4. Salt ...                                | .....                         | .....  | .....    | .....  | .....     | .....   |
| .....                     | 5. Piece-goods ...                         | .....                         | .....  | .....    | .....  | .....     | .....   |
| .....                     | 6. Metal ...                               | .....                         | .....  | .....    | .....  | .....     | .....   |
| 13                        | 7. Building materials ...                  | .....                         | 91     | 91       | 223  | .....     | .....   |
| 69                        | 8. Miscellaneous ...                       | 2                             | 36     | 38       | 9,956  | 38        | 9,956   |
| .....                     | 9. Fuel ...                                | .....                         | .....  | .....    | .....  | .....     | .....   |
| 3 rafts                   | 10. Timber ...                             | .....                         | .....  | 24 No.   | 57   | 24 No.    | 57      |
| .....                     | 11. Bamboos ...                            | .....                         | .....  | .....    | .....  | .....     | .....   |
| 139                       | 12. Total ...                              | 170                           | 132    | 302      | 19,925   | 211       | 19,702  |
| 2 rafts.                  |  |                               |        | & 24 No. |  | & 24 No.  |         |
| 259                       | 13. Total of same month last year          | 1,524                         | 891    | 2,415    | 30,542   | 954       | 29,523  |
| 3 rafts.                  |  |                               |        |          |  |           |         |
|                           |  | Up.                           | Down.  | Total.   |  |           |         |
| 4.                        | Total number of boats plying cargo No.     | 78                            | 61     | 139      | Total tollage of month—<br>24 + 25 + 26 ...      |           |         |
| 5.                        | Total number of boats plying passenger No. | .....                         | .....  | .....    |  |           |         |
| 6.                        | Total registered tonnage, cargo            | 340                           | 264    | 604      | Total tollage of same month last year ...        |           |         |
| 7.                        | Total registered tonnage, passenger        | .....                         | .....  | .....    |  |           |         |
| 8.                        | Ton-millage                                | 4,593                         | 3,786  | 8,379    | <i>Memorandum of Tollage.</i>                    |           |         |
| 9.                        | Estimated value of cargo Rs.               | 9,013                         | 10,855 | 19,868   |  |           |         |
| 10.                       | Number of passengers No                    | 251                           | 192    | 443      |  |           |         |
| 11.                       | Rafts, bamboos c. ft.                      | .....                         | .....  | .....    | 1. Balance not recovered on the 1st of the month |           |         |
| 12.                       | Do., timber "                              | .....                         | 24     | 24       | 2. Tollage per month                             | 128 6     |         |
| 13.                       | Estimated value of rafts Rs.               | .....                         | 57     | 57       | 3. Total   | 128 6     |         |
| 14.                       | Tollage on boats "                         | 69-13-6                       | 57-4-6 | 127-2-0  | 4. Amount credited in the accounts of the month  | 128 6     |         |
| 15.                       | Compounded tollage on boats Rs.            | .....                         | .....  | .....    | 5. Balance due at the end of the month           | .....     |         |
| 16.                       | Tollage on rafts "                         | .....                         | 1-4-3  | 1-4-3    |  |           |         |
| 17.                       | Total tollage on boats per ton-mile        | .....                         | .....  | 0-0-2-8  |  |           |         |
| 18.                       | Total tollage on rafts per 100 cubic feet  | .....                         | .....  | 5 3-9    |  |           |         |

## HIGH LEVEL CANAL, RANGE II.

LENGTH OF CANAL OPEN, 12½ MILES.

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |                  |               |         | PRIVATE.   |         | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|------------------|---------------|---------|------------|---------|----------|
|                           |                                   | Quantity - Tons.              |                  |               | Value.  | Quantity.  | Value.  |          |
|                           |                                   | Up.                           | Down.            | Total.        | Rupces. | Tons.      | Rupces. |          |
| 90                        | 1. Grain ...                      | 319                           | 14               | 333           | 16,628  | 333        | 16,628  |          |
| 1                         | 2. Cotton ...                     | .....                         | .....            | .....         | 230     | .....      | 230     |          |
| 61                        | 3. Oilseeds ...                   | .....                         | 92               | 92            | 8,804   | 92         | 8,804   |          |
| 10                        | 4. Salt ...                       | .....                         | 61               | 61            | 8,605   | 61         | 8,605   |          |
| 8                         | 5. Piece-goods ...                | .....                         | 17               | 17            | 4,780   | 17         | 4,780   |          |
| .....                     | 6. Metal ...                      | .....                         | .....            | .....         | .....   | .....      | .....   |          |
| 34                        | 7. Building materials ...         | .....                         | 280              | 280           | 255     | 7          | 102     |          |
| 191                       | 8. Miscellaneous ...              | 12                            | 34               | 46            | 6,036   | 46         | 6,036   |          |
| 15                        | 9. Fuel ...                       | .....                         | 86               | 86            | 243     | .....      | .....   |          |
| 31 rafts                  | 10. Timber, ...                   | .....                         | 1,528 No.        | 1,528 No.     | 4,584   | .....      | 4,528   |          |
| 22 "                      | 11. Bamboos, 11,500               | 100 No.                       | 11,400 "         | 11,500 "      | 346     | 11,500 No. | 346     |          |
| 410 & 53 rafts            | 12. Total ...                     | 331 & 100 No.                 | 584 & 12,028 No. | 915½ & 13,028 | 50,511  | 556½       | 49,851  |          |
| 305 & 58 rafts.           | 13. Total of same month last year | 2,096                         | 737              | 2,833         | 59,978  | 1,758      | 48,920  |          |

|   | Up.     | Down.   | Total.  |  | Rs. A. P. |
|---|---------|---------|---------|--|-----------|
| 14. Total number of boats plying cargo No.        | 215     | 195     | 410     | Total tollage of month—<br>24 + 25 + 26 ..       | 462 6 0   |
| 15. Total number of boats plying passenger No.    | .....   | 1       | 1       | Total tollage of same month last year ..         | 647 1 0   |
| 16. Total registered tonnage, cargo ...           | 602     | 1,169   | 1,831   |  |           |
| 17. Total registered tonnage, passenger ...       | .....   | 2       | 2       |  |           |
| 18. Ton-mileage ...                               | 13,539  | 15,852  | 29,391  |  |           |
| 19. Estimated value of cargo Rs.                  | 15,713  | 29,868  | 45,581  |  |           |
| 20. Number of passengers No.                      | 216     | 52      | 268     |  |           |
| 21. Rafts, bamboos c. ft.                         | 100     | 11,400  | 11,500  |  |           |
| 22. Do., timber "                                 | .....   | 1,528   | 1,528   |  |           |
| 23. Estimated value of rafts Rs.                  | 4       | 4,926   | 4,930   |  |           |
| 24. Tollage on boats "                            | 157-5-6 | 222-1-0 | 379-7-3 |  |           |
| 25. Compounded tollage on boats ... Rs.           | .....   | .....   | .....   |  |           |
| 26. Tollage on rafts "                            | 0-1-0   | 82-13-9 | 82-14-0 |  |           |
| 27. Total tollage on boats per ton-mile ...       | .....   | .....   | 0-2-4   |  |           |
| 28. Total tollage on rafts per 100 cubic feet ... | .....   | .....   | 0-10-0  |  |           |
|   |         |         |         | 1. Balance not recovered on the 1st of the month | 64 7 6    |
|   |         |         |         | 2. Tollage per month. ..                         | 462 6 0   |
|   |         |         |         | 3. Total ...                                     | 526 13 6  |
|   |         |         |         | 4. Amount credited in the accounts of the month  | 386 3 6   |
|   |         |         |         | 5. Balance due at the end of the month ...       | 140 10 0  |

## HIGH LEVEL CANAL, RANGE III.

LENGTH OF CANAL OPEN, 19 MILES.

| Number of<br>boats<br>or rafts. | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |       |                 |         | PRIVATE.        |         | REMARKS. |
|---------------------------------|--------------------------------------|-------------------------------|-------|-----------------|---------|-----------------|---------|----------|
|                                 |                                      | Quantity—Tons.                |       |                 | Value.  | Quantity.       | Value.  |          |
|                                 |                                      | Up.                           | Down. | Total.          | Rupees. | Tons.           | Rupees. |          |
| 56                              | 1. Grain ...                         | 168                           | 4     | 172             | 9,409   | 172             | 9,409   |          |
| .....                           | 2. Cotton ...                        | .....                         | ..... | .....           | .....   | .....           | .....   |          |
| 1                               | 3. Oilseeds ...                      | .....                         | 1     | 1               | 280     | 1               | 280     |          |
| .....                           | 4. Salt ...                          | .....                         | ..... | .....           | .....   | .....           | .....   |          |
| .....                           | 5. Piece-goods ...                   | .....                         | ..... | .....           | .....   | .....           | .....   |          |
| .....                           | 6. Metal ...                         | .....                         | ..... | .....           | .....   | .....           | .....   |          |
| 13                              | 7. Building materials ...            | .....                         | 91    | 91              | 223     | .....           | .....   |          |
| 69                              | 8. Miscellaneous ...                 | 2                             | 36    | 38              | 9,956   | 38              | 9,956   |          |
| .....                           | 9. Fuel ...                          | .....                         | ..... | .....           | .....   | .....           | .....   |          |
| 2 rafts                         | 10. Timber ...                       | .....                         | ..... | 24 No.          | 57      | 24 No.          | 57      |          |
| .....                           | 11. Bamboos ...                      | .....                         | ..... | .....           | .....   | .....           | .....   |          |
| 139<br>& 2 rafts.               | 12. Total ...                        | 170                           | 132   | 302<br>& 24 No. | 19,925  | 211<br>& 24 No. | 19,702  |          |
| 259<br>& 3 rafts.               | 13. Total of same<br>month last year | 1,524                         | 891   | 2,415           | 30,542  | 954             | 29,523  |          |

| Up.     | Down.  | Total.  |  | Rs. A. P. |
|---------|--------|---------|--|-----------|
| 78      | 61     | 139     | Total tollage of month—<br>24 + 25 + 26 ...                | 128 6 3   |
| .....   | .....  | .....   | Total tollage of same<br>month last year ...               | 341 11 9  |
| 340     | 264    | 604     | <i>Memorandum of Tollage.</i>                              |           |
| 4,593   | 3,786  | 8,379   |  |           |
| 9,613   | 16,855 | 19,868  |  | Rs. A. P. |
| 251     | 192    | 443     | 1. Balance not recovered<br>on the 1st of the<br>month ... | .....     |
| .....   | .....  | .....   | 2. Tollage per month ...                                   | 128 6 3   |
| .....   | 57     | 57      | 3. Total ...   | 128 6 3   |
| 69-13-6 | 57-4-6 | 127-20  | 4. Amount credited in<br>the accounts of the<br>month ...  | 128 6 3   |
| .....   | .....  | .....   | 5. Balance due at the end<br>of the month ...              | .....     |
| .....   | 1-4-3  | 1-4-3   |  |           |
| .....   | .....  | 0-0-2-8 |  |           |
| .....   | .....  | 5 3-9   |  |           |

## SOUTH-WESTERN CIRCLE.

## MIDNAPORE CANAL.

LENGTH OF CANAL OPEN, 53 MILES.

| Number of<br>boats or<br>rafts.                | DESCRIPTION.                           | TOTAL GOVERNMENT AND PRIVATE. |                              |                               |   | PRIVATE.                      |          | REMARKS.   |
|--|--|-------------------------------|------------------------------|-------------------------------|---|-------------------------------|----------|--|
|  |  | Quantity—Tons.                |                              |                               | Value.  | Quantity.                     | Value.   |  |
|  |  | Up.                           | Down.                        | Total.                        | Rupees.   | Tons.                         | Rupees.  |  |
| 472  | 1. Grain ...                           | 1,926                         | 663                          | 2,589                         | 1,32,341  | 2,589                         | 1,32,341 | Canal from Mohonpore to Panchkura closed for silt clearance. |
| 1  | 2. Cotton ...                          | .....                         | 1                            | 1                             | 540   | 1                             | 540      |  |
| 51   | 3. Oilseeds ...                        | 144                           | 142                          | 286                           | 26,608  | 286                           | 26,608   |  |
| 84   | 4. Salt ...                            | .....                         | 1,040                        | 1,040                         | 76,393  | 1,040                         | 76,393   |  |
| 4  | 5. Piece-goods ...                     | .....                         | 22                           | 22                            | 12,280  | 22                            | 12,280   |  |
| 29   | 6. Metal ...                           | 61                            | 143                          | 204                           | 1,65,800  | 204                           | 1,65,800 |  |
| 28   | 7. Building materials ...              | 193                           | 11                           | 204                           | 959   | 204                           | 959      |  |
| 583  | 8. Miscellaneous ...                   | 1,313                         | 692                          | 2,005                         | 3,04,096  | 2,005                         | 3,04,096 |  |
| 38   | 9. Fuel ...                            | 185                           | 103                          | 288                           | 3,501   | 288                           | 3,501    |  |
| 39 rafts                                       | 10. Timber ...                         | 14,550 c. ft.                 | 753 c. ft.                   | 15,303 c. ft.                 | 6,163   | 15,303 c. ft.                 | 6,163    |  |
| 5 "  | 11. Bamboos ...                        | 350 "                         | .....                        | 350 "                         | 58  | 350 "                         | 58       |  |
| 1,290<br>and<br>44 rafts                       | 12. Total* ...                         | 3,822<br>and<br>14,900 c. ft. | 2,817<br>and<br>753 c. ft.   | 6,639<br>and<br>15,653 c. ft. | 7,28,739  | 6,639<br>and<br>15,653 c. ft. | 7,28,739 |  |
| 860<br>and<br>33 rafts                         | 13. Total of same<br>month last year†. | 1,249<br>and<br>2,199 c. ft.  | 5,293<br>and<br>7,011 c. ft. | 6,542<br>and<br>9,210 c. ft.  | 3,41,267  | 6,542<br>and<br>9,210 c. ft.  | 3,41,267 |  |
|  |  | Up.                           | Down.                        | Total.                        |   |                               |          | Rs. A. P.  |
| 14. Total number of boats plying cargo No.     |  | 857                           | 433                          | 1,290                         | Total tollage of month—<br>24 + 25 + 26 ...             |                               |          | 5,395 4 0  |
| 15. Total number of boats plying passenger No. |  | 342                           | 412                          | 754                           | Total tollage of same<br>month last year ...            |                               |          | 6,041 3 0  |
| 15½. Total number of empty boats No.           |  | 286                           | 771                          | 1,057                         | Memorandum of Tollage.—                                 |                               |          |  |
| 16. Total registered tonnage, cargo ...        |  | 10,406                        | 6,551                        | 16,957                        |   |                               |          |  |
| 17. Total registered tonnage, passenger ...    |  | 1,179                         | 903                          | 2,082                         |   |                               |          |  |
| 17½. Total registered tonnage, empty ...       |  | 1,149                         | 3,557                        | 4,706                         |   |                               |          | Rs. A. P.  |
| 18. Ton-milage ...                             |  | 1,98,648                      | 1,48,259                     | 3,46,937                      | 1. Balance not recovered<br>on the 1st of the month ... |                               |          | 6,015 14 5   |
| 19. Estimated value of cargo Rs.               |  | 2,12,398                      | 5,10,120                     | 7,22,518                      |   |                               |          |  |
| 20. Number of passengers No.                   |  | 1,856                         | 6,970                        | 8,826                         |   |                               |          |  |
| 21. Rafts, bamboos c. ft.                      |  | 350                           | .....                        | 350                           | 2. Tollage per month ...                                |                               |          | 5,395 4 0  |
| 22. Do., bullahs "                             |  | 14,550                        | 753                          | 15,303                        |   |                               |          |  |
| 23. Estimated value of rafts Rs.               |  | 5,075                         | 1,146                        | 6,221                         | 3. Total ...  |                               |          | 11,411 2 5   |
| 24. Tollage on boats "                         |  | 3,035-8-0                     | 2,247-10-6                   | 5,283-2-6                     |   |                               |          |  |
| 25. Compounded tollage on boats ... Rs.        |  | .....                         | .....                        | .....                         |   |                               |          |  |
| 26. Tollage on rafts "                         |  | 102-15-0                      | 9-2-6                        | 112-1-6                       | 4. Amount paid into treasury during the month ...       |                               |          | 10,428 11 6  |
| 27. Total tollage on boats per ton-mile Pie    |  | .....                         | .....                        | 2-9                           |   |                               |          |  |
| 28. Total tollage on rafts per 100 cubic feet  |  |                               |                              |                               | 5. Balance due at the end                               |                               |          |  |

## HIDGELLER TIDAL CANAL.

LENGTH OF CANAL OPEN, 29 MILES.

| Number of boats or rafts. | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |                    |                      | PRIVATE. |                      | REMARKS. |
|---------------------------|--------------------------------------|-------------------------------|--------------------|----------------------|----------|----------------------|----------|
|                           |                                      | Quantity—Tons.                |                    |                      | Value.   | Quantity.            |          |
|                           |                                      | Up.                           | Down.              | Total.               | Rupees.  | Tons.                |          |
| 445                       | 1. Grain ...                         | 3,435                         | 7                  | 3,442                | 1,08,365 | 3,442                | 1,08,365 |
| .....                     | 2. Cotton ...                        | .....                         | .....              | .....                | .....    | .....                | .....    |
| .....                     | 3. Oilseeds ...                      | .....                         | .....              | .....                | .....    | .....                | .....    |
| 46                        | 4. Salt ...                          | .....                         | 385                | 385                  | 27,475   | 385                  | 27,475   |
| 21                        | 5. Piece-goods ...                   | .....                         | 61                 | 61                   | 42,375   | 61                   | 42,375   |
| 5                         | 6. Metal ...                         | .....                         | 7                  | 7                    | 1,540    | 4                    | 1,040    |
| 4                         | 7. Building materials ...            | 11                            | 2                  | 13                   | 90       | 13                   | 90       |
| 786                       | 8. Miscellaneous ...                 | 648                           | 583                | 1,237                | 1,12,844 | 1,237                | 1,12,844 |
| 38                        | 9. Fuel ...                          | 9                             | 296                | 305                  | 2,151    | 305                  | 2,151    |
| 2 rafts                   | 10. Timber ...                       | 199 c. ft.                    | 20 c. ft.          | 219 c. ft.           | 660      | 219 c. ft.           | 660      |
| 5 rafts                   | 11. Bamboos ...                      | 87 "                          | 114 "              | 201 "                | 34       | 201 "                | 34       |
| 345 & 7 rafts             | 12. Total ...                        | 4 103 & 286 c. ft.            | 1,347 & 134 c. ft. | 5,450 & 420 c. ft.   | 2,95,534 | 5,447 & 420 c. ft.   | 2,95,034 |
| 865 & 4 rafts             | 13. Total of same month last year... | 5,29 & 521 c. ft.             | 1,385 & 596 c. ft. | 7,214 & 1,117 c. ft. | 3,79,297 | 7,196 & 1,117 c. ft. | 3,78,597 |

|   | Up.       | Down.     | Total.     |  | Rs. A. P. |
|---|-----------|-----------|------------|--|-----------|
| Total number of boats plying cargo No.        | 613       | 732       | 1,345      | Total tollage of month—<br>24 + 25 + 26 ...          | 5,445 3 6 |
| Total number of boats plying passenger No.    | 31        | 37        | 68         | Total tollage of same month last year                | 7,501 8 9 |
| Total registered tonnage, cargo ...           | 8,691     | 5,942     | 14,633     | <i>Memorandum of Tollage.</i>                        |           |
| Total registered tonnage, passenger ...       | 80        | 116       | 196        |  |           |
| Ton-mileage ...                               | 182,040   | 128,258   | 310,298    |  | Rs. A. P. |
| Estimated value of cargo Rs.                  | 1,28,479  | 1,66,361  | 2,94,840   | 1. Balance not recovered on the 1st of the month ... | 359 1 3   |
| Number of passengers No.                      | 116       | 155       | 271        |  |           |
| Rafts, bamboos c. ft.                         | 87        | 114       | 201        | 2. Tollage per month ...                             | 5,445 3 6 |
| Do., bullahs "                                | 199       | 20        | 219        |  |           |
| Estimated value of rafts Rs.                  | 615       | 79        | 694        | 3. Total ...   | 5,804 4 9 |
| Tollage on boats "                            | 3,206 5-9 | 2,236 7-3 | 5,442 13-0 | 4. Amount paid into treasury during the month ...    | 4,940 1 9 |
| Compounded tollage on boats ... Rs.           | .....     | .....     | .....      |  |           |
| Tollage on rafts "                            | 1-15-6    | 0-7-0     | 2-6-6      |  |           |
| Total tollage on boats per ton-mile ...       | .....     | .....     | 0-0-3      |  |           |
| Total tollage on rafts per 100 cubic feet ... | .....     | .....     | 0-9-2      | 5. Balance due at the end of the month ...           | 864 3 0   |

**SONE CIRCLE.**  
**PATNA CANAL SYSTEM.**  
**LENGTH OF CANAL OPEN, 86½ MILES.**

| Number of<br>boats<br>of rafts. | DESCRIPTION.                             | TOTAL GOVERNMENT AND PRIVATE. |       |        |           | PRIVATE.  |           | REMARKS. |
|---------------------------------|--|-------------------------------|-------|--------|-----------|-----------|-----------|----------|
|                                 |  | Quantity—Tons.                |       |        | Value.    | Quantity. | Value.    |          |
|                                 |  | Up.                           | Down. | Total. | Rupees.   | Tons.     | Rupees.   |          |
| 2                               | 1. Grain ...                             | 1                             | 1     | 2      | 136       | 2         | 136       |          |
| .....                           | 2. Cotton ...                            | .....                         | ..... | .....  | .....     | .....     | .....     |          |
| 53                              | 3. Oilseeds ...                          | 21                            | 598   | 319    | 53,560    | 619       | 53,560    |          |
| 12                              | 4. Salt ...                              | 102                           | ..... | 102    | 5,345     | 102       | 5,345     |          |
| .....                           | 5. Piece-goods ...                       | 31                            | ..... | 31     | 52,950    | 31        | 52,950    |          |
| 1                               | 6. Metal ...                             | 14                            | ..... | 14     | 2,044     | 14        | 2,044     |          |
| .....                           | 7. Building materials                    | .....                         | ..... | .....  | .....     | .....     | .....     |          |
| 90                              | 8. Miscellaneous ...                     | 162                           | 392   | 554    | 8,57,086  | 336       | 42,271    |          |
| 2                               | 9. Fuel ...                              | 29                            | ..... | 29     | 411       | 29        | 411       |          |
| 5                               | 10. Timber { boats                       | 51                            | ..... | 51     | 2,590     | 5         | 270       |          |
|                                 | { rafts                                  | .....                         | 627   | 627    | 4,432     | 627       | 4,432     |          |
| 12                              | 11. Bamboos { boats                      | 69                            | ..... | 69     | 1,246     | 69        | 1,246     |          |
|                                 | { rafts                                  | 8                             | 2,052 | 2,060  | 25,150    | 2,060     | 25,150    |          |
| 177                             | 12. Total ...                            | 488                           | 3,670 | 4,158  | 10,04,950 | 3,894     | 1,87,815  |          |
| 479                             | 13. Total of same<br>month last year ... | 1,580                         | 5,457 | 7,037  | 10,98,634 | 6,978     | 10,98,031 |          |

|  | Up.     | Down.     | Total.    |  | Rs. A. P.  |
|--|---------|-----------|-----------|--|------------|
| 14. Total number of boats plying cargo No.     | 66      | 111       | 177       | Total tollage of month 24 + 25 + 26 ...              | 3,025 13 6 |
| 15. Total number of boats plying passenger No. | 4       | 4         | 8         |  |            |
| 15½. Total number of empty boats No.           | 75      | 9         | 84        | Total tollage of same month last year ...            | 3 535 6 3  |
| 16. Total registered tonnage, cargo            | 771     | 1,872     | 2,613     |  |            |
| 17. Total registered tonnage, passenger        | 86      | 57        | 143       |  |            |
| 17½. Total registered tonnage of empty boats   | 258     | 32        | 290       | <i>Memorandum of Tollage.</i>                        |            |
| 18. Ton-mileage                                | 57,486  | 1,40,897  | 1,98,383  |  | Rs. A. P.  |
| 19. Estimated value of cargo Rs.               | 74,991  | 9,00,377  | 9,75,368  | 1. Balance not recovered on the 1st of the month ... | 262 4 6    |
| 20. Number of passengers No.                   | 335     | 109½      | 444½      | 2. Tollage per month ...                             | 3,025 13 6 |
| 21. Rafts, bamboos c. ft.                      | 1,300   | 3,07,875  | 3,09,075  |  |            |
| 22. Do., bullahs "                             | .....   | 47,022    | 47,022    |  |            |
| 23. Estimated value of rafts Rs.               | 300     | 29,292    | 29,582    | 3. Total ...   | 3,288 2 0  |
| 24. Tollage on boats "                         | 466-4-9 | 1,413-4-6 | 1,879-9-3 |  |            |
| 25. Compounded tollage on boats Rs.            | 75-0-0  | 75-0-0    | 150-0-0   |  |            |
| 26. Tollage on rafts "                         | 0-6-0   | 995-14-3  | 996-4-3   | 4. Amount credited in the accounts of the month ...  | 2,838 0 9  |
| 27. Total tollage on boats per ton-mile        | .....   | .....     | 1-9 pias. |  |            |
| 28. Total tollage on rafts per 100 cubic feet  | .....   | .....     | 0-4-5     | 5. Balance due at the end of the month ...           | 450 1 3    |



## ARRAH CANAL SYSTEM.

LENGTH OF CANAL OPEN, 65 MILES.

| Number of<br>boats<br>or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |          |          |  | PRIVATE.  |                         | REMARKS. |
|---------------------------------|---|-------------------------------|----------|----------|--|-----------|-------------------------|----------|
|                                 |   | Quantity—Tons.                |          |          | Value.   | Quantity. | Value.                  |          |
|                                 |   | Up.                           | Down.    | Total.   | Rupees.  | Tons.     | Rupees.                 |          |
| 7.                              | 1. Grain ...                                  | 6                             | 47       | 53       | 3,618  | 53        | 3,618                   |          |
| .....                           | 2. Cotton ...                                 | .....                         | .....    | .....    | .....  | .....     | .....                   |          |
| 21                              | 3. Oilseeds ...                               | .....                         | 2.4      | 214      | 17,200   | 214       | 17,200                  |          |
| 32                              | 4. Salt ...                                   | 217                           | 7        | 224      | 20,380   | 224       | 20,380                  |          |
| .....                           | 5. Piece-goods ...                            | 44                            | 1        | 45       | 61,240   | 45        | 61,240                  |          |
| .....                           | 6. Metal ...                                  | 1                             | 66       | 67       | 20,302   | 67        | 20,302                  |          |
| .....                           | 7. Building materials ...                     | .....                         | 1        | 1        | 100  | 1         | 100                     |          |
| 91                              | 8. Miscellaneous ...                          | 89                            | 498      | 587      | 74,556   | 569       | 73,896                  |          |
| .....                           | 9. Fuel ...                                   | .....                         | .....    | .....    | .....  | .....     | .....                   |          |
| Rafts                           | 10. Timber ...                                | .....                         | 27       | 27       | 2,515  | 27        | 2,515                   |          |
| .....                           | 11. Bamboos ...                               | .....                         | 696      | 696      | 11,230   | 696       | 11,230                  |          |
| 151                             | 12. Total ...                                 | 357                           | 1,557    | 1,914    | 2,11,141   | 1,896     | 2,10,481                |          |
| 114                             | 13. Total of same month last year...          | 295                           | 1,636    | 1,931    | 1,03,450   | 1,931     | 1,03,450                |          |
| 14.                             | Total number of boats plying cargo No.        | 42                            | 109      | 151      | Total tollage of month—<br>24 + 25 + 26 ...          |           | Rs. A. P.<br>1,409 13 0 |          |
| 15.                             | Total number of boats plying passenger No.    | 13                            | 10       | 23       |  |           |                         |          |
| 15½.                            | Total number of empty boats No.               | 88                            | 8        | 96       | Total tollage of same month last year ...            |           | 938 12 9                |          |
| 16.                             | Total registered tonnage, cargo ...           | 410                           | 1,193    | 1,603    | <i>Memorandum of Tollage.</i>                        |           |                         |          |
| 17.                             | Total registered tonnage, passenger ...       | 449                           | 389      | 838      |  |           |                         |          |
| 17½.                            | Total registered tonnage, empty ...           | 238                           | 4        | 242      |  |           | Rs. A. P.               |          |
| 18.                             | Ton-mileage ...                               | 34,898                        | 83,083   | 1,17,981 | 1. Balance not recovered on the 1st of the month ... |           | 163 6 0                 |          |
| 19.                             | Estimated value of cargo Rs.                  | 1,21,055                      | 76,341   | 1,97,396 |  |           |                         |          |
| 20.                             | Number of passengers No.                      | 1,310½                        | 941      | 2,251½   | 2. Tollage per month ...                             |           | 1,409 13 0              |          |
| 21.                             | Rafts, bamboos c. ft.                         | .....                         | 1,04,463 | 1,04,463 |  |           |                         |          |
| 22.                             | Do., bullocks ..                              | .....                         | 2,013    | 2,013    |  |           |                         |          |
| 23.                             | Estimated value of rafts Rs.                  | .....                         | 13,745   | 13,745   | 3. Total ...   |           | 1,573 3 0               |          |
| 24.                             | Tollage on boats ..                           | 256-14-3                      | 528-12-6 | 785-10-9 |  |           |                         |          |
| 25.                             | Compounded tollage on boats .. Rs.            | 100 0-0                       | 100-0-0  | 200-0-0  | 4. Amount credited in the accounts of the month ...  |           | 1,394 4 0               |          |
| 26.                             | Tollage on rafts ..                           | .....                         | 424-2-3  | 424-2-3  |  |           |                         |          |
| 27.                             | Total tollage on boats per ton-mile ...       | .....                         | .....    | 1-6 pice |  |           |                         |          |
| 28.                             | Total tollage on rafts per 100 cubic feet ... | .....                         | .....    | 6-4 As.  | 5. Balance due at the end of the month ...           |           | 178 15 0                |          |

## BUXAR CANAL SYSTEM

LENGTH OF CANAL OPEN, 67 MILES.

| Number of<br>boats<br>or rafts. | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |       |        |         | PRIVATE.  |         | REMARKS. |
|---------------------------------|---------------------------------------|-------------------------------|-------|--------|---------|-----------|---------|----------|
|                                 |                                       | Quantity—Tons.                |       |        | Value.  | Quantity. | Value.  |          |
|                                 |                                       | Up.                           | Down. | Total. | Rupces. | Tons.     | Rupces. |          |
| 15                              | 1. Grain ...                          | .....                         | 171   | 171    | 13,800  | 171       | 13,600  |          |
| .....                           | 2. Cotton ...                         | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| 6                               | 3. Oilseeds ...                       | .....                         | 76    | 76     | 8,550   | 76        | 8,550   |          |
| 2                               | 4. Salt ...                           | 24                            | ..... | 24     | 3,600   | 24        | 3,600   |          |
| .....                           | 5. Piece-goods ...                    | 4                             | ..... | 4      | 11,150  | 4         | 11,150  |          |
| .....                           | 6. Metal ...                          | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| 29                              | 7. Building materials ...             | .....                         | 331   | 331    | 9,362   | 7         | 275     |          |
| 41                              | 8. Miscellaneous ...                  | 1                             | 402   | 403    | 41,438  | 403       | 41,438  |          |
| 2                               | 9. Fuel ...                           | .....                         | 13    | 13     | 98      | 13        | 98      |          |
| Rafts {                         | 10. Timber ...                        | .....                         | 286   | 286    | 4,765   | 286       | 4,765   |          |
|                                 | 11. Bamboos ...                       | .....                         | 316   | 316    | 4,745   | 316       | 4,745   |          |
| 95                              | 12. Total ...                         | 29                            | 1,595 | 1,624  | 97,508  | 1,300     | 88,421  |          |
| 68                              | 13. Total of same month last year ... | 245                           | 768½  | 1,013½ | 61,206  | 1,013½    | 61,206  |          |

|   | Up.    | Down.   | Total.   |  | Rs. A. P. |
|---|--------|---------|----------|--|-----------|
| 14. Total number of boats plying cargo No.        | 2      | 93      | 95       | Total tollage of month—<br>24 + 25 + 26 ...          | 903 14 11 |
| 15. Total number of boats plying passenger No.    | 8      | 11      | 19       |  |           |
| 15½. Total number of empty boats No.              | 63     | 10      | 73       |  |           |
| 16. Total registered tonnage, cargo ...           | 37     | 1,924   | 1,961    | Total tollage of same month last year ...            | 441 4 3   |
| 17. Total registered tonnage, passenger ...       | 216    | 271     | 487      |  |           |
| 17½. Total registered tonnage, empty ...          | 182    | 17      | 199      |  |           |
| 18. Ton-mileage ...                               | 2,151  | 58,644  | 60,795   | Memorandum of Tollage.                               |           |
| 19. Estimated value of cargo Rs.                  | 14,390 | 73,608  | 87,998   |  | Rs. A. P. |
| 20. Number of passengers No.                      | 580½   | 757½    | 1,338    | 1. Balance not recovered on the 1st of the month ... | 41 2 9    |
| 21. Rafts, bamboos c. ft.                         | .....  | 47,450  | 47,450   |  |           |
| 22. Do., bullahs ..                               | .....  | 21,464  | 21,464   | 2. Tollage per month ...                             | 903 14 11 |
| 23. Estimated value of rafts Rs.                  | .....  | 9,510   | 9,510    |  |           |
| 24. Tollage on boats ..                           | 21-6-0 | 472-3-3 | 493-9-3  | 3. Total ...   | 945 1 8   |
| 25. Compounded tollage on boats Rs.               | 75 0-0 | 123-0-2 | 198-0-2  |  |           |
| 26. Tollage on rafts ..                           | .....  | 212-5 6 | 212-5-6  | 4. Amount credited in the accounts of the month ...  | 916 12 5  |
| 27. Total tollage on boats per ton-mile ...       | .....  | .....   | 0-0-2-18 |  |           |
| 28. Total tollage on rafts per 100 cubic feet ... | .....  | .....   | 0-4-11   | 5. Balance due at the end of the month ...           | 28 5 3    |

**ABSTRACT FOR THE MONTH OF APRIL 1887, AS COMPARED WITH THE CORRESPONDING  
MONTH OF THE PREVIOUS YEAR.**

| CANAL.                       | TRAFFIC, 1887-88. |                      |    | TRAFFIC, 1886-87. |                      |    | REMARKS. |    |    |
|------------------------------|-------------------|----------------------|----|-------------------|----------------------|----|----------|----|----|
|                              | During the month. | To end of the month. |    | During the month. | To end of the month. |    |          |    |    |
| <i>Orissa Circle.</i>        | Rs.               | A.                   | P. | Rs.               | A.                   | P. | Rs.      | A. | P. |
| Baldanda Canal System ...    | 510               | 2                    | 6  | 510               | 2                    | 6  | 881      | 7  | 7  |
| Chandrapura Canal System ... | 6,113             | 11                   | 0  | 6,113             | 11                   | 0  | 6,316    | 2  | 6  |
| High Level, Range I ...      | 892               | 12                   | 0  | 892               | 12                   | 0  | 980      | 1  | 9  |
| Ditto, " II ...              | 462               | 6                    | 0  | 462               | 6                    | 0  | 647      | 1  | 0  |
| Ditto, " III ...             | 128               | 6                    | 3  | 128               | 6                    | 3  | 341      | 11 | 9  |
| Total Orissa Circle ...      | 8,107             | 5                    | 9  | 8,107             | 5                    | 9  | 9,166    | 8  | 7  |
| <i>South-Western Circle.</i> |                   |                      |    |                   |                      |    |          |    |    |
| Bidnapore Canal ...          | 5,395             | 4                    | 0  | 5,395             | 4                    | 0  | 9,041    | 3  | 0* |
| Bidgellee Tidal Canal ...    | 5,445             | 3                    | 6  | 5,445             | 3                    | 6  | 7,501    | 8  | 9  |
| Total South-Western Circle   | 10,840            | 7                    | 6  | 10,840            | 7                    | 6  | 16,542   | 11 | 9  |
| <i>Sone Circle.</i>          |                   |                      |    |                   |                      |    |          |    |    |
| Batna Canal System ...       | 3,025             | 13                   | 6  | 3,025             | 13                   | 6  | 3,535    | 6  | 3  |
| Barrah ditto ...             | 1,409             | 13                   | 0  | 1,409             | 13                   | 0  | 938      | 12 | 9  |
| Buxar ditto ...              | 903               | 14                   | 11 | 903               | 14                   | 11 | 441      | 4  | 3  |
| Total Sone Circle ...        | 5,339             | 9                    | 5  | 5,339             | 9                    | 5  | 4,915    | 7  | 3  |
| GRAND TOTAL ...              | 24,287            | 6                    | 8  | 24,287            | 6                    | 8  | 30,624   | 11 | 7  |

\* Inclusive of Rs. 3,990 steamer hire.

**GOVERNMENT TRANSPORT SERVICE.**

| CANAL.                  | TRAFFIC, 1887-88. |        |                 |                      |        |                 | TRAFFIC, 1886-87. |        |                 |                      |        |                 |
|-------------------------|-------------------|--------|-----------------|----------------------|--------|-----------------|-------------------|--------|-----------------|----------------------|--------|-----------------|
|                         | During the month. |        |                 | To end of the month. |        |                 | During the month. |        |                 | To end of the month. |        |                 |
|                         | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. |
| <i>Orissa Circle.</i>   | No.               | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A. P.       | No.               | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A. P.       |
| High Level ...          | 655               | 1,558  | 1,027 3 11      | 655                  | 1,558  | 1,027 3 11      | 1,276             | 5,101  | 1,744 11 7      | 1,276                | 5,101  | 1,744 11 7      |
| Total Orissa Circle ... | 655               | 1,558  | 1,027 3 11      | 655                  | 1,558  | 1,027 3 11      | 1,276             | 5,101  | 1,744 11 7      | 1,276                | 5,101  | 1,744 11 7      |

**TOTAL NAVIGATION RECEIPTS.**

| CANAL.                | TRAFFIC, 1887-88. |                      |    | TRAFFIC, 1886-87. |                      |    | REMARKS. |    |    |              |
|-----------------------|-------------------|----------------------|----|-------------------|----------------------|----|----------|----|----|--------------|
|                       | During the month. | To end of the month. |    | During the month. | To end of the month. |    |          |    |    |              |
|                       | Rs.               | A.                   | P. | Rs.               | A.                   | P. | Rs.      | A. | P. |              |
| Orissa Canals ...     | 9,134             | 9                    | 8  | 9,134             | 9                    | 8  | 10,911   | 4  | 2  | 10,911 . 4 2 |
| Bidnapore Canal       | 5,395             | 4                    | 0  | 5,395             | 4                    | 0  | 9,041    | 3  | 0  | 9,041 3 0    |
| Bidgellee Tidal Canal | 5,445             | 3                    | 6  | 5,445             | 3                    | 6  | 7,501    | 8  | 9  | 7,501 8 9    |
| Sone Canals ...       | 5,339             | 9                    | 5  | 5,339             | 9                    | 5  | 4,915    | 7  | 3  | 4,915 7 3    |
| Total                 | 25,314            | 10                   | 7  | 25,314            | 10                   | 7  | 32,369   | 7  | 2  | 32,369 7 2   |

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Offg. Joint-Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.  
SOUTH-WESTERN CIRCLE.  
CALCUTTA AND EASTERN CANALS.

*Statement showing Quantities of Goods carried during the month of May 1887.*

| Number of boats or rafts.                          | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |           |                    | PRIVATE.  |           | REMARKS.                  |
|--|-----------------------------------|-------------------------------|-----------|--------------------|---|-----------|---------------------------|
|  |                                   | Quantity—Tons.                |           |                    | Quantity.   | Value.    |                           |
|  |                                   | Up.                           | Down.     | Total.             | Tons.   | Rupees.   |                           |
| 519  | 1. Grain ...                      | 8,000                         | .....     | 8,000              | 8,000   | 6,35,578  | For detail see next page. |
| 1  | 2. Cotton ...                     | 1                             | .....     | 1                  | 1   | 475       |                           |
| 83   | 3. Oilseeds ..                    | 1,128                         | 29        | 1,157              | 1,157   | 1,25,700  |                           |
| 211  | 4. Salt ...                       | 554                           | 2,572     | 3,126              | 3,126   | 2,62,575  |                           |
| .....  | 5. Piece-goods ...                | .....                         | .....     | .....              | .....   | .....     |                           |
| 5  | 6. Metal ...                      | 13                            | 2         | 15                 | 15  | 7,060     |                           |
| 65   | 7. Building materials             | 2,395                         | 5         | 2,395              | 2,395   | 38,968    |                           |
| 1,014  | 8. Miscellaneous* ...             | 5,581                         | 268       | 5,849              | 5,849   | 7,21,695  |                           |
| 439  | 9. Fuel ...                       | 9,630                         | 56        | 9,686              | 9,686   | 85,973    |                           |
| .....  | 10. Timber ...                    | .....                         | .....     | .....              | .....   | .....     |                           |
| .....  | 11. Bamboos ...                   | .....                         | .....     | .....              | .....   | .....     |                           |
| 2,337  | 12. Total ...                     | 27,297                        | 2,932     | 30,229             | 30,229  | 18,78,024 |                           |
| 2,735 & 2 rafts                                    | 13. Total of same month last year | 73,838 & 1,400 No.            | 2,384     | 76,222 & 1,400 No. | 76,222 & 1,400 No.                                | 26,70,403 |                           |
|  |                                   | Up.                           | Down.     | Total.             |   |           | Rs. A. P.                 |
| 14. Total number of boats plying cargo ... No.     |                                   | 1,963                         | 374       | 2,337              | Total tollage of month—<br>24 + 25 + 26 ...       |           | 19,398 13                 |
| 14a. Ditto empty ditto ...                         |                                   | .....                         | .....     | 1,926              | Total tollage of same month last year ...         |           | 18,919 12                 |
| 15. Total number of boats plying passenger ... No. |                                   | 95                            | 2         | 97                 |   |           |                           |
| 16. Total registered tonnage, cargo ...            |                                   | 86,476                        | 8,752     | 95,228             | Memorandum of Tollage.                            |           |                           |
| 17. Total registered tonnage, passenger ...        |                                   | 6,850                         | 75        | 6,925              |   |           |                           |
| 18. Ton-mileage ...                                |                                   | .....                         | .....     | .....              |   |           | Rs. A. P.                 |
| 19. Estimated value of cargo Rs.                   |                                   | 16,31,619                     | 2,46,405  | 18,78,024          | 1. Balance not recovered on the 1st of the month  |           | 308 9                     |
| 20. Number of passengers ...                       |                                   | 530                           | 7         | 537                | 2. Tollage per month ...                          |           | 19,398 13                 |
| 21. Rafts, bamboos c. ft.                          |                                   | .....                         | .....     | .....              | 3. Total ...                                      |           | 19,707 6                  |
| 22. Do, bullahs „                                  |                                   | .....                         | .....     | .....              |   |           |                           |
| 23. Estimated value of rafts ...                   |                                   | .....                         | .....     | .....              |   |           |                           |
| 24. Tollage on boats Rs.                           |                                   | 17,254-7-3                    | 2 144-6-6 | 19,398-13-9        |   |           |                           |
| 25. Compounded tollage on boats Rs.                |                                   | .....                         | .....     | .....              | 4. Amount paid into treasury during the month ... |           | 19,312 2                  |
| 26. Tollage on rafts „                             |                                   | .....                         | .....     | .....              |   |           |                           |
| 27. Total tollage on boats per ton-mile ...        |                                   | .....                         | .....     | .....              |   |           |                           |
| 28. Total tollage on rafts per 100 cubic feet ...  |                                   | .....                         | .....     | .....              | 5. Balance due at the end of the month ...        |           | 395 4                     |

## ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).

## CALCUTTA AND EASTERN CANALS.

| Number of boats or rafts. | Description.            | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE. <sup>3</sup> |          | REMARKS. |
|---------------------------|-------------------------|-------------------------------|-------|--------|----------|-----------------------|----------|----------|
|                           |                         | Quantity—Tons.                |       |        | Value.   | Quantity.             | Value.   |          |
|                           |                         | Up.                           | Down. | Total. | Rupees.  | Tons.                 | Rupees.  |          |
| 52                        | (a) Jute ..             | 1,165                         | ..... | 1,165  | 1,14,205 | 1,165                 | 1,14,205 |          |
| 54                        | (b) Jaggery ...         | 542                           | 14    | 556    | 54,530   | 556                   | 54,530   |          |
| 19                        | (c) Sugar ..            | 96                            | ..... | 96     | 21,400   | 96                    | 21,400   |          |
| 1                         | (d) Tobacco ...         | .....                         | 2     | 2      | 360      | 2                     | 360      |          |
| 226                       | (e) Fish ...            | 95                            | ..... | 95     | 26,672   | 95                    | 26,672   |          |
| 4                         | (f) Hides ...           | 1                             | ..... | 1      | 1,620    | 1                     | 1,620    |          |
| 77                        | (g) Poultry ...         | 9                             | ..... | 9      | 7,984    | 9                     | 7,984    |          |
| 65                        | (h) Hay and straw ...   | 362                           | ..... | 362    | 7,602    | 362                   | 7,602    |          |
| 12                        | (i) Oils ...            | 18                            | 82    | 100    | 14,050   | 100                   | 14,050   |          |
| 27                        | (k) Earthenware ...     | 33                            | ..... | 33     | 464      | 33                    | 464      |          |
| 477                       | (m) Other miscellaneous | 3,260                         | 170   | 3,430  | 4,72,808 | 3,430                 | 4,72,808 |          |
| 1,014                     | Total Miscellaneous...  | 5,581                         | 268   | 5,849  | 7,21,695 | 5,849                 | 7,21,695 |          |

# PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

### TOLLY'S NULLAH.

*Statement showing Quantities of Goods carried during the month of May 1887.*

| Number of<br>boats or<br>rafts.                      | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE.  |                 |                                |  | PRIVATE.                       |            | REMARKS.                   |
|--|--------------------------------------|--------------------------------|-----------------|--------------------------------|--|--------------------------------|------------|----------------------------|
|  |                                      | Quantity--Tons.                |                 |                                | Value.   | Quantity.                      | Value.     |                            |
|  |                                      | Up.                            | Down.           | Total.                         | Rupees.  | Tons.                          | Rupees.    |                            |
| 805  | 1. Grain ...                         | 5,379                          | .....           | 5,379                          | 3,36,063   | 5,379                          | 3,36,063   | * For detail see next pag. |
| 2  | 2. Cotton ...                        | 7                              | .....           | 7                              | 3,800  | 7                              | 3,800      |                            |
| 12   | 3. Oilseeds ...                      | 115                            | 32              | 147                            | 15,612   | 147                            | 15,612     |                            |
| 72   | 4. Salt ...                          | 441                            | 391             | 832                            | 69,900   | 832                            | 69,900     |                            |
| .....  | 5. Piece-goods ...                   | .....                          | .....           | .....                          | .....  | .....                          | .....      |                            |
| 6  | 6. Metal ...                         | 83                             | .....           | 83                             | 8,137  | 83                             | 8,137      |                            |
| 294  | 7. Building materials                | 2,914                          | .....           | 2,914                          | 10,977   | 2,914                          | 10,977     |                            |
| 774  | 8. Miscellaneous* ...                | 3,036                          | 74              | 3,110                          | 3,17,889   | 3,110                          | 3,17,889   |                            |
| 142  | 9. Fuel ...                          | 1,877                          | .....           | 1,877                          | 16,746   | 1,877                          | 16,746     |                            |
| 2 rafts  | 10. Timber ...                       | 2 No.                          | 19 No.          | 21 No.                         | 1,564  | 21 No.                         | 1,564      |                            |
| 13 "   | 11. Bamboos ...                      | 847 "                          | .....           | 847 "                          | 106  | 847 "                          | 106        |                            |
| 2,107 &<br>15 rafts                                  | 12. Total ...                        | 13,852 &<br>849 No.            | 497 &<br>19 No. | 14,349 &<br>868 No.            | 7,80,794   | 14,349 &<br>868 No.            | 7,80,794   |                            |
| 2,182 &<br>12 rafts                                  | 13. Total of same<br>month last year | 12,164<br>77 c. ft.<br>231 No. | 875             | 13,039<br>77 c. ft.<br>231 No. | 9,84,644   | 13,039<br>77 c. ft.<br>231 No. | 9,84,644   |                            |
|  |                                      | Up.                            | Down.           | Total.                         |  |                                | Rs. A. P.  |                            |
| 14. Total number of boats plying<br>cargo No.        |                                      | 1,946                          | 161             | 2,107                          | Total tollage of month—<br>24 + 25 + 26 ...                |                                | 7,467 6 6  |                            |
| 14a. Ditto empty ditto ...                           |                                      | .....                          | .....           | 750                            |  |                                |            |                            |
| 15. Total number of boats plying<br>passenger No.    |                                      | 220                            | 8               | 228                            | Total tollage of same<br>month last year ...               |                                | 7,157 11 9 |                            |
| 16. Total registered tonnage,<br>cargo ...           |                                      | 42,763                         | 1,784           | 44,547                         | Memorandum of Tollage.                                     |                                |            |                            |
| 17. Total registered tonnage, pas-<br>senger ...     |                                      | 15,325                         | 900             | 16,225                         |  |                                |            |                            |
| 18. Ton-mileage ...                                  |                                      | .....                          | .....           | .....                          | Rs. A. P.  |                                |            |                            |
| 19. Estimated value of cargo Rs.                     |                                      | 7,30,224                       | 48,900          | 7,79,124                       | 1. Balance not recovered<br>on the 1st of the<br>month ... |                                | 3 6 1 3    |                            |
| 20. Number of passengers ...                         |                                      | 1,437                          | 53              | 1,490                          | 2. Tollage per month ...                                   |                                | 7,467 6 6  |                            |
| 21. Rafts, bamboos c. ft.                            |                                      | 847                            | .....           | 847                            | 3. Total ...   |                                | 7,773 7 9  |                            |
| 22. Do., bullahs "                                   |                                      | .....                          | " "             | .....                          | 4. Amount paid into<br>treasury during the<br>month ...    |                                | 7,601 5 3  |                            |
| 23. Estimated value of rafts Rs.                     |                                      | 186                            | 1,484           | 1,670                          | 5. Balance due at the end<br>of the month ...              |                                | 172 2 6    |                            |
| 24. Tollage on boats "                               |                                      | 7,019-4-6                      | 437-6-0         | 7,456-10-6                     |  |                                |            |                            |
| 25. Compounded tollage on<br>boats Rs.               |                                      | .....                          | .....           | .....                          |  |                                |            |                            |
| 26. Tollage on rafts "                               |                                      | 3-10-0                         | 7-2-0           | 10-12-0                        |  |                                |            |                            |
| 27. Total tollage on boats per ton-<br>mile ...      |                                      | .....                          | .....           | .....                          |  |                                |            |                            |
| 28. Total tollage on rafts per 100<br>cubic feet ... |                                      | .....                          | .....           | .....                          |  |                                |            |                            |

## ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).

## TOLLY'S NULLAH.

| Number of<br>boats or<br>rafts. | DESCRIPTION.                  | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE.  |          | REMARKS. |
|---------------------------------|-------------------------------|-------------------------------|-------|--------|----------|-----------|----------|----------|
|                                 |                               | Quantity—Tons.                |       |        | Value.   | Quantity. | Value.   |          |
|                                 |                               | Up.                           | Down. | Total. | Rupees.  | Tons.     | Rupees.  |          |
| 1                               | (a) Jute . . .                | 2                             | ..... | 2      | 175      | 2         | 175      |          |
| 89                              | (b) Jaggery ...               | 551                           | ..... | 551    | 53,987   | 551       | 53,987   |          |
| 1                               | (c) Sugar ...                 | 5                             | ..... | 5      | 1,200    | 5         | 1,200    |          |
| 23                              | (d) Tobacco ...               | 124                           | 11    | 135    | 34,200   | 135       | 34,200   |          |
| 69                              | (e) Fish ...                  | 21                            | ..... | 21     | 5,850    | 21        | 5,850    |          |
| .....                           | (f) Hides ...                 | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| 1                               | (g) Poultry ...               | .....                         | ..... | .....  | 50       | .....     | 50       |          |
| 121                             | (h) Hay and straw             | 566                           | ..... | 566    | 11,880   | 566       | 11,880   |          |
| 41                              | (i) Oils . . .                | 271                           | 7     | 278    | 38,875   | 278       | 38,875   |          |
| 144                             | (k) Earthenware ...           | 8                             | ..... | 8      | 2,336    | 8         | 2,336    |          |
| 284                             | (m) Other miscella-<br>neous. | 1,488                         | 56    | 1,544  | 1,69,336 | 1,544     | 1,69,336 |          |
| 774                             | Total Miscellaneous ...       | 3,036                         | 74    | 3,110  | 3,17,889 | 3,110     | 3,17,889 |          |

**ABSTRACT FOR THE MONTH OF MAY 1887 AS COMPARED WITH THE  
CORRESPONDING MONTH OF THE PREVIOUS YEAR.**

|                                 | TRAFFIC, 1887-88. |                      | TRAFFIC, 1886-87. |                      |
|---------------------------------|-------------------|----------------------|-------------------|----------------------|
|                                 | During the month. | To end of the month. | During the month. | To end of the month. |
|                                 | Rs. A. P.         | Rs. A. P.            | Rs. A. P.         | Rs. A. P.            |
| Calcutta and Eastern Canals ... | 19,398 13 9       | 43,476 10 3          | 18,919 12 0       | 41,567 10 0          |
| Tolly's Nullah ...              | 7,467 6 6         | 15,970 7 3           | 7,157 11 9        | 13,683 12 9          |
| Total ...                       | 26,866 4 3        | 59,447 1 6           | 26,077 7 9        | 55,251 6 9           |

CALCUTTA,  
The 5th July 1887. }

C. W. I. HARRISON, *Lieut-Col., R.E.,*  
*Offg. Joint-Secretary to the Government of Bengal.*



**PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.**  
**SOUTH-WESTERN CIRCLE.**

NUDDA RIVERS.

*Statement showing Quantities of Goods carried during the month of May 1887.*

| Number of boats or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |                           |                            |  | PRIVATE.                   |               | REMARKS.  |
|---------------------------|---|-------------------------------|---------------------------|----------------------------|--|----------------------------|---------------|-----------|
|                           |   | Quantity—Tons.                |                           |                            | Value.   | Quantity.                  | Value.        |           |
|                           |   | Up.                           | Down.                     | Total.                     | Rupees.  | Tons.                      | Rupees.       |           |
| 710                       | 1. Grain ...                                  | 1,050                         | 6,487                     | 7,537                      | 3,29,628   | 7,537                      | 3,29,628      |           |
| 83                        | 2. Cotton ...                                 | 101                           | 876                       | 977                        | 1,01,684   | 977                        | 1,01,684      |           |
| 157                       | 3. Oilseeds ...                               | 1,052                         | .....                     | 1,052                      | 88,434   | 1,052                      | 88,434        |           |
| .....                     | 4. Salt ...                                   | .....                         | .....                     | .....                      | .....  | .....                      | .....         |           |
| 17                        | 5. Piece-goods ...                            | 44                            | 13                        | 57                         | 58,520   | 57                         | 58,520        |           |
| 25                        | 6. Metal ...                                  | 92                            | 125                       | 217                        | 9,327  | 217                        | 9,327         |           |
| 484                       | 7. Building materials ...                     | 849                           | 1,332                     | 2,181                      | 3,62,261   | 2,181                      | 3,62,261      |           |
| 46                        | 8. Miscellaneous ...                          | 141                           | 96                        | 237                        | 1,796  | 237                        | 1,796         |           |
| 44 rafts                  | 9. Fuel ...                                   | 2,343 c. ft.                  | 15,501 c. ft.             | 17,844 c. ft.              | 15,932   | 17,844 c. ft.              | 15,932        |           |
| .....                     | 10. Timber ...                                | .....                         | .....                     | .....                      | .....  | .....                      | .....         |           |
| .....                     | 11. Bamboos ...                               | .....                         | .....                     | .....                      | .....  | .....                      | .....         |           |
| 1,522 & 44 rafts.         | 12. Total ...                                 | { 3,329 & 2,343 c. ft. }      | { 8,929 & 15,501 c. ft. } | { 12,258 & 17,844 c. ft. } | { 9,67,582 }   | { 12,258 & 17,844 c. ft. } | { 9,67,582 }  |           |
| 1,702 & 35 rafts          | 13. Total of same month last year             | { 8,180 & 25 No. }            | { 16,399 & 350 No. }      | { 24,579 & 375 No. }       | { 12,41,472 }  | { 24,579 & 375 No. }       | { 12,41,472 } |           |
|                           |   | Up.                           | Down.                     | Total.                     |  |                            |               | Rs. A. P. |
| 14.                       | Total number of boats plying cargo No.        | 633                           | 889                       | 1,522                      | Total tollage of month—<br>24 + 25 + 26 ...          |                            |               | 6,821 10  |
| 14a.                      | Total number of empty boats and steamers ...  | 537                           | 131                       | 668                        |  |                            |               |           |
| 15.                       | Total number of boats plying passenger No.    | 421                           | 697                       | 1,118                      | Total tollage of same month last year ...            |                            |               | 7,679 2   |
| 16.                       | Total registered tonnage, cargo ...           | 1,51,587                      | 3,57,664                  | 5,09,251                   |  |                            |               |           |
| 17.                       | Total registered tonnage, passenger ...       | 152                           | 168                       | 320                        | Memorandum of Tollage.                               |                            |               |           |
| 18.                       | Ton-mileage ...                               | .....                         | .....                     | .....                      |  |                            |               | Rs. A. P. |
| 19.                       | Estimated value of cargo ...                  | 3,67,441                      | 5,84,209                  | 9,51,650                   | 1. Balance not recovered on the 1st of the month ... |                            |               | 539 5     |
| 20.                       | Number of passengers ...                      | 703                           | 2,097                     | 2,800                      | 2. Tollage per month ...                             |                            |               | 6,821 10  |
| 21.                       | Rafts, bamboos c. ft.                         | .....                         | .....                     | .....                      | 3. Total ...   |                            |               | 7,360 15  |
| 22.                       | Do., bullahs ..                               | 2,343                         | 15,501                    | 17,844                     | 4. Amount paid into treasury during the month ...    |                            |               | 7,005 12  |
| 23.                       | Estimated value of rafts ...                  | 4,434                         | 11,496                    | 15,932                     | 5. Balance due at the end of the month ...           |                            |               | 355 3     |
| 24.                       | Tollage on boats Rs.                          | 2,396-4-6                     | 4,266-11-6                | 6,663-0-0                  |  |                            |               |           |
| 25.                       | Compounded tollage on boats Rs.               | .....                         | .....                     | .....                      |  |                            |               |           |
| 26.                       | Tollage on rafts ..                           | 30-4-6                        | 128-5-6                   | 158-10-0                   |  |                            |               |           |
| 27.                       | Total tollage on boats per ton-mile ...       | .....                         | .....                     | .....                      |  |                            |               |           |
| 28.                       | Total tollage on rafts per 100 cubic feet ... | .....                         | .....                     | .....                      |  |                            |               |           |

CALCUTTA,  
 The 5th July 1887.

C. W. I. HARRISON, *Lieut.-Col., R.E.,*  
*Offy. Joint-Secretary to the Government of Bengal.*

## CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 2nd July 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>2ND JULY 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>3RD JULY 1886. |                     |          |
|--------------------|---|---------------------|----------|---|---------------------|----------|
|                    | Number of<br>boats.                         | Weight of<br>cargo. | Tollage. | Number of<br>boats.                         | Weight of<br>cargo. | Tollage. |
|                    | No.   | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy ... | 334   | 49,600              | 778      | 225   | 42,006              | 783      |
| Jute ...           | 16  | 5,975               | 103      | 6   | 2,525               | 53       |
| Firewood ...       | 145   | 77,300              | 1,158    | 92  | 25,845              | 411      |
| Other articles ... | 733   | 2,02,550            | 3,165    | 690   | 2,75,580            | 2,591    |
| Total ...          | 1,228                                       | 3,35,425            | 5,198    | 1,013                                       | 3,45,956            | 3,838    |

## Weekly Return of Traffic Receipts on Indian Railways.

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D. AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ending 18th June 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated), including steam boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|---|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |   |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.     | Rs. A. P.   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                | 120,347               | 54,030 0 0         | 3,80,100 0                       | 55,050 0 0    | 11,620 0 0  | 1,20,700 0 0    | 19,860                   | 15,368       | 35,218  |
| Or per mile of railway ...                                    | 187                   | 84 0 0             | 599 0                            | 85 0 0        | 1 0 0*  | 170 0 0         | .....                    | .....        | .....   |
| For previous 23 weeks of half-year ...                        | 3,114,440             | 14,55,797 0 0      | 1,21,46,935 0                    | 17,31,046 0 0 | 2,96,038 0 0                                      | 34,82,991 0 0†  | 454,895                  | 437,196      | 891,691 |
| Total for 24 weeks ...  | 3,234,787             | 15,09,827 0 0      | 1,25,33,035 0                    | 17,86,096 0 0 | 3,07,659 0 0                                      | 36,03,581 0 0   | 474,555                  | 452,554      | 927,109 |
| COMPARISON.   |                       |                    |                                  |               |   |                 |                          |              |         |
| Total for corresponding week of previous year ...             | (a) 164,542           | 60,321 0 0         | 3,22,523 0                       | 53,905 0 0    | 12,124 0 0  | 1,26,350 0 0    | 17,473                   | 14,124       | 31,597  |
| Per mile of railway corresponding period of previous year ... | 272                   | 99 0 0             | 532 0                            | 89 0 0        | .....   | 189 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 3,154,212             | 14,11,838 0 0      | 1,38,30,577 0                    | 18,00,016 0 0 | 3,15,010 0 0                                      | 35,29,564 0 0   | 417,517                  | 408,074      | 815,591 |

a) Includes monthly tickets, viz., 41,813.

Steam-boat earnings, Rs. 10,800, have been excluded from the calculation.

Audited up to 31st March 1887.

Viz.—Dacca and Assam-Bihar Sections are also published separately.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 18TH JUNE 1886. |              |                  | RECEIPTS FOR WEEK ENDING 18TH JUNE 1887. |              |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 18TH JUNE 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 18TH JUNE 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|--------------|------------------|--|--------------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts.    | Per mile worked. | Mean mileage worked.                     | Receipts.    | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
| 606                                      | Rs. 1,26,350 | Rs. 208          | 645                                      | Rs. 1,20,700 | Rs. 187          | 606   | Rs. 15,01,017   | Rs. 234          | 615   | Rs. 15,22,188   | Rs. 215          | .....                   | Rs. 38,129              |

## DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 18th June 1887, on 86 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated) | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                            |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                  | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 12,000                | 3,006 0 0          | 5,200 0                          | 500 0 0    | 50 0 0                     | 4,450 0 0       | 2,161                    | 803          | 2,964  |
| Or per mile of railway ...                                    | 140                   | 45 0 0             | 60 0                             | 6 0 0      | 1 0 0                      | 52 0 0          | .....                    | .....        | .....  |
| For previous 23 weeks of half-year ...                        | 294,643               | 98,781 0 0         | 3,44,881 0                       | 28,224 0 0 | 3,266 0 0                  | 1,30,271 0 0*   | 50,466                   | 24,856       | 75,322 |
| Total for 24 weeks ...  | 306,643               | 1,02,681 0 0       | 3,50,081 0                       | 28,724 0 0 | 3,316 0 0                  | 1,34,721 0 0    | 52,627                   | 25,689       | 78,316 |
| COMPARISON.   |                       |                    |                                  |            |                            |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 9,260                 | 3,006 0 0          | 3,568 0                          | 511 0 0    | 60 0 0                     | 3,666 0 0       | 933                      | 397          | 1,330  |
| Per mile of railway corresponding period of previous year ... | 108                   | 35 0 0             | 41 0                             | 6 0 0      | .....                      | 41 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 250,859               | 67,387 0 0         | 3,32,240 0                       | 29,764 0 0 | 5,143 0 0                  | 1,02,594 0 0    | 20,503                   | 34,630       | 55,133 |

\* Audited up to 31st March 1887.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

| RECEIPTS FOR WEEK ENDING 18TH JUNE 1886. |           |                  | RECEIPTS FOR WEEK ENDING 18TH JUNE 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 18TH JUNE 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 18TH JUNE 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
| 20                                       | Rs. 8,892 | Rs. 43           | 20                                       | Rs. 8,892 | Rs. 43           | 20  | Rs. 8,892       | Rs. 43           | 20  | Rs. 8,892       | Rs. 43           |                         |                         |

## ASSAM-BEHAR STATE RAILWAY.

## PUENNAH SECTION.

*Approximate Return of Traffic for week ended 18th June 1887, on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week...                                 | 2,500                 | 850 0 0            | 20,000 0                         | 2,000 0 0  | 10 0 0                      | 2,880 0 0       | 470                      | 608          | 1,078  |
| Or per mile of railway ...                                    | 64                    | 22 0 0             | 513 0                            | 51 0 0     | .....                       | 73 0 0          | .....                    | .....        | .....  |
| For previous 10 weeks of half-year ...                        | 25,908                | 9,021 0 0          | 2,34,701 0                       | 23,225 0 0 | 100 0 0                     | 32,400 0 0*     | 4,834                    | 6,254        | 11,088 |
| Total for 11 weeks ...  | 28,408                | 9,871 0 0          | 2,54,701 0                       | 25,225 0 0 | 170 0 0                     | 35,280 0 0      | 5,304                    | 6,862        | 12,166 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

\* Audited up to week ending

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## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 10TH JUNE 1886. |           |                  | RECEIPTS FOR WEEK ENDING 18TH JUNE 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 19TH JUNE 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 18TH JUNE 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
| .....                                    | .....     | .....            | 39                                       | Rs. 2,860 | Rs. 73           | .....   | .....           | .....            | 39  | Rs. 35,280      | Rs. 82           | Rs. 35,280              | .....                   |

## TIRHOOT STATE RAILWAY.

*Approximate Return of Traffic for the week ending 18th June 1887, on 240 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week on 240 miles open ...                    | 38,274                | 13,730 13 6        | 2,04,017 20                      | 18,379 0 0    | 3,613 12 8                  | 35,753 10 2     | 5,754                    | 7,106        | 12,860  |
| Or per mile of railway ...  | 154                   | 55 2 0             | 819 0                            | 73 13 0       | 3 0 0                       | 131 15 0*       | .....                    | .....        | .....   |
| For previous 23 weeks of half-year ...                              | 880,505               | 3,30,318 2 6       | 39,77,426 20                     | 3,82,121 0 0  | 73,041 3 4                  | 7,04,480 5 10   | 130,951                  | 138,000      | 268,951 |
| Total for 24 weeks ...  | 927,870               | 3,53,049 9 0       | 40,81,344 0                      | 4,00,500 0 0  | 76,655 0 0                  | 8,30,234 0 0    | 136,705                  | 145,826      | 282,531 |
| COMPARISON.   |                       |                    |                                  |               |                             |                 |                          |              |         |
| Total for corresponding week of previous year on 240 miles open ... | 40,304                | 13,735 14 1        | 1,32,927 0                       | 12,675 15 0   | 4,211 11 10                 | 30,623 7 11     | 5,889                    | 4,071        | 9,960   |
| Per mile of railway corresponding week of previous year ...         | 165                   | 55 13 0            | 540 0                            | 51 8 0        | 5 1 0                       | 112 6 0*        | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...                    | 880,296               | 3,07,238 10 11     | 32,43,285 20                     | 3,25,004 7 11 | 81,659 1 3                  | 7,13,396 4 1    | 110,976                  | 121,610      | 232,586 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of railway."

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tirhoot State Railway.*

| RECEIPTS FOR WEEK ENDING 10TH JUNE 1886. |            |                  | RECEIPTS FOR WEEK ENDING 18TH JUNE 1887. |            |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 19TH JUNE 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 18TH JUNE 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|------------|------------------|--|------------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts.  | Per mile worked. | Mean mileage worked.                     | Receipts.  | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
| 240                                      | Rs. 30,623 | Rs. 124          | 240                                      | Rs. 35,754 | Rs. 144          | 240   | Rs. 3,84,087    | Rs. 1,561        | 240   | Rs. 4,17,302    | Rs. 1,076        | Rs. 33,115              | .....                   |



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JULY 13, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta. or Twelve Rupees if sent by Post.*

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### ANNUAL REPORT ON THE ADMINISTRATION OF CIVIL JUSTICE IN THE SONTAL PERGUNNAHS FOR 1886.

#### RESOLUTION.

##### JUDICIAL.

*Calcutta, the 11th July 1887.*

READ—

The Annual Report on the Administration of Civil Justice in the Sontal Pergunnahs for the year 1886.

Read also—

The Reports for the years 1884 and 1885, and the orders of Government recorded thereon.

The following statement shows the progress of civil litigation during the past three years :—

|                 | INSTITUTED |        |        | DISPOSED OF |        |        | PENDING |       |       |
|-----------------|------------|--------|--------|-------------|--------|--------|---------|-------|-------|
|                 | 1884.      | 1885.  | 1886.  | 1884.       | 1885.  | 1886.  | 1884.   | 1885. | 1886. |
| Civil suits     | 6,605      | 5,258  | 5,841  | 6,408       | 5,517  | 5,550  | 804     | 635   | 926   |
| Rent            | 3,583      | 3,280  | 2,258  | 3,611       | 3,446  | 2,167  | 406     | 239   | 330   |
| Title           | 2,873      | 2,993  | 2,705  | 2,432       | 2,718  | 2,988  | 763     | 1,039 | 756   |
| Civil execution | 3,470      | 3,130  | 3,301  | 3,401       | 3,416  | 2,858  | 823     | 537   | 980   |
| Rent            | 2,431      | 2,857  | 1,922  | 2,185       | 2,345  | 1,855  | 708     | 715   | 782   |
| Title           | 791        | 665    | 874    | 738         | 727    | 714    | 159     | 97    | 257   |
| Total           | 19,813     | 17,683 | 16,901 | 18,835      | 18,169 | 16,132 | 3,748   | 3,262 | 4,031 |

The increase in the number of civil suits, and the large decrease in the number of rent-suits, are both attributed to the same cause, namely, the sale question. The explanation is intelligible in the former case, as a large number of title-suits were instituted to set aside sales of land, public feeling being much disturbed on this subject, and the legality of such sales being widely questioned. But it is not so easy to understand how the sale question had the effect of reducing the number of rent-suits. Perhaps the explanation is to be found in the fact, alluded to in paragraph 10 of the Commissioner's report, that many vendors of land remained on as bhaolidar tenants of the purchasers, and that the latter did not care to file rent-suits while their titles as purchasers were being assailed in the courts. The Deputy Commissioner also states that the number of rent-suits diminished owing probably to the good harvests. As regards the sale question, it is only necessary to remark here that an enquiry has been made, and that the special reports submitted by the Deputy Commissioner and the Commissioner are under the consideration of this Government in the Revenue Department.

2. *Practice and Procedure.*—Both in the report for 1885, and in his present report, the Commissioner has expressed apprehensions lest the simplicity of the special rules in force in the Pergunnahs should be supplanted by the elaborate and tedious procedure of the Civil Courts in Regulation districts; and the Deputy Commissioner also thinks that possibly the case-work is being done in too elaborate a manner, and states that he has endeavoured, as far as possible, to encourage simplicity in the method of its disposal. Sir Stuart Bayley is inclined to think that, if executive administration is being sacrificed to a press of judicial work, the fault must lie not so much in the laws as in the officers who administer them. The principle embodied in the civil rules is quite inconsistent with any sacrifice of substance to form, their object being, as was laid down by their first originator, the late Sir George Yule, "to cause speedy and just decisions with not more of form than is necessary to secure justice." The Commissioner justly remarks that, if these rules are adhered to, there need be no cause for complaint. At the same time the Lieutenant-Governor is not disposed to agree with the Commissioner in thinking that short written statements of claim should be received only in exceptional cases. The rules permit a plaintiff to make his claim *visâ voce* or by means of a brief written statement, and it is doubtless often convenient and desirable that a claim should be presented in writing. Petition-writers are required to take out licenses, and so long as the courts have the power of fixing their number, there is no reason why such competition should spring up among them as to make them degenerate into touts and case-mongers. The increased demand for processes is a feature which should be discouraged as far as the rules permit; but no doubt some such increase must be naturally expected from year to year. The rules permit a suitor to serve processes himself, or through the heads of villages in which witnesses reside, and it is stated that many suitors would avail themselves of this privilege, but that the vernacular establishments are overworked, and the suitors would, therefore, have to wait some time. As the petition-writers are licensed and thoroughly under the control of the courts to which they are attached, there appears to be no reason why they should not be allowed to write out the processes on forms supplied to them. This would save the time of the amla and expedite the course of justice; and the Commissioner is requested to report if such a plan cannot be introduced at all events experimentally. Sir Stuart Bayley notes with satisfaction that the Deputy Commissioner has made a stand against the unnecessary elaboration of judicial work. Appearance by agent should not be permitted except for special reasons: postponements, which are as expensive to Government through its officers as to the parties themselves, should only be allowed when justice requires them: arbitration should be encouraged in complicated cases: the staff of process-servers should be closely supervised: and, as the proportion of cases appealed is very small, it should be the object of deciding officers not to write lengthy judgments to fortify the record, so to speak, against a possible appeal, but to make it as brief and succinct as is compatible with the supply of supplementary information, in case an appeal should actually be instituted. The record should be enough to show any reasonable man that the facts of the case have been fairly enquired into, the grounds of decision, and no more.

There are cogent reasons of policy and expedience for the performance of the executive and judicial work of the Sontal Pergunnahs by the same officers; and if, as the Commissioner justly remarks, an officer sits trying civil suits all day long inside four walls, he is not likely to be conversant with what is going on in the interior of his sub-division. The Lieutenant-Governor fully agrees with the Deputy Commissioner that the more good executive work an officer does, the more is he likely to reduce his judicial work by nipping quarrels in the bud; while, as to those cases that do come before him, a thorough knowledge of his sub-division and of the people in it conduces to their more speedy and satisfactory disposal. The Judicial is of no less importance than the Executive work, and must be properly and carefully disposed of; but Sir Stuart Bayley looks to the Commissioner to see that the one is not altogether sacrificed to the other. It was alleged in the report for 1885—and the point is again pressed on the attention of Government in the report under review—that the large employment of barristers and pleaders in what may be called the plains portion of the Sontal Pergunnahs tends to the introduction of lengthy and more elaborate procedure, and that laws which are necessary in more advanced districts are not adapted for a simple race. As regards the last allegation, Sir Stuart Bayley can only repeat and endorse the answer given by this Government to a similar complaint made by the Commissioner as long ago as 1873, that where particular laws have been introduced, this has been done deliberately, and that they will not be withdrawn unless it is shown that real and serious evils result in practice from their operation, which cannot be got over by good and discreet officers. It will not suffice to show that indiscreet officers thirsting for technicalities may abuse the Acts; in that case the officers will be changed, and not the laws. As to the larger employment of legal practitioners, it is only in suits exceeding the value of one thousand rupees that they can appear as a right (proviso to section 2, Act XXXVII of 1855), and the total number of such suits must be very few, while the number in which Sontals are parties must be even fewer. This, then, is a matter over which the courts have full control.

3: *Civil Suits*.—The increase in the number of civil suits, that is suits for money and moveable property, was common to all sub-divisions except Dughur and Rajmehul. The Deputy Commissioner has referred to the operation of the usury clauses in section 6 of Regulation III of 1872, and the Commissioner remarks that there is nothing new to be said on the matter, that the clauses are still in force, not being affected, *quoad* cases not exceeding Rs. 1,000 in value, by the High Court ruling in the case of Ram Narain Naik. In this the Commissioner is correct: but the Lieutenant-Governor does not understand the Deputy Commissioner to question the applicability of those clauses, but merely to entertain doubts as to their correct interpretation. This is a matter on which orders cannot well be passed in a Resolution; if the Commissioner thinks it necessary, a special report can be submitted.

4: *Rent-suits*.—The number of rent-suits decreased from 3,250 to 2,258. There has been a steady decrease in these suits since 1880, when the number was as high as 10,994. As was remarked in paragraph 15 of the Commissioner's report for 1881, many of these were suits in which questions of title were involved, and the large diminution has been due to the action of the settlement in determining such questions. Again, it was stated in paragraph 3 of the Resolution on the report for 1882:—"The Commissioner observes that the majority of the suits appearing hitherto under the head of rent-suits were really *jote*-suits, that is, suits in which the tenants, for the time virtually proprietors, contended among themselves for possession of disputed plots." Moreover, the rule that a tenant who sub-lets can recover no more than the settlement rent recorded in respect of the land must tend to prevent the institution of rent-suits. The very large decrease during the year under review is no doubt partly due to a good harvest; and partly to the transfer of the Rohini estate to the Court of Wards, which now collects rents under the certificate procedure. The fact that *bhaoli* tenures are so much in vogue shows that ryots will sometimes freely give to the mahajan more than the latter can gain in the courts. These tenures are said to be extremely common in those villages where sales have been numerous, the vendors holding on as *bhaolidars* under the mahajan purchasers. As the courts will only decree the recorded settlement money

rents, the prevalence of such holdings indicates the existence of good feeling and a considerable amount of confidence between creditor and debtor. As remarked in paragraph 3 of the Resolution on the report for 1885, the Lieutenant-Governor would like to have some more detailed information as to the extent of such phaoi holdings, and the causes for their increase.

5. *Title suits.*—The number of title-suits was 2,705 in 1886 as compared with 2,993 in the preceding year. Under this head the Deputy Commissioner remarks that many suits of an unusual character have been contributed by the sale question. As has been stated above, the sale question is under the Lieutenant-Governor's consideration and will be separately dealt with. Owing to the uncertainty which had for some time hung over the question, the large number of 257 execution proceedings remained pending in title cases against only 97 in the previous year. "The Courts," it is said, "are opposed to sales of land while it is still uncertain how far these will be legal, and proceedings hang fire."

6. *Appeals.*—There is no appeal as of right, but under rule 42 of the Rules of Civil Procedure, the Sub-divisional Officers, the Deputy Commissioner and the Commissioner have power to revise the proceedings of their subordinates. These powers of revision should not, however, be converted into regular appeals. Out of over 10,000 cases disposed of, appeals were instituted in 893, 539 appeals being from subordinates in sub-divisions to the Sub-divisional Officers, and 354 being to the Deputy Commissioner. This latter number would not have been so large but for the uncertainty of the law on the sale question, 242 out of the 354 appeals being in title-suits. Of the appeals to Sub-divisional Officers, Deoghur accounts for nearly half. The orders of the lower courts were upheld in about 50 per cent. of the appeals, and there were reversals in only 47 cases; many cases had to be remanded owing to the difficulties attending the sale question. Of the appeals to the Deputy Commissioner, 307 were actually heard—30 decrees being reversed and 150 confirmed, while there were 127 remands. The largest number of appeals came from Deoghur, where litigants are said to be very obstinate, and where, besides the disputes among the Pundas, there are other burning questions, such as the right to fell timber and the sale of mustagiri rights. 67 applications for revision were made to the Commissioner, which, with 28 pending cases, gave a total of 95 cases for disposal. Out of 73 cases disposed of decrees were reversed in 10 only, and 26 cases were remanded. It is not stated whether there were any appeals to the High Court.

7. *Receipts of Courts.*—The receipts of the courts during the year amounted to Rs. 72,025-8 as compared with Rs. 73,905-13 in the previous year, a decrease which does not call for any special explanation. The Deputy Commissioner has not yet found time to submit the report called for in paragraph 6, of last year's Resolution on the subject of the valuation of suits. The Lieutenant-Governor hopes to receive it at an early date. It is of great importance that there should be complete uniformity in the administration of the Courts-fecs Act.

8. The present Deputy Commissioner only joined the district in June 1886, and this furnishes some excuse for the fact that his report is defective in important particulars. The report for the present year should contain fuller information regarding execution proceedings, and other matters of interest should be noticed, such as the relation of landlords and tenants, the position of headmen, the nature of suits instituted, and the action of the courts on the well-being of the Sontal people.

9. In conclusion, the Lieutenant-Governor is of opinion that the administration of the Sontal Pergunnahs is being carried on not only cheaply but efficiently. The work requires a special training, and many of the officers employed have spent much of their service within the district. The Civil and Criminal judicial work, and the whole of the executive work of the district, are carried on by the same officers. Of the nine officers vested with civil powers corresponding to a Munsif, four draw less, and two not more, than probationer Munsifs. One draws the pay of the lowest grade of Munsifs, and two others that of the second grade. Of the seven officers exercising the powers of a Subordinate Judge, one receives the pay of a



third grade Munsif, two that of a first grade Munsif, and another less than that of the lowest grade of Subordinate Judges. The remaining three receive less than the pay of a second grade Subordinate Judge. The facts mentioned by the Deputy Commissioner in paragraph 20 of his Report show that some increase of establishments is required, and the Lieutenant-Governor will await the receipt of a definite proposition statement. The Lieutenant-Governor notices with satisfaction the good work done by the Sub-divisional Officers of Godda and Pakour. The remarks concerning the merits of other officers will be noted in the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

*Offg. Chief Secretary to the Government of Bengal.*

### LIBERALITY OF BABOO HARO CHANDRA CHAUDHURI IN AID OF EDUCATION.

GENERAL DEPARTMENT—EDUCATION.

*Calcutta, the 12th July 1887.*

#### RESOLUTION.

#### READ—

An endorsement from the Director of Public Instruction, No. 4227, dated the 27th June 1887, forwarding a letter from the Inspector of Schools, Eastern Circle, Dacca.

BABOO HARO CHANDRA CHAUDHURI, a zemindar of Sherepur, in the Mymensingh district, has promised a contribution of Rs. 100 a month towards the maintenance of the Sherepur Victoria Academy, which, in commemoration of the Jubilee year of the reign of Her Majesty the Queen-Empress of India, has been raised from the status of a middle English school to that of a high school. He has also made a donation of Rs. 900 to improve the accommodation of the school.

2. The Lieutenant-Governor tenders his thanks to Baboo Haro Chandra Chaudhuri for his liberality.

ORDER.—Ordered that a copy of this Resolution be published in the *Calcutta Gazette*, and that a copy of it be forwarded to the Director of Public Instruction for information, and for communication to the donor.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

*Secretary to the Government of Bengal.*

The following is published for general information.

P. NOLAN,

*Secretary to the Government of Bengal.*

**ADMINISTRATION REPORT OF THE METEOROLOGICAL REPORTER  
TO THE GOVERNMENT OF BENGAL, FOR THE YEAR 1886-87.**

THE Department was under my control during the first half of the official year, when Mr. John Eliot, the permanent Meteorological Reporter to the Government of Bengal, returned from furlough and took over charge of the duties from the 24th September 1886, from which time up to the end of the year he remained in charge. Mr. Eliot has since been appointed to officiate for Mr. Blanford as Meteorological Reporter to the Government of India, with effect from the 6th May, and it has therefore fallen upon me as Officiating Meteorological Reporter to the Government of Bengal to submit this annual report.

There has hardly been any change of importance in the administration of the Department during the year under review. The system of working adopted in previous years has been steadily maintained, and fairly complete registers of observations have been received from almost all the meteorological stations under my control in Bengal and Assam. This standard of work is kept up by frequent inspection of the observatories either by the Reporter or the head clerk, and by a careful and critical inspection of the observations sent in to the head office. During the year under review it has been found advisable, in order to enforce attention to certain cases of neglect and carelessness in taking the readings of the instruments, to institute a system of small fines on the observers for reporting incorrect observations. It has been found that this system is far more effective than the former plan of simply writing reprimanding letters. Incorrect readings of the instruments are now comparatively rare. The Superintendents of the observatories, whose duties are in most cases honorary, have also afforded much help to the Department in supervising the work of the observers; and have contributed in no small degree to the accuracy of the returns.

The number of observatories in Bengal and Assam from which returns were received in this office during 1886-87 were—

- 1 First class.
- 2 Second „
- 21 Third „
- 26 Provincial third class.

*Inspection of Observatories.*—The following stations were inspected during the year:—

By Mr. Eliot—

|            |             |             |
|------------|-------------|-------------|
| Patna.     | Furrêdpore. | Rungpore.   |
| Gya.       | Pogra.      | Julpigoree. |
| Chupra.    | Dacca.      | Mymensingh. |
| Motihari.  | Darjeeling. |             |
| Durbhunga. | Dinagpore.  |             |

By Mr. Dallas, Assistant Meteorological Reporter to the Government of India—

|             |           |           |
|-------------|-----------|-----------|
| Dacca.      | Dhubri.   | Purneah.  |
| Mymensingh. | Sibsagar. | Tezpoore. |
| Cachar.     |           |           |

By myself—

Raneegunge.

Burdwan.

Bankoora.

By my head clerk—

Rampore Beaulah.

Chupra.

Berhampore.

Bogra.

Motihari.

Arrah.

Dinagepore.

Bhagulpore.

Krishnagar.

Julpiguri.

Bankipore.

Serajgange.

Delree.

It will thus be seen that a large number of the stations have been inspected this year. Some of them had to be visited twice, either because of unsatisfactory readings, or that the condition of the observatory required a second visit. These were Dacca, Mymensingh, Chupra, Patna, Motihari, Julpigoree, Bogra, and Dinagepore.

*First Class Observatory.*—Alipore.—As this observatory is under the direct superintendence of the Meteorological Reporter to the Government of India no report can be given on its working during the past year. It can, however, be said that the Daily Weather Reports and the monthly meteorological registers were received with much punctuality and correctness throughout the year.

*Second Class Observatories.*—The following are the second class observatories that report to this office:—

*Second Class Observatories.*

| STATIONS.     | Superintendents.           | Superintendents' allowances. | Observers.  | Observers' allowances. | Assistant observers. | Assistant observers' allowances. |
|---------------|----------------------------|------------------------------|---|------------------------|----------------------|----------------------------------|
|               |                            | Rs.                          |   | Rs.                    |                      | Rs.                              |
| Dhubri        | Surgeon Edwin Dobson, M.B. | 30                           | Munshi Kadim-uddeen Ahmed. (a)<br>Baboo Baidya Nath Banerjee. (b) | 30                     | Munshi Kafayat-ulla. | 10                               |
| Sanger Island | Nil.                       | Nil.                         | Mr. R. H. Peters. (c)<br>Mr. C. Williams. (d)                     | 45                     | Nil.                 | Nil.                             |

(a) Dismissed on 23rd August 1886.

(b) Appointed since 24th August 1886.

(c) From 1st April 1886 to 7th January 1887. On three months' leave.

(d) „ 8th January 1887 to 31st March 1887.

Of these two, only Dhubri observatory was visited on the 9th, 10th, and 11th August 1886 by Mr. Dallas, Assistant Meteorological Reporter to the Government of India. In accordance with the decision come to last year as the result of my inspection of this observatory, Munshi Kadimuddin Ahmed, who was found to be unfit for the duties of the head observer, was dismissed on the 23rd August 1886. His place was filled from August 24th by Babu Baidya Nath Banerjee, who received a course of practical training at the Alipore Observatory in the use of the several instruments, and in the Meteorological Office in the work of preparation of the various registers. During the visit of Mr. Dallas the old Observer continued to hold office. The condition of the observatory was not satisfactory. Mr. Dallas reported—“There was a bad leakage in the roof of the Casella tower. On the morning of the 10th the water was pouring on the clock work of the anemometer, and will, if not stopped, eventually ruin it.” The leakage was at once stopped by the District Engineer, but the Superintendent has reported that with the setting in of the rains in the year 1886-87 the leakage has again appeared. Unless the anemograph house can be effectually repaired, it will be impossible to keep the self-recording Casella's anemograph in working order. Owing to this cause there have been several breaks in the traces of the anemograph during the year, and the instrument has not been working very satisfactorily. It is hoped that

this observatory will materially improve under the care of the new observer and of the paid Superintendent. The returns during the year have been received punctually, and have been found generally correct.

Saugor Island was not visited during the year. The observatory was found to work very satisfactorily. Fortin's barometer, No. 1315, which was in use since 15th March 1885, was reported to leak badly on the 31st May 1886. Newman's marine barometer belonging to the light-house was used from that date till the 19th June 1886, when Fortin's barometer, No. 626, was brought into use. A set of comparative readings was taken with the marine barometer, and the Fortin's standard supplied, in order that the readings reported from the former might be reduced to the Indian standard. A carefully compared aneroid barometer, No. 1773, has also been supplied to the observatory to serve as a spare instrument in cases of sudden breakage or injury to the instrument in use. The anemograph at Saugor Island, which is one of Beckley's pattern, has worked satisfactorily throughout the year, and there have been no breaks. Mr Peters the observer has worked very well and has done good service during stormy weather in reporting the additional observations required. In consideration of his services he has been granted a good service allowance of Rs. 5 a month, with effect from 1st April 1887.

*Imperial Third Class Observatories.*—These are 21 in number—14 are situated in Bengal, 1 (Akyab in Burmah, 4 (Sibsagar, Silchar, Tezapore and Tura) in Assam, and 2 (Gopulpore and Coconada) in Madras. The two last are maintained in connection with the Bay of Bengal Storm Signal Service.

The following table gives the names of the Superintendents and observers at the observatories during the year 1886-87:—

*Imperial Third Class Observatories.*

| STATIONS.       | Superintendents.          | Observers.   | Observers' allowances. |
|-----------------|---------------------------|--|------------------------|
| Akyab ...       | Nil                       | Mr. F. B. Atkinson (a)<br>M. McSweeney (b)<br>A. H. Prime (c)<br>McDonough (d) | 15                     |
| Berhampore      | Civil Surgeon             | Baboo Mahendra Nath Roy  | 15*                    |
| Burdwan ...     | Ditto                     | Mokhoda Prasad Chowdhry  | 15*                    |
| Chittagong ...  | Nil                       | Mr. J. E. Gabriel (e)<br>J. J. Brown (f)                                       | 25                     |
| Coconada ...    | Port Officer              | C. J. M. Gactane   | 15                     |
| Cuttack ...     | Nil                       | H. W. Alley (g)<br>Frederick Stone (h)   | 25                     |
| Dacca ...       | Nil                       | T. W. DeSouza (i)<br>T. R. H. Wayne (j)  | 15                     |
| Darjeeling ...  | Rector, St. Paul's School | F. N. Rushton  | 25                     |
| Demagiri ...    | Medical Officer           | Baboo Girish Chandra Bhar (k)<br>" Srish Chandra Sarkar (l)                    | Voluntary.             |
| Durghanga ...   | Civil Surgeon             | Jogin Chandra Banerjee   | Do. †                  |
| False Point ... | Nil                       | Mr. J. Loudon  | 20                     |
| Gopulpore ...   | Port Officer              | " J. Sumasirow Naidoo  | 15                     |
| Gya ...         | Civil Surgeon             | Baboo Makund Lall, offg.   | 25                     |
| Hazaribagh ...  | Ditto                     | " Nuthoo Lall  | 20†                    |
| Jessore ...     | Ditto                     | " Poresb Nath Roy Chowdhry   | 15†                    |
| Patna ...       | Ditto                     | Surjan Singh.  |                        |
| Puruchab ...    | Civil Medical Officer     | Baboo Lolit Mohan Banerjee (m)<br>" Gopal Chandra Chandra (n)                  | 15                     |
| Sibsagar ...    | Civil Surgeon             | " Dandadhar Dutta Barua  | 30*                    |
| Silchar ...     | Ditto                     | Ramesh Chandra Bhadra  | 15†                    |
| Tezapore ...    | Ditto                     | Mir Sabdar Ali   | 15                     |
| Tura ...        | Civil Medical Officer     | Abdul Majeem   | Voluntary.             |

(a) 1st April to 12th June 1886. Transferred to Bengal.

(b) 13th June to 20th July and 1st September to 31st October 1886.

(c) 21st July to 31st August.

(d) 1st November 1886 to 31st March 1887.

(e) 1st April to 2nd June 1886 and 21st August 1886 to 31st March 1887.

(f) 3rd June to 20th August 1886.

(g) 1st April to 18th May 1886.

(h) 19th May 1886 to 31st March 1887.

(i) 1st April to 28th November 1886 and 8th December 1886 to 31st March 1887.

(j) 29th November 1886 to 7th December 1886.

(k) 1st April to 5th October 1886 and 8th January to 31st March 1887.

(l) 6th October 1886 to 7th January 1887.

(m) 1st April 1886 to 30th April 1886.

(n) 1st May 1886 to 31st March 1887.

\* Has special allowance of Rs. 10 a month for meritorious service

† Has special allowance of Rs. 5 a month for good service.

At Hazaribagh; Cuttack, Darjeeling and Chittagong the self-recording anemographs have been kept up as hitherto. In the first two stations, Casella's pattern instruments are used, and in the third and fourth, Beckley's instrument. The records were most complete in the case of Hazaribagh and Chittagong. In the former there was a short break of 17 hours only during the year, for cleaning.

The Chittagong observer, writing under date the 26th February 1887, reported that "during the severe nor'wester at 4 A. M. this morning, which was accompanied with thunderstorm and hail, a large piece of heavy bamboo matting from an adjoining roof was thrown against the anemograph structure on the office roof, bringing down the whole of the exposed machinery. The cups, rods and the wind vanes have been bent and broken." These were repaired locally, and the instrument again began to work from the 1st March 1887 from 2 P. M. There was therefore a break from 26th February to 1st March.

At Cuttack there have been several breaks in the anemograph traces. These are apparently due to want of attention on the part of the Telegraph Master, Mr. Stone.

Darjeeling.—The traces have not been so continuous as could be desired, but this has been due to a great extent to the fact that the anemograph is not a very satisfactory one. Mr. Carter, the Superintendent, and the observer have worked hard to try to obtain more distinct traces, but they have unfortunately not been very successful.

Of the 21 Imperial third class observatories, 11 were inspected during the year, viz., Berhampore, Burdwan, Dacca, Darjeeling, Durbhanga, Gya, Patna, Purneah, Sibsagar, Silchar, and Tezporo.

Berhampore was visited by my head clerk on 11th August. He reported that the observatory was in an excellent condition. Baboo Mohendra Nath Roy continues to be the observer. His readings are always accurate, and the special allowance of Rs. 10 which he holds is well deserved. A solar radiation thermometer was stolen from the observatory grounds, while under exposure, on the 2nd January 1887, but the thief could not be discovered. A new instrument was brought into use from 3rd January 1887.

Burdwan was visited by myself on the 7th April 1886. The condition of the observatory was satisfactory. The personal allowance of Rs. 10 was therefore continued to the observer, Baboo Mokhada Prosad Chowdry.

Dacca was twice inspected, first by Mr. Dallas on the 26th of July 1886, and then by Mr. Eliot on the 15th March 1887. Mr. Dallas condemned the big dial wind-vane which was on the centre of the roof, and ordered the removal of the rain-gauge to a different site, as it was liable to be inundated by the overflowing of the Boreogunga river; and this was actually the case on the 28th August 1886. A Roorkee pattern small-sized vane was supplied. Mr. Eliot selected the position of the new instrument. Mr. Eliot found everything in good order, except the grass thermometer, in which a small portion of the column (about 1°) was detached. It was put right.

Darjeeling.—Mr. Eliot visited the station on the 10th and 11th March 1887. He reported—"The instruments and shed were all in good order. The anemograph is working fairly; the instrument is, however, by no means a satisfactory one, and requires constant care to keep it in working order. The bed plate of the upper part of the instrument appears to be very considerably warped, and hence it is necessary to insert wedges in order that the cog wheels may work into each other. The traces were very good and distinct. The tracing spiral of one of the cylinders had become slightly bent, and the sharp end which was thus turned over was tearing the paper. This defect will be rectified as speedily as possible by the observer. The observer is a very sharp and intelligent young man, and takes the observations exactly, and shows much interest in the anemograph." After Mr. Moore, the former observer, had left the station, the observer's allowance was reduced to Rs. 15, with effect from May 1886, to equalize the pay with that of all third class observers. In consideration of the fact that the observer has to look after the anemograph, which is situated at a distance from the observatory, and which requires constant care and attention to keep it in order, the allowance has again been raised to Rs. 25 a month, with effect from the 1st January 1887.

Durbhanga was visited by Mr. Eliot on the 25th December 1886. The instruments and shed were generally in good order. The anemometer was condemned and a new instrument supplied.

Gya was visited by Mr. Eliot on 22nd December 1886. The officiating observer, Mukund Lal, was examined and found to be competent. He was trained at the Patna observatory before being appointed. The observatory was in fair order. Prior to this visit, in November 1886 the officiating observer was fined the full value of a wet minimum thermometer which had been broken by gross neglect and carelessness. The dry minimum thermometer had a deposit of about ten degrees of spirit in the upper part, which explained the cause of the very low readings of the instrument from 1st August to October 1886, when the instrument was recalled and put into order and then again brought into use from 26th December 1886. Thus there was a long break due to the rejection of erroneous readings recorded by the observer.

Patna was visited by my head clerk on the 3rd August 1886, and subsequently by Mr. Eliot on the 21st of December 1886. Surjun Sing was officiating as observer in place of Munshi Mohabhtlal, who was under suspension from August 1886. The observatory was not in good order when examined by the head clerk, nor was the observer found to be very competent. Mr. Eliot found that the observer, and the condition of the observatory had improved materially in December 1886. The instruments were quite clean and all in proper order. The shed was newly repaired, and the observer read the instruments correctly.

The Patna observatory is now working well. At present the work of reduction and tabulation of the observations from Patna is being carried on in the Calcutta office, and the allowance for the observer has been reduced to Rs. 20. The observer has to take the synoptic observations in addition to the regular work of the observatory.

Purneah was visited by Mr. Dallas on the 25th and 26th August 1886. Generally speaking, the observatory was in good condition, so far as the observer and the instruments were concerned. Mr. Dallas reported that the anemometer was very much sheltered to the east and north by high trees, and proposed that both anemometer and wind vane should be removed to the south-west corner of the jail building. This change of position of the instruments has been made from the 20th January 1887. The wind registration previous to this must therefore be of doubtful value.

Sibsagar was visited by Mr. Dallas on the 17th August 1886. He found the observatory in good working order. He compared the barometer with a standard taken from Calcutta, and found the previously determined correction had remained unaltered. He condemned the position of the meteorological shed. He writes—"The thermometer shed is situated in a hollow 3 or 4 feet below the level of the ground on which the station is built. In consequence there is far from a free circulation of air, and as the slope is from south to north, the shed has an undue northern exposure, and the temperature is distinctly lower than over the open ground around the tank. The shed is surrounded by high jungle, and the readings of the thermometers can hardly be taken as representative of the temperature of the surrounding country." The seismometer was reported to be not working at all, as it had failed to give indications of earthquakes, although the shocks were sufficient to crack buildings so, as to render them unsafe.

Baboo Dandadhar Dutt Barua continues to be the observer. He receives a ten-rupee special allowance.

Silchar was visited by Mr. Dallas on the 2nd August 1886. The condition of the observatory was reported to be good. The observer was also found to be a competent man. The instruments were all found to be in working order. A sharp shock of earthquake occurred at 11-25 A.M. on May 19th, 1886, occasioning considerable damage to several lungalows in the station, but the seismograph failed to give any indication. The observer was trained in the methods of reading and recording the indications of the instrument.

Tezporé was visited on the 14th August 1886. This is the first visit of inspection since the observatory was started (April 1885). Mr. Dallas reports—"The thermometer shed is situated on the summit of a hill 200 or 300 feet

above the level of the river, and is the highest point around. The position is exceedingly good. The river runs on the southern side, and a level wooded plain surrounds the west, north, and east sides of the hill. The anemometer was clean and moving freely. The wind-vane was apparently true, and also running easily, but there was no means of getting up to it." Some arrangement must be made to enable the observer to oil the instrument from time to time.

The barometer is placed in a room in the jail. The sun thermometer and grass thermometer were stolen in June 1886, while under exposure. Dr. Campbell, the Superintendent of observatory, suggested that a chowkidar should be appointed to watch the instruments, but Mr. Blanford, the Meteorological Reporter to the Government of India, decided that radiation thermometers should not in future be used at this observatory.

Many readings from this observatory have had to be rejected as erroneous, and the observer was careless and did not understand his work. These errors have been repeatedly pointed out, and the present observations are now fairly good.

The rest of the observatories could not be visited, viz., Akyab, Chittagong, Coconada, Cuttack, Demagiri, False Point, Gopalpore, Hazaribagh, Jessore, and Tura. Their condition can only be judged from the registers furnished, which appear to show that the observers have generally maintained their character for accuracy of observations.

At Akyab the shed has been thoroughly repaired during the year.

The observer at Chittagong deserves mention, not only for the care and attention he has bestowed on the anemograph, but also for the correctness of his observations.

From Coconada the reports were regular and generally satisfactory.

The Cuttack observatory, under the Telegraph Master, Mr. Stone, was in a very inefficient state, and either through his carelessness or want of knowledge, many instrument readings have had to be rejected during the course of the year. The anemograph was also allowed to get out of order from want of attention. Mr. Stone has now been transferred from Cuttack.

Demagiri.—This is a voluntary station, having only the ordinary thermometers and a wind-vane as instruments under observation. It cannot be considered a satisfactory station.

False Point.—This observatory has worked well during the year under Mr. London.

Gopalpore has sent in registers and telegrams regularly throughout the year, and the observations have been very satisfactory. The Port Officer appears to take a very lively interest in the work of the observatory.

Hazaribagh.—This is one of the best kept observatories in Bengal. Observer Nathoo Lal has submitted very satisfactory readings throughout the year. The anemograph was kept in working order throughout. The special allowance of Rs 5 drawn by the observer is therefore well deserved.

Jessore.—The condition of the observatory has improved materially, and the observations have been correct. The observer's personal allowance, which was withheld for six months last year for neglect of duty, was restored from 1st October 1886.

Tura.—This is a voluntary station recording thermometric and wind observations only. It has improved very materially in the character of its observations and in the reports submitted.

*Provincial Third-Class Stations.*—The following table gives the names of the third class Provincial observatories which have been working during the past year, together with the names of the Superintendents and observers:—

## Provincial Third Class Observatories.

| STATIONS.       | Superintendents.                                 | Observers.                            | Observers' allowances. |
|-----------------|--|---------------------------------------|------------------------|
| Arrah           | Superintending Engineer, {                       | Babu Satis Chandra Banerjee } (a) ... | 10                     |
| Balasure        | Sone Circle.                                     | " Haradhan Chatterjee } ...           | 10                     |
| Bankoora        | Executive Engineer ...                           | " Radha Mohan Das ...                 | 10                     |
|                 | The Magistrate ...                               | " Bhairab Nath Chatterjee ...         | Voluntary.             |
| Bhagulpore      | Executive Engineer ...                           | " Jagat Chandra Bhadury ...           | 10                     |
| Bogra           | Civil Surgeon ...                                | " Gangadha Barik ...                  | 10                     |
| Burrisaul       | Executive Engineer, Dacca Division.              | " Kedar Nath Roy ...                  | 10                     |
| Buxar           | Executive Engineer ...                           | " Baikoot Nath Guha ...               | 10                     |
| Chupra          | Executive Engineer, Gandak Division.             | " Kally Prasanna Maitra ...           | 10                     |
| Chyebassa       | Head-master, Zillah School ...                   | " Mati Lal Sarkar ...                 | 10                     |
| Comilla         | Executive Engineer, Chittagong.                  | " Kali Prasanna Biswas } (b) ...      | 10                     |
|                 |  | " Hari Har Nag ...                    | 10                     |
| Dehree          | Executive Engineer, Dehree Workshops.            | " Peary Lal Sen ...                   | 10                     |
| Dinagepore      | Executive Engineer, Rajshahy Division.           | " Behary Lal Banerjee } (c) ...       | 10                     |
| Furreedpore     | Executive Engineer, Dacca Division.              | Munshi Abdul Azeez Khan } ...         | 10                     |
|                 |  | Babu Rasick Lal Sen Gupta } (d) ...   | 10                     |
|                 |  | " Norosh Chandra Mozumdar ...         | 10                     |
| Julpigoree      | Executive Engineer, Darjeeling Division.         | " Radha Charn Chuckerbutty. } (e) ... | 10                     |
|                 |  | " Beni Madhub Chatterjee ...          | 10                     |
| Krishnagar      | Civil Surgeon ...                                | " Upendra Nath Mookerjee ...          | 10                     |
| Maldah          | Civil Medical Officer ...                        | " Peary Lal Ghosh ...                 | 10                     |
| Midnapore       | Executive Engineer, Cossye Division.             | " Madhu Sudan Das ...                 | 10                     |
| Motihari        | Executive Engineer, Gunduck Division.            | Mr. B. Agnr (1) ...                   | 10                     |
|                 |  | Babu Mahendra Nath Seal (2) } (f) ... | 10                     |
|                 |  | " C Narain Swami Pillay ...           | 10                     |
| Mymensingh      | Executive Engineer ...                           | " Shubul Chandra Shaha } (g) ...      | 10                     |
|                 |  | " Jamini Kishore Chakravarti. ...     | 10                     |
| Noakhally       | The Magistrate ...                               | " Gopal Chandra Gangooly } (h) ...    | 10                     |
|                 |  | " Gopal Chandra Pal ...               | 10                     |
| Nya Dumka       | Civil Surgeon ...                                | " Bejoy Kant Sen ...                  | 10                     |
| Rampore Beaulah | Executive Engineer ...                           | " Dwarka Nath Mookerjee ...           | 10                     |
| Ranchi          | Sub-divisional Officer, Public Works Department. | " Gopal Chandra Chatterjee ...        | 10                     |
|                 | Nil  | " Shashadhar Mookerjee ...            | 10                     |
| Ranigunge       | Nil  | " Radha Raman Ghosh ...               | 10                     |
|                 |  | " Djabar Gupta ...                    | 10                     |
| Rungpore        | Executive Engineer ...                           | " Basanta Kumar Bose } (i) ...        | 10                     |
|                 |  | " Priya Nath Bose ...                 | 10                     |
| Serajgunge      | Nil  | " H. L. Seal ...                      | 10                     |

|   |     |     |           |
|---|-----|-----|-----------|
| (a) { Regular observer                          | ... | ... | 345 days. |
| { Temporary                                     | ... | ... | 20 "      |
| (b) { Regular                                   | ... | ... | 352 "     |
| { Temporary                                     | ... | ... | 13 "      |
| (c) { Regular                                   | ... | ... | 230 "     |
| { Temporary                                     | ... | ... | 135 "     |
| (d) { Regular                                   | ... | ... | 344 "     |
| { Temporary                                     | ... | ... | 16 "      |
| (e) { Regular                                   | ... | ... | 142 "     |
| { Temporary                                     | ... | ... | 223 "     |
| (f) { (1) Dispensed with on 24th February 1887. | ... | ... | ...       |
| { (2) Appointed from 25th February 1887.        | ... | ... | ...       |
| (g) { Regular observer                          | ... | ... | 231 days. |
| { Temporary                                     | ... | ... | 134 "     |
| (h) { Regular                                   | ... | ... | 210 "     |
| { Temporary                                     | ... | ... | 153 "     |
| (i) { Regular                                   | ... | ... | 229 "     |
| { Temporary                                     | ... | ... | 120 "     |

The observatories generally have worked very well during the year, and the work has gone on very smoothly. There were very few changes in the observers, and the readings were generally fairly trustworthy. The observatories inspected were—

|             |              |                  |
|-------------|--------------|------------------|
| Arrah,      | Dinagepore,  | Rampore Beaulah, |
| Bankoora,   | Furreedpore, | Ranigunge,       |
| Bhagulpore, | Julpiguri,   | Rungpore,        |
| Chupra,     | Krishnagar,  | Serajgunge,      |
| Bogra,      | Motihari,    |                  |
| Dehree,     | Mymensing,   |                  |

or 16 out of the 26 stations have been under inspection during the year.



Arrah was visited on the 3rd July 1886. The returns from this observatory were highly satisfactory, and the condition of the observatory reflects much credit on the Superintendent and the observer.

Bankoora was visited by myself on 4th April. This is a voluntary observatory. This was the first visit of inspection since its establishment. The observatory is situated on one of the highest points of the station, which is in itself one of the highest parts of the surrounding country. The whole of this district is of undulating nature with light friable soil, and the natural drainage should be very good. On the north side of the station, at about a distance of  $1\frac{3}{4}$  miles from the observatory, a river called Gandeshari flows, and another small river, the Darkeshar, about half a mile to the south and south-east of the observatory. The plain in which the observatory is placed is fairly open, and it is close to and on the north side of the jail. The observatory should therefore yield very valuable observations. There were a few defects in the exposure of the instruments, and the observer showed a want of knowledge of how to keep them in order; but since the inspection, the character of the work appears to have materially improved.

Bhagulpore was visited on the 9th August 1886. The object of the visit was to settle the question of certain continued low readings of the barometer, but, so far as can be ascertained, these comparatively low readings are correct, and represent a peculiar abnormal feature. The observatory was in good order.

Chupra was visited on the 4th and 5th August 1886 by my head clerk, and by Mr. Eliot on 23rd December 1886. Mr. Eliot found the instruments in good order.

Bogra was visited on the 10th May 1886 by my head clerk, and on 14th March 1887 by Mr. Eliot. In the former visit the anemometer was condemned. Mr. Eliot found the observatory in good order, and the instruments all very neat and clean. The observer, Babu Gangadhar Barik, was trained at Alipore, and is a good observer.

Dehree was visited on the 1st August 1886. The instruments were in good order.

Dinagapore was inspected on the 13th May 1886 and 7th March 1887 by my head clerk and Mr. Eliot, respectively. The shed and the instruments were found in good order. Mr. Eliot found that the observer read the barometer a little low.

Furzedpore was inspected by Mr. Eliot in February 1887. The instruments were all in good order, and the observer read them accurately and readily.

Julpaiguri was inspected on the 10th March 1887. The observatory was in a very satisfactory condition.

Krishnagar was inspected on the 2nd February 1887 by my head clerk. He found the instruments clean and in good order. The defects noticed in the last Administration Report were rectified.

Motihari was visited on the 24th December 1886. The instruments were found to be in good order.

Mymensing was visited by Mr. Dallas on the 27th July 1886 and by Mr. Eliot on the 16th March 1887. Both of them found the instruments of the observatory in fairly good order.

Rampore Beaulah was visited on the 7th May 1887. The shed was removed from its former position in the grounds of the Executive Engineer's office to the compound of the post-office. The barometer has been placed in the post-office in good light, protected by a wire cage. The wind instruments are on the roof of the office. This change was necessary, as the Executive Engineer's office was removed near the post-office. The rain-gauge was far away from the shed. These instruments have since been localised. The shed in its present position is 13 yards from the embankment of the river Pandma.

Kanecgunge was inspected by myself on the 6th April 1886. It was in satisfactory condition.

Rungpore was visited by Mr. Eliot on the 8th March 1887. The observatory was not so clean as it ought to have been. The officiating observer read the instruments correctly.

Serajgunge was visited by my head clerk on the 4th February 1887. The observatory was not in so satisfactory condition as it ought to have been. Amongst other things, the wind-vane was unserviceable.

The remaining stations could not be visited. But the returns from the majority of these stations were satisfactory.

*Rain-record stations.*—The number of stations reporting rainfall during the year 1886-87 has been 249, which shows an increase of four stations over those of the preceding year. The stations which have been added are Akhirigunge (Moorshedabad), Debigunge (Julpigoree), Bickram and Halsa (Patna district). The returns were received very punctually and regularly in the majority of cases, except from some of the stations, such as Gop, Pipli and Salipore in the Orissa Division, and the stations Kaliagunge, Gondwara and Balorampore in Purneah district, and Jhalda in Manbhoom.

*Instruments.*—The following table shows the number of instruments that have been broken or lost or rendered unserviceable, and the number of instruments replaced during the year 1886-87 at the Imperial and Provincial observatories:—

*Return of instruments broken or withdrawn and issued to the observatories for 1886-87.*

| STATIONS.          | Barometer. | HYGROMETER. |      | Maximum thermometer. | MINIMUM THERMOMETER. |      | RADIATION THERMOMETER. |        | Anemometer. | Wind-vane. | Measure glass. | Pail for glass thermometer. | Thermometer cage. | Revering bottle. | Spirit level. | Rain-gauge. | Sand glass. | Clock. | Lens. | Lantern. |
|--------------------|------------|-------------|------|----------------------|----------------------|------|------------------------|--------|-------------|------------|----------------|-----------------------------|-------------------|------------------|---------------|-------------|-------------|--------|-------|----------|
|                    |            | Dry.        | Wet. |                      | Dry.                 | Wet. | Solar.                 | Grass. |             |            |                |                             |                   |                  |               |             |             |        |       |          |
| IMPERIAL.          |            |             |      |                      |                      |      |                        |        |             |            |                |                             |                   |                  |               |             |             |        |       |          |
| Akyab ...          | ...        | ...         | ...  | ...                  | ...                  | ...  | a                      | ...    | ...         | ...        | a-b            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Berhampore ...     | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Burdwan ...        | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Chittagong ...     | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | a-c         | ...        | ...            | a-c                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Coochabada ...     | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Cuttack ...        | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Dacca ...          | ...        | a-c         | a-c  | a-c                  | ...                  | ...  | ...                    | ...    | ...         | a-c        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Darjeeling ...     | ...        | ...         | ...  | ...                  | ...                  | ...  | a-b                    | ...    | ...         | ...        | ...            | ...                         | ...               | a-b              | a             | ...         | ...         | ...    | ...   | ...      |
| Demagiri ...       | ...        | ...         | ...  | a-c                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Dumfri ...         | ...        | ...         | ...  | a-c                  | a-c                  | a-c  | a-c                    | ...    | a-c         | a-c        | a-c            | ...                         | ...               | ...              | ...           | a-c         | a-c         | ...    | ...   | ...      |
| Durbhunga ...      | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | a-c         | a-c        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| False Point ...    | ...        | ...         | ...  | ...                  | ...                  | ...  | a-b                    | ...    | a-c         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | a           | ...    | ...   | ...      |
| Gopalpore ...      | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Gya ...            | ...        | a-c         | ...  | a-c                  | ...                  | ...  | a-b                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | a      | ...   | ...      |
| Hazaribagh ...     | ...        | ...         | a-c  | ...                  | ...                  | ...  | ...                    | ...    | a-c         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Jessore ...        | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | a-c         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Patna ...          | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Purneah ...        | ...        | ...         | ...  | a                    | a-c                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Saugor Island ...  | a-c        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | a              | a-c                         | ...               | ...              | ...           | a-c         | a           | ...    | ...   | ...      |
| Sibsagar ...       | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Silchar ...        | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Tezjore ...        | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Tura ...           | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| PROVINCIAL.        |            |             |      |                      |                      |      |                        |        |             |            |                |                             |                   |                  |               |             |             |        |       |          |
| Arrah ...          | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | a c         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Balasore ...       | ...        | ...         | a    | a-c                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Bankoora ...       | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Bhagulpore ...     | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | a-c         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Bogra ...          | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | a-c         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Burrisaul ...      | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | a           | a           | ...    | ...   | ...      |
| Buxar ...          | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | a          | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Chyobassa ...      | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Chupra ...         | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | a     | ...      |
| Comilla ...        | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Dehreo ...         | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Dinapore ...       | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | a-c   | ...      |
| Furriedpore ...    | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Julpigoree ...     | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Krishnagar ...     | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | a-c        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Maldah ...         | ...        | ...         | ...  | ...                  | ...                  | ...  | a-c                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Midnapore ...      | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | a          | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Motihari ...       | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Mymensing ...      | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Noakhully ...      | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | a      | ...   | ...      |
| Nya Dumka ...      | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | a-c         | ...        | a              | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Rampore Beaulah... | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Ranchee ...        | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Raniganj ...       | ...        | ...         | ...  | ...                  | ...                  | ...  | ...                    | ...    | ...         | ...        | a              | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Runkpore ...       | ...        | ...         | ...  | ...                  | ...                  | a-c  | ...                    | ...    | ...         | ...        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |
| Serajgunge ...     | ...        | ...         | a-b  | ...                  | ...                  | ...  | ...                    | ...    | ...         | a-b        | ...            | ...                         | ...               | ...              | ...           | ...         | ...         | ...    | ...   | ...      |

(a) Supplied.

(b) Broken.

(c) Withdrawn for defect.

The list shows that the instruments have, on the whole, been very carefully looked after, and there have been very few breakages due to wilful neglect of duty on the part of the observers either of the Imperial or Provincial observatories.

*Office establishment.*—There was only one change in the office establishment during the year, due to the death of Baboo Nibarun Chandra Chatterjee, 3rd clerk. I regret much to have to notice his death, as in him the office has lost a most trustworthy and useful assistant. Baboo Jati Lal De has taken his

place as 3rd clerk, and the office staff consisted of the following clerks on the 31st March 1887:—

• Baboo Chandi Charan Chatterjee, Head clerk and inspector of observatories; Purna Chandra Mookerjee, 2nd clerk; Jati Lal De, 3rd clerk; Tabulators Baboos Kaminy Mohun Bose, Debendra Nath Banerjee, Joggeshur Roy, Bireshur Mookerjee, Rakhal Das Chuckerbutty, Ashutosh Roy Chowdhury, Hari Das Mozumdar, Hem Chandra Goswamy, Charu Chandra Mookerjee; draughtsman Baboo Nagendra Lal Pal.

The whole of the office staff has worked extremely well throughout the year under the very efficient superintendence of the Head clerk, Baboo Chandi Charan Chatterjee.

The regular reports and maps, &c, issued by the Department during the year have been precisely the same as those issued in the year 1885-86, and which are described on page 16 of the Administration Report of that year.

During the year 1886, 2,158 letters were received and 3,131 letters were issued, or about the same number as in the previous year. The reduction and tabulation of the 10 A.M. and 4 P.M. observations taken at the 23 Imperial stations, and of the 10 A.M. observations taken at 26 Provincial 3rd class stations, and also of the daily synoptic readings taken at the observatories of Patna, Chittagong, Sibsagar, Dhubri, Hazaribagh, and Cuttack, have all been steadily maintained. The Patna and Hazaribagh registers are now being worked out in the Calcutta office.

A small establishment of three temporary clerks at a monthly pay of Rs. 20 each was sanctioned during the year for a period of four and a half months to prepare books for working out the daily mean pressure and maximum and minimum temperature of the 22 Provincial observatories which have furnished more than three years' data since their establishment, and also of the Assam stations, Sibsagar, Dhubri, and Silchar, since their commencement. This work has now been accomplished, and in the daily meteorological returns and reports these normal values are being utilized.

The entry of the rainfall observations taken at the 79 new revenue stations has not yet been made in the usual form of record books for deducing averages, and this will have to be undertaken in 1888 in a similar manner to the preceding.

It will thus be seen, the work of the office continues very heavy. The same difficulty was felt as in the previous year in keeping the work of the office precisely up to date, and if it had not been for the employment of the temporary assistance referred to, there would probably have been an accumulation of arrears.

*Storm-signals.*—It was only necessary to hoist the signals once during the year, namely, on June 15th and 16th. They were hoisted to indicate the existence of a cyclonic storm which was formed at the head of the Bay of Bengal on the 13th June, and after intensifying considerably, moved in a north-westerly direction, the centre passing near Saugor Island, and then through South-West Bengal, Chutia Nagpur and South Behar. Night signal No. 10 was hoisted at 2.30 A.M. of the 15th at the signal stations in the river Hughli, and it was followed by day signal No. 6, denoting that a small cyclonic storm was advancing up the Bay and will cross the coast north of a line joining False Point and Chittagong. Notices were also given to the Port Commissioners, Calcutta, and the Port Officers at Calcutta, Balasore, Chandbali, and False Point. Notice of the hoisting of the signals was also given in the *Telegraph Shipping Gazette*. At 3.25 P.M. orders were given to hoist day signal No. 9 to be followed by night signal No. 11, danger signal, indicating the approach towards Saugor Roads of a cyclonic vortex of small extent of the kind which forms during the rainy season. The Executive Engineers at Balasore and Midnapore were also informed. At 7 o'clock of the morning of the 16th the centre of the storm reached the coast very close to Saugor Island and slightly to the east of it, and as it was still advancing in a northerly direction, the only available warning signal No. 12 for the Port of Calcutta was hoisted, signifying the existence of a cyclone the centre of which was near Saugor, and that the storm was probably advancing towards Calcutta. This signal was the only one that I could possibly use to apprise the Calcutta Port of the storm in question. This signal is, however, intended for use only in the approach of storms of great magnitude and intensity, and though I was aware that the storm was not one of the very intense and fierce cyclones which

are generated perhaps once in ten years, yet I was certain that the storm was of sufficient intensity to make it very dangerous for shipping to move in the river and in the port, and hence this signal was hoisted. At midday of the 16th, the centre of cyclonic storm was between Saugor and Calcutta, and was advancing in a north-westerly direction. Information was received at 2-55 P.M. that the flagstaff at Mud Point was broken by the wind force and the storm signals could not be again hoisted at this station. On the 17th the storm centre proceeded inland through Midnapore and the adjacent districts, and the storm signals which were hoisted at the port and at the river stations were therefore ordered to be lowered at 4 A.M. of this day, and the Port Officers at Balasore and Chandbali were informed accordingly.

A considerable number of smaller and more feeble cyclonic storms and barometric depressions occurred during the prevalence of the south-west monsoon over the Bay. A rather severe, but small cyclone was also formed during the first advance of monsoon winds up the Bay which broke on the Madras coast, and also a curious series of three fierce cyclonic storms was formed in the Bay in November and December, all of which crossed the Madras coast, following approximately similar courses. The principal depressions formed in this year are as follows:—

1. *Storm of May 23rd and 24th.*—This was formed off the south Madras coast, and at some little distance to the east or south-east of Madras on May 22nd and 23rd. By 10 A.M. of the 24th the storm was advancing over the coast line between Negapatam and Madras, and the centre of the storm, which probably passed not very far from Pondicherry, was almost on the coast at this time. It was a storm of considerable diameter, and was very fierce near the centre. The S.S. *Tibre* was involved in the storm. At 2 P.M. of the 23rd the Meteorological Reporter, Madras, and the Port Officers at Negapatam, Masulipatam, Coconada, and Vizagapatam were telegraphed to the following effect:—“Cyclonic storm south-east of Madras and apparently approaching coast.” At 1-10 P.M. on the 24th, it being found that the cyclone was crossing the Peninsula, the following telegram was despatched to the Meteorological Reporter, Bombay:—“Cyclonic storm of considerable intensity crossing Peninsula south of Madras.” By the morning of the 25th the storm had entirely passed inland, and it afterwards apparently passed into the Indian Ocean. It gave heavy rainfall on its onward march to Negapatam and adjacent places.

2. *Feeble depression of 1st June.*—At the close of May there formed off the Pegu coast a storm which reached the South Bengal coast on June 1st, the centre passing between Saugor Island and Chittagong. The centre on the 2nd was not very far from Burrisal, and it then advanced inland and filled up, giving very heavy rain to South-East Bengal.

3. *Depression of 6th and 7th June.*—This depression was also very feeble. It formed off the Pegu coast about the 6th of June, and on the 7th advanced inland near Akyab and between this station and Chittagong. It also brought up heavy rain to South-East Bengal.

4. *Depression of 9th to 20th July 1886.*—During the whole of the eleven days of the existence of this depression, which was formed at the head of the Bay, winds were more or less cyclonic in direction, though light in force. The storm possessed little strength till about the 16th, when it had slightly intensified. On this day the centre, as far as could be judged, was to the east of False Point and almost to the south of Saugor Island. On the 17th the small storm had again distinctly intensified, and was a little to the north of False Point. It then passed inland, bringing heavy rain in its advance. On the 18th the centre was considerably to the north of Cuttack, and moving in a north-westerly direction. It filled up and disappeared on the 20th.

5. *The depression of 16th to 20th August.*—This was formed off the Ganjam coast on the 16th. It was a feeble storm as judged by the barometric depression, but which gave a heavy sea and very bad weather over that part of the Bay. It passed inland to the north of Gopalpore on the 19th.

6. *The feeble depression of 13th to 17th September.*—It was formed in the north-west angle of the Bay on the 13th, and crossed the Orissa coast on the evening of the 15th, and passed into Chutia Nagpur on the 16th, when it broke up.

7. *The feeble depression of 18th to 24th September.*—This was formed in the north-west angle of the Bay. The centre passed inland between False Point

and Balasore on the evening of the 21st. It gave heavy rain to Orissa and South-West Bengal and South and Central Behar.

8. *Depression of 24th to 30th September.*—This was formed off the Arakan and Pegu coasts on the 24th, but did not begin to influence the Bengal coast until the 27th, when it was approaching the Ganjam coast. It gave heavy rain to Orissa and South-West Bengal, and moderate rain to Behar and Chutia Nagpur.

9. *Depression of 18th and 19th October.*—This was formed in the centre of the Bay and moved towards the Ganjam coast, which it crossed early in the morning of the 20th and drifted westwards into the interior. The Port Officers at Gopalpore and Vizagapatam were apprized of the existence of the storm on the 18th. It gave heavy rain to the west coast of the Bay.

10. *Storm of 6th to 13th or 14th November.*—A definite cyclonic vortex showed itself on the 5th or 6th in the centre and south of the Bay. It marched to the west-north-west, and struck the Madras coast, the centre crossing the coast a little to the north of Madras shortly before noon on the 9th. It advanced across the Peninsula unbroken, and then passed into the Arabian Sea, marching to the north-west. The Peninsular and Oriental Company's steamer *Peshawar* was involved in it on the 13th. At 3-15 p.m. on the 7th the Master Attendant, Madras, and the Port Officers, Gopalpore and Coconada, were apprized of the formation of the cyclonic storm, and at 2-45 p.m. of the 8th, telegrams announcing the storm were sent to the Master Attendant, Madras, the Port Officers at Gopalpore and Coconada, to Weather Bombay, and to A. V. Nursing Rao, Esq., Vizagapatam, to the following effect:—"The cyclonic storm I warned you about yesterday appears to be of large extent and of considerable intensity. The centre is advancing westward, and will probably strike the coast north of Madras and between Madras and Masulipatam within the next 24 hours."

11. *Storm of 18th to 24th November.*—This was formed in the Martaban Gulf, and it passed into the Bay of Bengal to the north of Andamans. The centre of the disturbance was in about 16° north latitude, and 89° east longitude at noon of the 22nd, and 16½° north latitude and 84½° east longitude at noon of the 23rd. It struck the coast between Vizagapatam and Coconada late on the evening of that day, and broke up a few hours afterwards. At 2-50 p.m. of the 22nd, the following telegram was despatched to the Port Officers at Gopalpore, Vizagapatam, Coconada, Masulipatam, and Master Attendant, Madras, and also to Mr. A. V. Nursing Rao:—"A cyclonic storm, accompanied by very strong winds, has formed near the Andamans, and is moving apparently towards the mid-west coast of Bay. It is probably not of large extent; advisable to watch weather." On the 23rd, at 2-35 p.m., the following telegram was addressed to the same officers:—"Present cyclonic storm is approaching the coast of the Circars between Gopalpore and Coconada, and the centre will probably cross the coast near Vizagapatam within the next 24 hours. Storm is apparently of small extent and diffused in character, but accompanied with strong winds." On the 24th, at 2-30 p.m., the following message was sent to the Meteorological Reporter, Bombay:—"Cyclone travelling westward; crossed the coast of the Circars late yesterday evening. The storm appears to be small and diffused in character."

12. *Storm of 7th to 9th December.*—A small storm or cyclone was formed in the south of the Bay on the 7th. It advanced a little to the north of west and struck the Madras coast on the afternoon of the 9th, and shortly after disappeared. It gave very strong winds and very high sea. The Port Officers, Coconada, Masulipatam, Negapatam, and Madras, and Meteorological Reporter, Bombay, were apprized of the existence of the storm.

*Daily Weather Report.*—The Bay of Bengal reports of the Storm Signal Service were published every day without any break during the year. The Lithographic Branch of the Survey Department supplied the printed skeleton report forms. There has been no change in the number (20) of the reporting stations over the Bay area. The telegrams were received very regularly from almost all the stations, except that occasional delays have happened in the case of Diamond Island telegrams, particularly during stormy weather.

Mr. A. V. Nursing Rao has continued to favour the Department with the daily observations taken at Vizagapatam, the telegrams from which station are received very punctually. The thanks of the Department are therefore

due to him for his continued valuable assistance in connection with the Storm Signal Service.

This report was supplied to 39 Government officers and 22 subscribers paying at the rate of Rs. 2 a month. The receipts from subscribers during the year have covered the cost of printing the reports in this office and of distributing them. There was a balance of Rs. 96-1-3 at the end of the year 1886-87. This amount was kept in hand to meet urgent demands for repairs to the lithographic presses, &c.

The Bengal Daily Weather Reports were published in the year 1886 during the period 27th April to 4th November; 38 stations sent in daily observations by means of telegrams for this report. The report was distributed to 98 Government officials and 19 subscribers.

In accordance with the sanction of the Government of Bengal, the stations of Sibsagar, Dhubri, and Silchar will be added to the number of reporting stations for the Bengal Daily Weather Report for 1887.

*Special work.*—During the year a full report on the False Point cyclone of 22nd September 1885 was completed by me, and published as volume IV, Part II, of the Indian Meteorological Memoirs.

*Expenditure.*—The following statement gives the expenditure on account of the Bengal Meteorological Department during the year 1886-87, and the total grants sanctioned by Government under each of the various heads:—

*Financial statement for 1886-87.*

| HEAD OF EXPENDITURE.                              |     |                      |     | Actual expenses incurred during 1886-87. | Budget grant for 1886-87. |
|---|-----|----------------------|-----|--|---------------------------|
|   |     |                      |     | Rs. A. P.                                | Rs. A. P.                 |
| Meteorological Reporter's allowance               | ... | ...                  | ... | 5,400 0 0                                | 5,400 0 0                 |
| Office establishment                              | ... | ...                  | ... | 5,963 7 11                               | 7,092 0 0                 |
| Office rent (included in the India Office budget) | ... | ...                  | ... | .....                                    | .....                     |
| Observers   | {   | Telegraph masters    | ... | 2,050 0 0                                | 9,120 0 0                 |
|   |     | Native observers     | ... | 3,420 0 0                                |                           |
|   |     | Provincial observers | ... | 2,855 0 0                                |                           |
| Messengers' allowances                            | ... | ...                  | ... | 132 0 0                                  | 132 0 0                   |
| Allowance to the Superintendent of observatories  | ... | ...                  | ... | 360 0 0                                  | 1,000 0 0                 |
| <i>Central Office.</i>                            |     |                      |     |  |                           |
| Contingent and office furniture                   | ... | ...                  | ... | 969 13 6                                 | 936 0 0                   |
| Postage   | ... | ...                  | ... | 1,013 1 3                                | 2,000 0 0                 |
| Telegraphic messages                              | ... | ...                  | ... | 18,935 5 0                               | 19,600 0 0                |
| Travelling allowances                             | ... | ...                  | ... | 1,396 13 9                               | 1,030 0 0                 |
| <i>Observatories.</i>                             |     |                      |     |  |                           |
| Building and repairs                              | ... | ...                  | ... | 1,045 0 6                                | 1,300 0 0                 |
| Contingent of the observatory                     | ... | ...                  | ... | 24 15 9                                  | 98 0 0                    |
| Total   |     |                      |     | 44,564 9 8                               | 47,788 0 0                |

METEOROLOGICAL OFFICE, BENGAL, }

The 16th June 1887.

ALEXANDER PEDLER,

Offg. Meteorological Reporter to the  
Government of Bengal.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government during the week ending the 9th July 1887.

| No.                    | District and date of return. | Rainfall at Sudder station in inches.   | Character of the weather, state and prospects of the crops, and state of health at date.  |  |
|------------------------|------------------------------|---|---|--|
| BENGAL.                |                              |   |   |  |
| Western Districts.     |                              |   |   |  |
| BURDWAN DIV.           | 1 Burdwan, July 9, '87       | 2.21  | General rain. Prospects, which were not good, are much improved by the general rain now falling. Common rice sells at about 23 seers per rupee. Public health fair.   |  |
|                        | Culra ...                    | 0.60  |   |  |
|                        | Cuttwa ...                   | 2.90  |   |  |
|                        | Rancegunge ...               | 1.09  |   |  |
|                        | 2 Bankura „ 9, '87           | 2.21  | Weather—seasonable. Transplanting of paddy has begun on low lands. More rain wanted. Prices stationary. Public health good.   |  |
|                        | Bishenpore ...               | 0.77  |   |  |
|                        | 3 Beerbhoom „ 9, „           | 5.01  | Heavy rain almost daily with cool nights and mornings. Rainfall has enabled transplanting of paddy seedlings to be pushed vigorously forward. Prospects are favourable. Public health good, but cattle-pox reported from several localities.  |  |
|                        | Rampore Haut ...             | 2.18  |   |  |
|                        | 4 Midnapore „ 9, '87         | 1.37  | Weather—muggy. More rain wanted, especially in the south of the district.   |  |
|                        | 5 Hooghly „ 9, „             | 0.73  | Weather—unusually dry during the week. Heavy rain falling at the time of report has come in time to prevent damage to seedlings and to enable rice cultivation to go on. Public health good. There has been some steady rain during the week. Prospects favourable and operations of the season in progress.  |  |
| Serampur ...           | 2.38                         |   |   |  |
| Jehanabad „            | 3.00                         |   |   |  |
| Howrah „ 9, „          | 3.55                         |   |   |  |
| Oolcheriah ...         | 1.35                         |   |   |  |
| Central Districts.     |                              |   |   |  |
| PRESIDENCY DIV.        | 6 24-Parghs., July 12, '87   | 5.67  | Weather—hot and cloudy with occasional heavy showers. Prospects of crops satisfactory. Transplantation going on. Public health generally good. Rain almost daily; moist warm temperature. Crops promise well. Rain was wanted for transplanting <i>amun</i> seedlings. Indigo manufacture has begun at chur factories. Prospects good.  |  |
|                        | 7 Nudda „ 9, „               | 0.78  |   |  |
|                        | Kushtea ...                  | 1.86  |   |  |
|                        | Meherpore ...                | 2.70  |   |  |
|                        | 8 Khoolna „ 9, '87           | 0.65  | Weather—cloudy with scanty rain. Rice crop in Satkhira is said to want rain, but elsewhere rainfall is sufficient and prospects are favourable. Public health good.   |  |
|                        | 9 Jessore „ 9, „             | 1.2   |   |  |
|                        | Jhenidah „                   | 2.09  | Weather—hot and close. Prospects of crops good, but more rain is wanted. Public health good.  |  |
|                        | Magurah „                    | 1.34  |   |  |
|                        | Narail „                     | 0.17  |   |  |
|                        | Hongong „                    | 2.37  |   |  |
|                        | 10 Moorshedabad „ 9, '87     | 3.27  | Weather—very hot. Rain at intervals. Sowing of <i>amun</i> almost over. Jute and sugarcane thriving well. Public health good.   |  |
|                        | Lalbagh „                    | 3.34  |   |  |
|                        | Kandi „                      | 3.14  |   |  |
|                        | Jungipur „                   | 5.33  |   |  |
|                        | 11 Dinajpore „ 9, '87        | 2.92  | Weather—fair. Crops uninjured by floods are good. Public health fair.   |  |
|                        | Thakurgaon „                 | 3.06  |   |  |
|                        | 12 Rajshahye „ 9, '87        | 2.02  | Weather—hot, cloudy and showery. Prospects of crops, where not injured by floods, are favourable. Harvesting of <i>til</i> continues. Public health generally good, though slight fever is prevalent. Prospects of crops continue good. A few cases of cholera reported from thanas Uliore and Borohari in the Kurigram sub-division; otherwise health of the district is good. |  |
| Natore „               | 3.03                         |   |   |  |
| Nowgong „              | 0.96                         |   |   |  |
| 13 Raupore „ 9, „      | 2.48                         |   |   |  |
| Guilbanda „            | Nil                          | Weather—comparatively cool with occasional showers. Sowing of <i>amun</i> still continues. Public health fair. A few cases of cow-pox reported from thana Sherpore. |   |  |
| Kurigram „             | 3.04                         |   |   |  |
| Nilphamari „           | 5.38                         |   |   |  |
| 14 Bogra „ 9, '87      | 3.64                         |   |   |  |
| Nowkhilla „            | 1.23                         | Weather—rainy. Prospect of crops good. Public health good. Rivers rising.   |   |  |
| 15 Pubna „ 9, '87      | 4.27                         |   |   |  |
| Serajgunge „           | 1.71                         | Weather—seasonable. State and prospects of crops fair.  |   |  |
| 16 Darjeeling „ 9, '87 | 6.18                         |   |   |  |
| 17 Jalpigore „ 9, „    | 6.58                         |   |   |  |
| Eastern Districts.     |                              |   |   |  |
| DACCA DIVISION.        | 18 Dacca, July 9, '87        | 0.71  | Weather—hot and mostly cloudy. Harvesting of jute has begun. Sowing of <i>aus</i> and <i>roachia</i> paddy is being pushed on rapidly. Paddy crops and <i>til</i> have suffered damage in parts of the district owing to sudden rise of water; otherwise prospects on the whole continue good. Public health good.  |  |
|                        | Manickgunge „                | 0.44  |   |  |
|                        | Munshigunge „                | 0.65  |   |  |
|                        | Naraingunge „                | 1.27  |   |  |
|                        | 19 Furreddore „ 9, '87       | 1.31  | Weather—seasonable. Prospects of crops good. Public health fair.  |  |
|                        | Goalundo „                   | 0.19  |   |  |
|                        | 20 Madaripore „              | 0.40  | Weather—hot and rainy. Cultivation of <i>amun</i> going on. General health good.  |  |
|                        | Backergunge „ 8, '87         | 1.36  |   |  |
|                        | 21 Mymensingh „ 8, '87       | 3.03  |   | Rain general. River rising. Prospects of crops favourable. |
|                        | Jamalpur „                   | 0.60  |   |  |
| Kishor-gunge „         | 2.71                         |   |   |  |
| Atta „                 | 1.78                         |   |   |  |
| Netrokona „            | 2.76                         |   |   |  |

| No.                             | District and date of return.        | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|---------------------------------|-------------------------------------|---------------------------------------|---|
| <b>BENGAL—contd.</b>            |                                     |                                       |   |
| <i>Eastern Districts—contd.</i> |                                     |                                       |   |
| <b>CHITTAGONG DIV.</b>          | 22 Chittagong, July 12, '87         | 4.91                                  | Weather—seasonable. Transplanting of <i>aus</i> completed. Cultivation of <i>aman</i> going on. Prices unchanged. Sporadic cases of cholera reported.   |
|                                 | 23 Noakhali „ 8, „                  | 3.07                                  | Weather—generally cloudy, but not yet sufficient rain. Prospects of crops fair.   |
|                                 | Fenny „ „                           | 1.36                                  | More rain wanted.   |
|                                 | 24 Tipperah July 7, '87             | 2.55                                  | Weather—somewhat dry for time of year. Crops are in excellent condition up to the present time, but rivers are rising in the north, and in the south more rain is wanted to prevent injury to the <i>aus</i> crop.  |
|                                 | Brahmunbariah „ „                   | 1.19                                  |   |
|                                 | Chandpur „ „                        | 0.20                                  |   |
| <b>CHITTAGONG DIV.</b>          | 25 Chittagong Hill Tracts, „ 5, '87 | 8.10                                  | Weather—rain with occasional sunshine during the greater part of the week. <i>Joom</i> paddy and cotton doing well. Ploughing for late rice continues; seed-beds being sown. Fever prevalent.   |
|                                 | Hill Tipperah „ 7, „                | 3.30                                  | Weather—rainy. <i>Aman</i> paddy being transplanted. Oilseeds and <i>satya</i> paddy being gathered. Sugarcane and <i>joom</i> crops promising. Public health good.   |
| <b>BEHAR.</b>                   |                                     |                                       |   |
| <b>PATNA DIV.</b>               | 26 Patna, July 9, '87               | 1.59                                  | Weather—cloudy and close, with occasional showers. <i>Bhadai</i> and paddy seedlings growing well. Sugarcane promising. Public health generally good.   |
|                                 | 27 Gaya „ 9 „                       | 1.70                                  | Weather—moist and cloudy. <i>Bhadai</i> and paddy being sown. Cholera, fever and small-pox still reported.  |
|                                 | 28 Shahabad „ 9 „                   | 1.32                                  | Weather—seasonable. Prospects of <i>Bhadai</i> crop favourable where irrigation is practicable. More rain is required. Cholera reported from the Buxar and Sassaram sub-divisions, and one suburb of Arrah town; otherwise public health good. Prices stationary. |
|                                 | Sassaram „ „                        | Nil                                   |   |
|                                 | Bhabunah „ „                        | 0.72                                  |   |
|                                 | 29 Darbhanga „ 9 „                  | 4.10                                  | Weather—occasionally cloudy. Prospects of early rice favourable. <i>Bhadai</i> sowings in progress. Indigo manufacture going on. Prices remain stationary. Cholera abating.   |
|                                 | 30 Mozufferpore „ 9, '87            | 1.52                                  | Weather—cloudy and rainy. Rice, <i>marua</i> , <i>sama</i> and <i>kanni</i> being transplanted, and maize being weeded. A good deal of cholera and fever and some small-pox reported.   |
|                                 | Hajipur „ „                         | 1.19                                  |   |
|                                 | Sitamarhi „ „                       | 2.95                                  |   |
|                                 | 31 Saran „ 9 „                      | 3.74                                  | Weather—cloudy with occasional sunshine. Prospects of crops continue good. Cholera reported from the interior.  |
| <b>PATNA DIV.</b>               | Sewan „ „                           | 2.21                                  |   |
|                                 | Gopalzunge „ „                      | 5.01                                  |   |
| <b>PATNA DIV.</b>               | 32 Champaran „ 9 „                  | 1.78                                  | Weather—hot; often cloudy and rainy. Transplanting of paddy has begun on low lands. <i>Bhadai</i> crops coming up well. <i>Mahai</i> of indigo in progress. Cholera much diminished. Prices stationary.   |
|                                 |                                     |                                       |   |
| <b>BRAGULPORE DIV.</b>          | 33 Monghyr, July 9, '87             | 3.83                                  | Weather—hot and close with occasional showers. <i>Bhadai</i> crops and paddy seedlings are thriving well, and prospects continue favourable. Cholera still lingers in places; otherwise general health good.  |
|                                 | Begusserai „ „                      | 4.81                                  |   |
|                                 | Jamui „ „                           | 3.86                                  |   |
|                                 | 34 Bhagalpore „ 9 „                 | 1.96                                  | Weather—more seasonable. Brighter weather has benefited <i>Bhadai</i> , but weeding still backward. Young rice damaged on low lands within reach of Kosi floods; otherwise <i>marua</i> and rice prospects good. Transplanting in progress.                       |
|                                 | 35 Purneah „ 9 „                    | 2.21                                  | Weather—fair with occasional heavy showers. Jute crop damaged and low land rice injured by excessive rain.  |
|                                 | Kishengunge „ „                     | 5.01                                  |   |
|                                 | Arrareah „ „                        | 3.77                                  |   |
|                                 | 36 Maldah „ 9 „                     | 3.98                                  | Weather—changeable, sometimes with high winds. Floods have done considerable injury to <i>Bhadai</i> and <i>aman</i> crops over greater part of thana Kharba. Winter paddy is being transplanted. Common rice 20 to 21 seers per rupee. Public health good.       |
|                                 | Chanchal „ „                        | 3.12                                  |   |
|                                 | Shibgunge „ „                       | 1.76                                  |   |
| <b>BRAGULPORE DIV.</b>          | 37 Southal Pergna „ 9 „             | 2.11                                  | Weather—cloudy with occasional showers. Sowing of Indian-corn proceeding everywhere; in Deoghur the early sowings have suffered from insects. Lands are now being prepared for transplanting paddy. Indigo in Rajmehal is not doing well.                         |
|                                 | Deoghur „ „                         | 4.57                                  |   |
|                                 | Pakour „ „                          | 5.97                                  |   |
|                                 | Rajmehal „ „                        | 2.99                                  |   |
|                                 | Golda „ „                           | 7.56                                  |   |
| <b>ORISSA.</b>                  |                                     |                                       |   |
| <b>ORISSA DIV.</b>              | 38 Cuttack „ „                      | .....                                 | Report not received.  |
|                                 | 39 Pooree „ „                       | .....                                 | Report not received.  |
|                                 | 40 Balasore July 8, „               | 1.98                                  | Weather—hot and cloudy with occasional showers. All crops and agricultural operations are going on well. Cholera among pilgrims returning from Pooree; public health otherwise fair.  |



| District and date of return.       |             |             | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|------------------------------------|-------------|-------------|---------------------------------------|---|
| <b>CHOTA NAGPORE.</b>              |             |             |                                       |   |
| <i>South-West Frontier Agency.</i> |             |             |                                       |   |
| 41                                 | Hazaribagh, | July 8, '87 | 1.13                                  | Weather—generally fair. More rain wanted in parts of the district. Sugar-cane doing well. Paddy is being transplanted. Cholera in places; otherwise public health good.                 |
| 42                                 | Lohardugga  | " 9 "       | 3.56                                  | Weather—seasonable. Alternate sunshine and rain. Heavy rain wanted in Palamow. Prospects of crops appear to be good. Prices easy. Cholera still prevails; public health otherwise fair. |
|                                    | Palamow     | " ...       | 0.69                                  |   |
| 43                                 | Singbnoom   | " 8 "       | 1.56                                  | Weather—cool. Light showers frequent. Prospects of crops good. Cholera reported from Seraikella and from Baharagorah outpost. Cattle-disease abating. Public health fair.               |
| 44                                 | Wachnoom    | " 9 "       | 0.57                                  | Weather—close and hot. More rain much wanted for the seedlings. Prospects of crops otherwise good. Public health good.  |
|                                    | Govindpur   | " ...       | 1.32                                  |   |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 12<sup>th</sup> July 1887.

P. NOLAN,  
Secy. to the Govt. of Bengal.



The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of February 1887.

## IMPORTS INTO CALCUTTA.

| SPECIFICATION OF ROUTES.         | FOOD-GRAINS. |          |          |                  |                      | FIBROUS PRODUCTS. |             | OILSEEDS. |               | Tea, Indian. | Cotton, raw. | Silk, raw. | SUGAR.   |             | TOBACCO.  |              |
|----------------------------------|--------------|----------|----------|------------------|----------------------|-------------------|-------------|-----------|---------------|--------------|--------------|------------|----------|-------------|-----------|--------------|
|                                  | Rice.        | Paddy.   | Wheat.   | Gram and pulses. | Other to all-grains. | Jute, raw.        | Gunny-bags. | Linseed.  | Mustard seed. |              |              |            | Drained. | Un-drained. | Bis-path. | Other kinds. |
|                                  | Mds.         | Mds.     | Mds.     | Mds.             | Mds.                 | Mds.              | No.         | Mds.      | Mds.          | Mds.         | Mds.         | Mds.       | Mds.     | Mds.        | Mds.      | Mds.         |
| country boats ...                | 18,22,693    | 1,76,805 | 11,250   | 90,816           | 5,813                | 3,62,000          | 610,783     | 14,405    | 19,239        | ...          | 3,872        | 105        | 6,413    | 23,843      | 551       | 9,090        |
| river steamers ...               | 17,402       | 330      | 3,045    | 1,083            | ...                  | 2,48,087          | ...         | 7,319     | 2,237         | 15,343       | 2,125        | 44         | 500      | ...         | ...       | 101          |
| East Indian Railway ...          | 3,20,683     | 3,509    | 1,01,173 | 97,563           | 14,628               | ...               | 25,200      | 91,816    | 1,49,644      | 703          | 1,85,434     | 1,196      | 613      | 3,087       | ...       | 1,214        |
| Eastern Bengal State Railway ... | 66,908       | 9,926    | 160      | 32,366           | ...                  | 5,70,162          | 918,960     | 1,122     | 280           | 3,582        | 1,093        | 1,174      | 86       | 32,251      | 9,820     | 7,370        |
| road ...                         | 90,809       | 8,542    | 303      | 13,084           | ...                  | 60,018            | 11,800      | 16        | ...           | ...          | 70           | ...        | 13,900   | 34,718      | ...       | 8,352        |
| sea ...                          | 2,651        | 9,950    | ...      | 75,999           | 1,406                | 2,837             | 11,610      | ...       | 68            | 172          | 11,528       | 22         | 20,201   | ...         | ...       | 353          |
| Grand total of 1887 ...          | 23,23,209    | 1,93,158 | 1,10,839 | 3,11,811         | 21,817               | 12,51,290         | 1,587,303   | 1,14,478  | 1,71,541      | 10,800       | 2,05,812     | 2,051      | 41,185   | 94,709      | 10,371    | 27,055       |
| Imports in February 1886 ...     | 20,50,038    | 1,64,056 | 1,79,616 | 2,30,810         | 12,303               | 10,45,927         | 1,082,973   | 80,116    | 1,05,342      | 14,443       | 1,38,137     | 1,459      | 37,031   | 95,040      | 5,804     | 29,016       |

The following Statement shows the Values, Quantities, and Numbers of the Principal Staples of Trade exported Inland from Calcutta during the month of February 1887.

## EXPORTS FROM CALCUTTA.

| SPECIFICATION OF ROUTES. | Cotton piece-goods. |         | Cotton twist. |         | Salt.    | Gunny-bags. | Whither exported.  | Cotton piece-goods. |         | Cotton twist. |         | Salt.     | Gunny-bags. |
|--------------------------|---------------------|---------|---------------|---------|----------|-------------|--|---------------------|---------|---------------|---------|-----------|-------------|
|                          | European.           | Indian. | European.     | Indian. |          |             |  | European.           | Indian. | European.     | Indian. |           |             |
|                          | Rs.                 | Rs.     | Mds.          | Mds.    | Mds.     | No.         |  | Rs.                 | Rs.     | Mds.          | Mds.    | Mds.      | No.         |
| BENGAL.                  |                     |         |               |         |          |             | CHOTA NAGPORE.   |                     |         |               |         |           |             |
| Adwan ...                | 2,65,762            | 11,900  | 373           | 1,392   | 39,829   | 117,045     | Hazarebagh ...   | 1,19,790            | ...     | 178           | ...     | 4,563     | 2,835       |
| Chhagan ...              | 1,95,429            | 1,100   | 196           | 618     | 16,734   | 83,545      | Manbhoom ...   | 51,684              | ...     | 23            | 1,461   | 8,892     | 1,610       |
| Innapore ...             | 2,07,321            | ...     | 2,662         | ...     | 23,625   | 32,005      | Total of Chota Nagpore ...   | 1,74,394            | ...     | 24            | 1,639   | 13,475    | 4,445       |
| ochly ...                | 1,00,451            | 9,343   | 537           | 31      | 2,086    | 43,118      | Grand Total of supplies into the provinces under the Lieutenant-Governor of Bengal. OTHER PROVINCES. |                     |         |               |         |           |             |
| Pergunnahs ...           | 1,78,000            | 6,391   | 553           | ...     | 8,915    | 18,557      |  |                     |         |               |         |           |             |
| dhua ...                 | 3,60,635            | ...     | 1,641         | ...     | 19,001   | 28,058      |  |                     |         |               |         |           |             |
| dhua ...                 | 18,422              | ...     | 71            | ...     | 8,353    | 1,820       |  |                     |         |               |         |           |             |
| sore ...                 | 1,05,176            | 440     | 730           | ...     | 17,065   | 7,840       | Assam ...  | 83,82,000           | 52,364  | 17,094        | 8,233   | 5,48,700  | 1,063,782   |
| orchadabad ...           | 1,16,005            | 770     | 136           | 7       | 6,140    | 13,300      | North-Western ...  | 2,12,979            | ...     | 170           | ...     | 34,650    | 3,402       |
| agepore ...              | 2,76,444            | ...     | 152           | ...     | 10,229   | 6,825       | and Oudh ...   | 25,06,518           | 18,480  | 4,060         | 701     | 24,006    | 403,079     |
| shalya ...               | 5,53,553            | ...     | 982           | ...     | 12,609   | 140         | Punjab ...   | 9,09,783            | ...     | 1,031         | ...     | 140,660   | ...         |
| urpore ...               | 1,10,994            | ...     | 46            | ...     | 6,184    | 43,905      | Central Provinces ...  | 2,38,326            | 440     | 172           | ...     | 37,870    | ...         |
| ra ...                   | 1,02,855            | ...     | 39            | ...     | 33,930   | 1,244       | Rajputana States ...   | 44,800              | 1,430   | 144           | ...     | 42,010    | ...         |
| na ...                   | 49,003              | 2,310   | 39            | ...     | 1,185    | 700         | Bombay ...   | 2,431               | 6,300   | ...           | ...     | 1,131,583 | ...         |
| jeeling ...              | 1,91,898            | ...     | 81            | ...     | 11,301   | 2,310       | Madras ...   | 41,647              | 422     | 1,900         | ...     | 303,094   | ...         |
| phoreo ...               | 5,90,387            | ...     | 1,728         | 11      | 31,903   | 1,155       | Mysore ...   | ...                 | 430     | ...           | ...     | 189,250   | ...         |
| va ...                   | 5,31,115            | ...     | 2,076         | ...     | 30,241   | 1,155       | Berar ...  | 126                 | ...     | ...           | ...     | 2,065,780 | ...         |
| reedpore ...             | 1,16,008            | ...     | 508           | ...     | 25,665   | 35          | Pondicherry ...  | ...                 | ...     | ...           | ...     | 76,28,711 | ...         |
| keerpore ...             | 1,25,184            | ...     | ...           | ...     | 19,050   | 120         | British Burmah ...   | 3,71,701            | 207     | 1,267         | 1,016   | ...       | ...         |
| hensingh ...             | ...                 | ...     | ...           | ...     | 4,825    | ...         | Other places ...   | 9,721               | 4,203   | 27            | 1,000   | ...       | ...         |
| pemb ...                 | ...                 | ...     | ...           | ...     | ...      | ...         | Grand Total of 1887 ...  | 1,25,08,937         | 84,736  | 25,861        | 11,863  | 6,07,452  | 13,049,394  |
| tagong ...               | 1,18,922            | ...     | 160           | ...     | 5,090    | 2,000       | Exports in February 1886 ...   | 1,31,84,757         | 71,824  | 22,911        | 8,613   | 5,47,728  | 13,208,608  |
| kholy ...                | 18,000              | ...     | 40            | ...     | ...      | ...         | The Sea-borne Trade of Calcutta in these Staples during the month of February 1887 was as follows:-  |                     |         |               |         |           |             |
| Total of Bengal ...      | 43,77,402           | 33,314  | 12,189        | 2,259   | 3,38,538 | 493,699     |  |                     |         |               |         |           |             |
| BEHAR.                   |                     |         |               |         |          |             |  |                     |         |               |         |           |             |
| na ...                   | 4,70,913            | 1,430   | 288           | 120     | 56,486   | 86,915      |  |                     |         |               |         |           |             |
| hubad ...                | 2,03,931            | ...     | 53            | 317     | 10,187   | 21,890      | IMPORTED INTO CALCUTTA—  | Rs.*                | Rs.     | Mds.          | Mds.    | Mds.      | No.         |
| ufferpore ...            | 4,18,005            | 3,300   | 3             | 205     | 18,215   | 20,830      | From Foreign Ports—  |                     |         |               |         |           |             |
| bhunga ...               | 1,85,361            | ...     | 4             | 10      | 5,085    | 2,835       | United Kingdom ...   | 96,29,153           | ...     | 1,863         | ...     | 5,95,633  | ...         |
| in ...                   | 5,31,670            | ...     | 16            | 1,145   | 22,469   | 28,925      | Other foreign ports ...  | 24,080              | ...     | 391           | ...     | 2,10,110  | ...         |
| mparan ...               | 6,71,454            | 8,140   | 35            | 32      | 15,288   | 8,610       | Total of Foreign Trade ...   | 96,51,143           | ...     | 14,25         | ...     | 8,05,823  | ...         |
| ghyr ...                 | 1,53,865            | ...     | 14            | 308     | 9,123    | 18,905      | From Indian Ports—   |                     |         |               |         |           |             |
| ulpore ...               | 4,10,130            | ...     | 13            | 427     | 17,176   | 36,846      | Bombay ...   | 9,240               | 60,942  | ...           | 9,161   | 38,574    | 17,500      |
| neth ...                 | 4,45,007            | 600     | 7             | 560     | 10,217   | 2,830       | Madras ...   | ...                 | ...     | 15            | ...     | ...       | 42          |
| dh ...                   | ...                 | ...     | ...           | ...     | 4,697    | 200         | Other ports in Madras ...  | ...                 | ...     | ...           | ...     | ...       | ...         |
| dh Pergunnahs ...        | 4,21,804            | ...     | 115           | 744     | 17,547   | 46,780      | British Burmah ...   | 5,000               | ...     | ...           | ...     | ...       | ...         |
| Total of Behar ...       | 37,11,004           | 17,050  | 670           | 4,186   | 1,89,866 | 289,220     | Other Indian ports ...   | 390                 | ...     | ...           | ...     | ...       | 1,385       |
| ORISSA.                  |                     |         |               |         |          |             | Total of Interportal Trade ...   | 14,240              | 62,082  | 15            | 9,166   | 38,574    | 14,010      |
| ack ...                  | ...                 | ...     | ...           | ...     | ...      | 7,500       | Grand Total of Im-ports in February 1886 ...   | 96,68,389           | 62,082  | 14,272        | 9,166   | 8,44,397  | 14,010      |
| more ...                 | 1,18,550            | ...     | 4,201         | 149     | 6,807    | 208,918     | As per tariff declaration value.   | 94,10,832           | 84,361  | 13,741        | 8,218   | 6,30,115  | 5,700       |
| Total of Orissa ...      | 1,18,550            | ...     | 4,201         | 149     | 6,807    | 306,418     |  |                     |         |               |         |           |             |

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported from Calcutta during the month of February 1887.

| SPECIFICATION OF ROUTES.                    | COTTON PIECE-GOODS. |           | COTTON TWIST. |         | Salt.    | Gunny-bags. |
|---|---------------------|-----------|---------------|---------|----------|-------------|
|   | European.           | Indian.   | European.     | Indian. |          |             |
|   | Rs.                 | Rs.       | Mds.          | Mds.    | Mds.     | No.         |
| country boats ...                           | ...                 | 3,99,755  | ...           | 6,462   | 4,003    | 2,71,047    |
| river steamers ...                          | ...                 | 5,47,632  | ...           | 1,183   | 134      | 7,000       |
| East Indian Railway ...                     | ...                 | 79,10,910 | ...           | 6,701   | 8,650    | 2,54,094    |
| Eastern Bengal State Railway ...            | ...                 | 28,33,018 | ...           | 4,622   | ...      | 61,532      |
| road ...                                    | ...                 | 1,84,115  | ...           | 607     | ...      | 8,674       |
| sea ...                                     | ...                 | 6,92,517  | ...           | 8,282   | 7,615    | 6,297       |
| Grand Total of Exports in February 1887 ... | 1,25,08,937         | 84,736    | 25,861        | 11,863  | 6,07,452 | 13,049,394  |
| Exports in February 1886 ...                | 1,31,84,757         | 71,824    | 22,911        | 8,613   | 5,47,728 | 13,208,608  |

# SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 13, 1887.

## Meteorological Report of the Province of

| DISTRICT.                                     | Representative stations. | STATION OBSERVATIONS.                         |  |                           |                            |                             |                   |                  |                                 |                                 |                         |                             |                          |                             |                            |                                     |
|---|--------------------------|---|--|---------------------------|----------------------------|-----------------------------|-------------------|------------------|---------------------------------|---------------------------------|-------------------------|-----------------------------|--------------------------|-----------------------------|----------------------------|-------------------------------------|
|   |                          | AIR PRESSURE.                                 |  |                           |                            |                             | TEMPERATURE.      |                  |                                 |                                 |                         | HUMIDITY.                   |                          | CLOUD.                      |                            |                                     |
|   |                          | Highest, 10 A.M., barometer-reading of month. | Lowest, 10 A.M., barometer-reading of month. | Mean, 10 A.M., for month. | Mean reduced to sea-level. | Variation from normal mean. | Highest of month. | Lowest of month. | Mean daily maximum temperature. | Mean daily minimum temperature. | Mean daily temperature. | Variation from normal mean. | Mean, 10 A.M., humidity. | Variation from normal mean. | Mean cloud amount, 10 A.M. | Variation from normal mean, 10 A.M. |
| Pooree  | Gopalpore                | 29.688  | 29.401                                       | 29.582                    | 29.632                     | +0.02                       | 95.9              | 77.8             | 87.6                            | 81.4                            | 84.5                    | +1.7                        | 76                       | -1                          | 4.6                        | -3                                  |
|   | False Point              | 29.741  | 29.470                                       | 29.622                    | 29.640                     | +0.08                       | 91.5              | 74.6             | 83.3                            | 80.1                            | 84.7                    | -1.0                        | 77                       | -6                          | 2.0                        | +0.4                                |
| Cuttack                                       | Cuttack                  | 29.672  | 29.413                                       | 29.555                    | 29.635                     | +0.14                       | 100.4             | 74.8             | 86.6                            | 78.7                            | 87.1                    | -1.1                        | 66.7                     | -8                          | 6.4                        | -0.2                                |
| Balsore                                       | Balsore                  | 29.677  | 29.405                                       | 29.561                    | 29.610                     | +0.05                       | 97.5              | 74.8             | 81.4                            | 79.0                            | 83.2                    | +0.5                        | 75                       | -                           | 3.7                        | -                                   |
| South-West Midnapore and South 24-Pergunnahs. | Sankar Island            | 29.735  | 29.524                                       | 29.617                    | 29.643                     | +0.10                       | 96.7              | 70.5             | 80.0                            | 81.8                            | 80.2                    | +0.4                        | 82                       | -2                          | 7.6                        | 0                                   |
| Midnapore                                     | Midnapore                | 29.589  | 29.393                                       | 29.476                    | 29.525                     | +0.00                       | 101.3             | 74.8             | 81.0                            | 78.7                            | 80.3                    | -0.5                        | 70                       | -                           | 4.1                        | -                                   |
| 24-Pergunnahs, Howrah, and Hooghly.           | Calcutta                 | 29.711  | 29.506                                       | 29.603                    | 29.624                     | +0.10                       | 94.0              | 72.7             | 83.7                            | 78.5                            | 84.1                    | -0.7                        | 76                       | -9                          | 7.6                        | +0.5                                |
| Burdwan                                       | Burdwan                  | 29.628  | 29.414                                       | 29.521                    | 29.620                     | +0.00                       | 97.7              | 75.4             | 83.5                            | 78.2                            | 85.4                    | 0                           | 72                       | -0                          | 7.3                        | -0.1                                |
| Bankoora                                      | Bankoora                 | 29.400  | 29.161                                       | 29.291                    | -                          | -                           | 90.1              | 74.6             | 82.9                            | 78.0                            | 85.0                    | -                           | 71                       | -                           | 4.0                        | -                                   |
| West Burdwan and Beerbhoom.                   | Raniganj                 | 29.377  | 29.180                                       | 29.279                    | -                          | -0.03                       | 130.0             | 73.4             | 83.5                            | 78.5                            | 80.0                    | -1.4                        | 73                       | -                           | 4.7                        | -                                   |
| Moorshedabad                                  | Berhampore               | 29.051  | 29.438                                       | 29.557                    | 29.624                     | +0.12                       | 94.7              | 72.8             | 81.2                            | 78.3                            | 84.6                    | -1.4                        | 84                       | +2                          | 9.1                        | +0.8                                |
| Nuddea  | Krishnagar               | 29.673  | 29.473                                       | 29.576                    | -                          | -                           | 95.8              | 71.3             | 81.5                            | 77.8                            | 84.7                    | -                           | 77                       | -                           | 7.4                        | -                                   |
| Jessore and Khoulia                           | Jessore                  | 29.720  | 29.460                                       | 29.611                    | 29.644                     | +0.14                       | 95.3              | 72.0             | 81.5                            | 78.7                            | 85.1                    | +0.2                        | 80                       | -4                          | 8.3                        | +0.6                                |
| Chittagong                                    | Chittagong               | 29.709  | 29.407                                       | 29.623                    | 29.712                     | +0.17                       | 92.3              | 70.5             | 80.7                            | 76.8                            | 81.8                    | +0.1                        | 81                       | -5                          | 8.6                        | +1.2                                |
| Chittagong Hill Tracts                        | Dumagri                  | Observations not received.                    |  |                           |                            |                             |                   |                  |                                 |                                 |                         |                             |                          |                             |                            |                                     |
| Backergunj                                    | Barrisal                 | 29.750  | 29.535                                       | 29.651                    | 29.681                     | 0                           | 92.8              | 71.8             | 83.5                            | 78.5                            | 83.5                    | ?                           | 81.4                     | -                           | 7.3                        | -                                   |
| Noakhally                                     | Noakhally                | 29.691  | 29.401                                       | 29.640                    | 29.683                     | -                           | 90.0              | 70.9             | 87.8                            | 77.6                            | 82.7                    | +1.3                        | 77                       | -                           | 5.0                        | -                                   |
| Furreedpore                                   | Furreedpore              | 29.714  | 29.488                                       | 29.611                    | -                          | +0.01                       | 89.5              | 70.9             | 87.0                            | 77.7                            | 82.4                    | 0                           | 82                       | -                           | 3.4                        | -                                   |
| Dacca   | Dacca                    | 29.738  | 29.508                                       | 29.635                    | 29.657                     | +0.21                       | 93.1              | 73.1             | 83.4                            | 78.4                            | 83.9                    | +0.4                        | 83                       | -4                          | 8.0                        | +0.3                                |
| Tipperah                                      | Comillah                 | 29.733  | 29.532                                       | 29.641                    | 29.677                     | +0.00                       | 94.3              | 70.8             | 80.1                            | 75.9                            | 82.6                    | +1.3                        | 79                       | -                           | 7.0                        | -                                   |
| Mymensingh                                    | Mymensingh               | 29.721  | 29.405                                       | 29.610                    | -                          | +0.11                       | 91.3              | 71.1             | 87.5                            | 76.4                            | 82.0                    | -0.5                        | 80                       | -                           | 7.9                        | -                                   |
| Bogra   | Bogra                    | 29.641  | 29.425                                       | 29.556                    | 29.619                     | -                           | 92.3              | 73.8             | 83.3                            | 77.2                            | 82.8                    | -                           | 85                       | -                           | 8.4                        | -                                   |
| Patna   | Serajgunj                | 29.689  | 29.465                                       | 29.591                    | 29.640                     | -0.16                       | 92.6              | 71.2             | 84.9                            | 77.0                            | 83.0                    | +0.3                        | 83                       | -                           | 7.6                        | -                                   |
| Rajshahye                                     | Rampore Beaulah.         | 29.659  | 29.425                                       | 29.552                    | 29.621                     | -0.18                       | 93.3              | 69.6             | 80.2                            | 76.1                            | 82.7                    | -1.1                        | 81                       | -                           | 3.9                        | -                                   |
| Maldah  | Maldah                   | 29.577  | 29.331                                       | 29.461                    | -                          | -                           | 97.8              | 71.3             | 89.6                            | 78.0                            | 83.8                    | -                           | 82                       | -                           | 4.4                        | -                                   |
| Dinagore                                      | Dinagore                 | 29.594  | 29.357                                       | 29.511                    | 29.631                     | +0.07                       | 94.1              | 72.1             | 87.7                            | 77.0                            | 82.4                    | -0.5                        | 80                       | -                           | 7.4                        | -                                   |
| Rungpore                                      | Rungpore                 | 29.592  | 29.371                                       | 29.625                    | 29.651                     | -0.14                       | 92.8              | 70.7             | 86.8                            | 76.5                            | 81.7                    | -0.4                        | 87                       | -                           | 4.8                        | -                                   |
| Jalpigoree and Cooch Behar.                   | Jalpigoree               | 29.400  | 29.238                                       | 29.376                    | 29.604                     | -0.03                       | 93.0              | 68.8             | 85.1                            | 74.4                            | 79.9                    | -1.9                        | 94.1                     | -                           | 7.8                        | -                                   |
| Darjeeling Hill Tracts                        | Darjeeling               | 29.035  | 29.774                                       | 29.882                    | -                          | -0.23                       | 68.6              | 49.6             | 63.9                            | 55.1                            | 59.5                    | -0.5                        | 96                       | 0                           | 8.5                        | -0.2                                |
| Purneah and North Bhagulpore.                 | Purneah                  | 29.587  | 29.387                                       | 29.652                    | 29.635                     | +0.18                       | 94.2              | 69.6             | 88.1                            | 76.3                            | 83.3                    | -3.1                        | 82                       | +3                          | 5.7                        | -0.3                                |
| Mozufferpore                                  | Mozufferpore             | Observations suspended.                       |  |                           |                            |                             |                   |                  |                                 |                                 |                         |                             |                          |                             |                            |                                     |
| Durbhunga                                     | Durbhunga                | 29.526  | 29.328                                       | 29.447                    | 29.613                     | +0.17                       | 95.4              | 72.5             | 89.2                            | 77.8                            | 83.5                    | -2.1                        | 82                       | +4                          | 6.4                        | +1.5                                |
| humparun                                      | Motihari                 | 29.465  | 29.268                                       | 29.378                    | 29.605                     | -0.03                       | 95.8              | 70.8             | 90.0                            | 76.3                            | 83.5                    | -2.3                        | 74                       | -                           | 7.5                        | -                                   |
| arun  | Chupra                   | 29.484  | 29.306                                       | 29.407                    | -                          | -0.04                       | 98.0              | 74.1             | 91.9                            | 78.8                            | 85.4                    | -3.3                        | 77                       | -                           | 5.2                        | -                                   |
| ahabad  | Dehree                   | 29.347  | 29.134                                       | 29.257                    | 29.587                     | +0.11                       | 99.5              | 69.0             | 91.4                            | 79.6                            | 85.5                    | -1.3                        | 67                       | -                           | 3.6                        | -                                   |
|   | Buxar                    | 29.430  | 29.244                                       | 29.345                    | 29.585                     | -0.01                       | 100.4             | 73.2             | 93.3                            | 78.7                            | 89.0                    | -3.1                        | 68                       | -                           | 4.5                        | -                                   |
|   | Arrah                    | 29.460  | 29.277                                       | 29.351                    | 29.576                     | -0.08                       | 99.4              | 74.6             | 92.3                            | 78.9                            | 85.0                    | ?                           | 70                       | -                           | 4.6                        | -                                   |
| ya  | Gya                      | 29.204  | 29.112                                       | 29.204                    | 29.577                     | -0.08                       | 102.0             | 74.8             | 94.3                            | 81.2                            | 87.7                    | -2.1                        | 67                       | +3                          | 5.3                        | -1.3                                |
| ina   | Bankipore                | 29.499  | 29.325                                       | 29.421                    | 29.603                     | +0.16                       | 98.0              | 75.2             | 91.0                            | 79.0                            | 85.0                    | -4.3                        | 84                       | +10                         | 6.0                        | -0.3                                |
| outh Bhagulpore and Moughlyr.                 | Bhagulpore               | 29.504  | 29.323                                       | 29.430                    | 29.591                     | -0.02                       | 97.1              | 71.0             | 90.0                            | 77.8                            | 83.9                    | -1.2                        | 78                       | -                           | 4.1                        | -                                   |
| uthal Pergunnahs                              | Naya Doonka              | 29.186  | 28.995                                       | 29.101                    | -                          | -0.00                       | 94.0              | 74.3             | 91.2                            | 77.6                            | 84.4                    | -1.7                        | 82                       | -                           | 3.0                        | -                                   |
| azaribagh                                     | Hazaribagh               | 27.722  | 27.561                                       | 27.632                    | 29.699                     | +0.27                       | 99.0              | 71.7             | 90.3                            | 74.9                            | 82.6                    | -1.5                        | 64                       | -2                          | 7.1                        | -0.2                                |
| harungga and Manbhoom.                        | Ranchow                  | 27.592  | 27.415                                       | 27.501                    | 29.580                     | +0.60                       | 99.0              | 69.4             | 89.8                            | 73.4                            | 81.6                    | -1.6                        | 66                       | -                           | 6.4                        | -                                   |
| ngbhoom                                       | Charbassa                | 28.937  | 28.747                                       | 28.857                    | -                          | +0.05                       | 101.8             | 75.0             | 94.8                            | 78.8                            | 86.3                    | -1.1                        | 65                       | -                           | 5.6                        | -                                   |
| sau   | Sibsaar                  | 29.453  | 29.235                                       | 29.369                    | 29.703                     | +0.07                       | 94.6              | 71.1             | 89.2                            | 76.3                            | 82.3                    | -1.1                        | 84                       | +1                          | 8.6                        | -0.1                                |
|   | Dhulri                   | 29.053  | 29.409                                       | 29.547                    | 29.665                     | +0.06                       | 90.2              | 72.3             | 82.8                            | 75.7                            | 79.3                    | -2.5                        | 90                       | +3                          | 8.0                        | +0.6                                |
|   | Situar                   | 29.085  | 29.472                                       | 29.597                    | 29.703                     | -0.04                       | 95.6              | 70.3             | 89.5                            | 75.4                            | 82.0                    | -0.8                        | 77                       | -8                          | 8.0                        | +0.5                                |

\* Mean for 29 days.

† Mean for 28 days.

‡ Mean for 26 days.

Bengal for the month of June 1887.

| DISTRICT OBSERVATIONS. |              |                      |                       |                                   |                      |              |            |                            |                                   | Representative stations. | DISTRICT.                                     | METEOROLOGICAL DIVISION. |
|------------------------|--------------|----------------------|-----------------------|-----------------------------------|----------------------|--------------|------------|----------------------------|-----------------------------------|--------------------------|---|--------------------------|
| RAINFALL.              |              |                      |                       |                                   |                      |              |            |                            |                                   |                          |   |                          |
| Of month.              |              |                      |                       |                                   | Since 15th May 1887. |              |            |                            |                                   |                          |   |                          |
| Mean of district.      | Normal mean. | Variation from mean. | Number of rainy days. | Normal mean number of rainy days. | Mean of district.    | Normal mean. | Variation. | Mean number of rainy days. | Normal mean number of rainy days. |                          |   |                          |
| 5.22                   | 8.83         | -5.61                | 9.3                   | 11.5                              | 7.48                 | 10.39        | -2.91      | 11.8                       | 14.8                              | Gopalpore ...            | Pooree ...                                    | ORISSA.                  |
| 9.79                   | 9.76         | +0.03                | 11.8                  | 12.6                              | 14.89                | 11.72        | +2.97      | 14.2                       | 16.5                              | Palm Point ...           | Cuttack ...                                   |                          |
| 4.95                   | 8.73         | -3.77                | 10.0                  | 12.2                              | 12.24                | 10.85        | +1.39      | 12.7                       | 16.4                              | Cuttack ...              | Cuttack ...                                   |                          |
| 7.71                   | 9.03         | -2.22                | 12.0                  | 14.2                              | 10.06                | 12.11        | -1.48      | 16.0                       | 18.4                              | Balasore ...             | Balasore ...                                  |                          |
| 8.52                   | 9.50         | -0.98                | 13.0                  | 12.6                              | 12.41                | 11.40        | +0.95      | 16.0                       | 16.3                              | Saugor Island ...        | South-West Midnapore and South 24-Pergunnahs. | SOUTH-WEST BENGAL.       |
| 6.97                   | 10.04        | -3.07                | 12.5                  | 15.5                              | 9.67                 | 12.07        | -3.00      | 16.9                       | 20.5                              | Midnapore ...            | Midnapore ...                                 |                          |
| 6.61                   | 9.02         | -2.41                | 12.0                  | 13.6                              | 15.01                | 11.30        | +3.71      | 17.7                       | 17.9                              | Calcutta ...             | 24-Pergunnahs, Howrah, and Hooghly.           |                          |
| 8.29                   | 9.85         | -1.56                | 12.0                  | 14.4                              | 11.78                | 11.08        | +0.10      | 17.0                       | 18.2                              | Burdwan ...              | Burdwan ...                                   |                          |
| 7.23                   | 10.29        | -3.06                | 15.0                  | 14.3                              | 14.00                | 11.86        | +2.05      | 22.2                       | 18.5                              | Bankura ...              | Bankura ...                                   | EAST BENGAL.             |
| 12.03                  | 8.05         | +3.98                | 15.8                  | 13.4                              | 20.84                | 11.62        | +9.22      | 24.3                       | 18.0                              | Ranigunj ...             | West Burdwan and Hoerbloom.                   |                          |
| 6.74                   | 9.90         | -3.16                | 13.0                  | 14.7                              | 13.37                | 13.25        | +0.12      | 20.0                       | 19.7                              | Berhampore ...           | Moorshedabad ...                              |                          |
| 9.71                   | 12.46        | -2.75                | 15.3                  | 16.6                              | 11.49                | 15.84        | -4.36      | 19.7                       | 22.2                              | Krishnagar ...           | Nuddes ...                                    |                          |
| 17.45                  | 30.37        | -12.92               | 24.5                  | 21.6                              | 19.02                | 35.84        | -16.82     | 27.6                       | 27.6                              | Jessore ...              | Jessore and Khoolna ...                       | NORTH BENGAL.            |
| 14.06                  | 20.15        | -6.09                | 26.0                  | 21.7                              | 17.50                | 21.35        | -3.85      | 33.0                       | 28.1                              | Chittagong ...           | Chittagong ...                                |                          |
| 9.34                   | 10.83        | -1.49                | 19.3                  | 20.8                              | 11.00                | 23.00        | -12.00     | 21.8                       | 27.3                              | Demagiri ...             | Chittagong Hill Tracts                        |                          |
| 15.14                  | 28.27        | -13.13               | 18.5                  | 20.0                              | 16.71                | 33.28        | -16.57     | 20.0                       | 20.6                              | Barisal ...              | Backergunj ...                                |                          |
| 11.15                  | 12.63        | -1.48                | 14.3                  | 17.7                              | 12.44                | 17.15        | -4.71      | 17.6                       | 23.7                              | Noakholly ...            | Noakholly ...                                 | NORTH BENGAL.            |
| 9.00                   | 13.34        | -4.34                | 13.0                  | 18.5                              | 11.31                | 17.40        | -6.18      | 23.3                       | 24.8                              | Furzedpore ...           | Furzedpore ...                                |                          |
| 13.00                  | 17.15        | -4.06                | 22.0                  | 19.1                              | 13.79                | 21.77        | -7.96      | 24.3                       | 25.8                              | Dacca ...                | Dacca ...                                     |                          |
| 23.07                  | 16.21        | +7.76                | 18.4                  | 18.0                              | 26.81                | 20.09        | +6.82      | 23.4                       | 21.7                              | Commillah ...            | Tipperah ...                                  |                          |
| 19.07                  | 12.22        | +7.45                | 15.8                  | 15.5                              | 28.10                | 16.49        | +11.67     | 23.6                       | 21.0                              | Mymensingh ...           | Mymensingh ...                                | NORTH BENGAL.            |
| 15.10                  | 11.03        | +4.16                | 16.5                  | 16.3                              | 15.82                | 14.05        | +0.87      | 23.5                       | 21.7                              | Bogra ...                | Bogra ...                                     |                          |
| 9.14                   | 10.01        | -0.87                | 11.5                  | 13.7                              | 16.51                | 13.13        | +3.38      | 18.0                       | 18.6                              | Serajgunj ...            | Pubna ...                                     |                          |
| 13.16                  | 11.84        | +0.32                | 12.5                  | 15.6                              | 21.66                | 14.18        | +7.48      | 19.5                       | 19.5                              | Rampore Beau-leah ...    | Rajshahye ...                                 |                          |
| 18.84                  | 13.17        | +5.67                | 16.6                  | 14.4                              | 32.89                | 16.36        | +16.53     | 23.8                       | 18.2                              | Maldah ...               | Maldah ...                                    | NORTH BENGAL.            |
| 31.79                  | 30.45        | +1.11                | 19.5                  | 17.0                              | 44.97                | 27.42        | +17.55     | 28.5                       | 23.0                              | Dinapore ...             | Dinapore ...                                  |                          |
| 40.03                  | 30.21        | +10.72               | 21.0                  | 21.9                              | 55.33                | 38.84        | +16.54     | 31.4                       | 30.5                              | Rungpore ...             | Rungpore ...                                  |                          |
| 24.85                  | 28.85        | -4.00                | 24.3                  | 23.5                              | 46.22                | 31.37        | +14.85     | 34.3                       | 31.3                              | Julpigore ...            | Julpigore and Oooch Behar.                    |                          |
| 13.77                  | 11.23        | +2.55                | 15.0                  | 11.7                              | 29.00                | 13.43        | +15.57     | 22.0                       | 14.8                              | Darjeeling ...           | Darjeeling Hill Tracts...                     | NORTH BENGAL.            |
| 11.07                  | 7.20         | +3.87                | 10.0                  | 8.9                               | 17.52                | 8.85         | +8.67      | 12.3                       | 10.8                              | Purneah ...              | Purneah and North Bhagulpore.                 |                          |
| 12.49                  | 7.76         | +4.74                | 12.3                  | 9.6                               | 18.34                | 8.86         | +9.48      | 18.0                       | 11.4                              | Mozufferpore ...         | Mozufferpore ...                              |                          |
| 12.03                  | 7.88         | +4.15                | 12.0                  | 9.4                               | 14.88                | 9.17         | +5.71      | 16.0                       | 11.6                              | Durbhurja ...            | Durbhunga ...                                 |                          |
| 6.47                   | 6.40         | -0.08                | 9.0                   | 8.8                               | 10.89                | 7.33         | +3.56      | 13.3                       | 10.1                              | Motihari ...             | Chumparun ...                                 | NORTH BENGAL.            |
| 3.57                   | 5.44         | -1.87                | 6.0                   | 9.0                               | 9.58                 | 5.91         | +3.67      | 9.3                        | 10.4                              | Chupra ...               | Sarun ...                                     |                          |
| 4.58                   | 5.88         | -1.00                | 5.8                   | 8.5                               | 9.80                 | 6.89         | +2.91      | 10.3                       | 10.3                              | Dehree ...               | Shahabad ...                                  |                          |
| 5.20                   | 6.30         | -1.10                | 8.0                   | 9.2                               | 12.92                | 7.37         | +5.55      | 13.3                       | 11.0                              | Buxar ...                | Arrah ...                                     |                          |
| 6.06                   | 6.95         | -0.01                | 11.2                  | 10.6                              | 14.35                | 8.25         | +6.10      | 16.6                       | 12.7                              | Gya ...                  | Gya ...                                       | SOUTH BENGAL.            |
| 6.35                   | 9.15         | -2.80                | 14.8                  | 13.3                              | 18.09                | 10.93        | +7.17      | 21.3                       | 16.3                              | Bankipore ...            | Patna ...                                     |                          |
| 5.94                   | 8.66         | -2.72                | 12.2                  | 13.0                              | 11.62                | 9.83         | +1.80      | 10.2                       | 15.9                              | Bhagulpore ...           | South Bhagulpore and Koughlyr.                |                          |
| 6.22                   | 7.80         | -1.58                | 11.3                  | 13.8                              | 15.73                | 9.06         | +6.67      | 16.0                       | 17.1                              | Naya Doomka ...          | Sonthal Pergunnahs ...                        |                          |
| 5.72                   | 8.45         | -2.73                | 11.0                  | 16.1                              | 15.18                | 10.57        | +4.61      | 16.0                       | 21.0                              | Hasaribagh ...           | Hasaribagh ...                                | SOUTH BENGAL.            |
|                        |              |                      |                       |                                   |                      |              |            |                            |                                   | Ranchee ...              | Lohardunga and Man-shoom.                     |                          |
|                        |              |                      |                       |                                   |                      |              |            |                            |                                   | Chaitanea ...            | Sinethon ...                                  |                          |
|                        |              |                      |                       |                                   |                      |              |            |                            |                                   | Sibesar ...              | ...   |                          |
|                        |              |                      |                       |                                   |                      |              |            |                            |                                   | Dhauri ...               | Assam ...                                     | ASSAM.                   |
|                        |              |                      |                       |                                   |                      |              |            |                            |                                   | Shilchar ...             | ...   |                          |

Table of Rainfall recorded at Station

| Serial<br>no. | District.     | Station.        | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|---------------|---------------|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1             | Pooree        | Pooree          | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'01 | ...  | 0'01 | 0'12 | 0'20 | 0'12 | 0'32 | ...  | ...  | ...  | 0'05 | ...  | ...  |
|               |               | Khurdah         | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'16 | ...  | ...  | 0'11 | 0'75 | 0'50 | 0'14 | 0'03 | ...  | ...  | 1'71 | 0'11 | ...  |
|               |               | Bampur          | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|               |               | Pulse Point     | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'06 | ...  | ...  | 0'00 | 0'75 | 0'14 | 0'53 | ...  | ...  | ...  | 0'51 | 0'0  | ...  |
|               |               | Gop             | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'51 | ...  | 0'42 | 0'20 | ...  | ...  | ...  | 2'07 | 1'14 | 0'11 |
|               |               | Pipiti          | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|               | Cuttack       | Juantsingpore   | ...  | ...  | ...  | ...  | ...  | 0'10 | ...  | 0'03 | ...  | ...  | ...  | 0'10 | 0'27 | 0'20 | ...  | ...  | ...  | 1'80 | 0'2  | ...  |
|               |               | Hanki           | ...  | ...  | ...  | 0'03 | ...  | 0'02 | ...  | 0'03 | ...  | ...  | ...  | 0'03 | 0'05 | 0'47 | ...  | ...  | ...  | ...  | 1'01 | 1'4  |
|               |               | Cuttack         | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'85 | ...  | ...  | ...  | 0'01 | 0'50 | 0'40 | ...  | 0'04 | 0'35 | ...  | ...  | ...  |
|               |               | Kondrapara      | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'01 | 0'04 | 0'09 | 0'20 | ...  | 0'12 | ...  | 0'10 | 2'43 |
|               |               | Jajpore         | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'33 | 0'09 | ...  | 0'20 | ...  | ...  | ...  | 0'24 | 3'71 |
|               | Balasore      | Dharmasalla     | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'01 | 0'33 | 0'07 | ...  | ...  | ...  | ...  | 4'80 | ...  |
|               |               | Salipore        | ...  | ...  | ...  | ...  | ...  | 0'10 | ...  | ...  | ...  | ...  | ...  | 0'80 | 0'45 | 0'20 | ...  | ...  | ...  | ...  | 5'00 | 1'50 |
|               |               | Chandbali       | ...  | ...  | ...  | ...  | 0'15 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'15 | 0'55 | ...  | ...  | ...  | ...  | 0'15 | 0'3  |
|               |               | Bhadruck        | ...  | ...  | ...  | ...  | ...  | 0'26 | ...  | ...  | ...  | ...  | ...  | ...  | 1'55 | 0'30 | ...  | ...  | ...  | ...  | 0'34 | 0'37 |
|               |               | Sornu           | ...  | ...  | ...  | ...  | ...  | 0'80 | ...  | ...  | ...  | ...  | ...  | ...  | 1'00 | 0'25 | 0'12 | ...  | ...  | ...  | 0'85 | 0'81 |
| 2             | Midnapore     | Jajpore         | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'15 | 0'10 | 0'13 | 0'37 | ...  | ...  | 0'14 | 1'10 | 1'00 | ...  |
|               |               | Bartodah        | ...  | ...  | ...  | ...  | 0'02 | ...  | ...  | ...  | ...  | ...  | ...  | 0'07 | 0'30 | 0'05 | 0'03 | ...  | 0'07 | 0'77 | 0'93 | 0'26 |
|               |               | Con'rai         | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'20 | 0'40 | 0'00 | 0'38 | 0'07 | ...  | 0'51 | 0'59 | ...  |
|               |               | Sunder Island   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'47 | 0'10 | 0'31 | 0'25 | 0'04 | ...  | ...  | 2'17 | 1'74 |
|               |               | Tudong          | ...  | ...  | ...  | 1'00 | ...  | ...  | ...  | ...  | 0'20 | ...  | ...  | 1'00 | 0'10 | 0'20 | ...  | ...  | ...  | ...  | 2'00 | 1'20 |
|               | 24-Pargunnahs | Midnapore       | ...  | 0'10 | 0'07 | ...  | ...  | ...  | ...  | ...  | 0'07 | ...  | ...  | ...  | 0'22 | 0'51 | 0'30 | ...  | ...  | ...  | 0'14 | 0'53 |
|               |               | Ghatol          | ...  | ...  | 0'37 | 0'25 | 1'46 | ...  | ...  | ...  | 1'15 | ...  | ...  | ...  | 0'23 | 0'30 | 0'18 | ...  | ...  | ...  | 1'11 | 1'00 |
|               |               | Dunog           | ...  | ...  | ...  | ...  | ...  | 0'78 | ...  | ...  | ...  | ...  | ...  | ...  | 0'8  | ...  | 0'10 | 0'35 | ...  | ...  | 1'52 | 0'60 |
|               |               | Heria           | ...  | ...  | ...  | ...  | 0'03 | ...  | ...  | ...  | ...  | 0'03 | ...  | ...  | ...  | 0'05 | 0'16 | ...  | ...  | 0'12 | 3'5  | 0'70 |
|               |               | Bhagwanpore     | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'63 | 0'04 | 0'07 | ...  | ...  | ...  | 1'00 | 0'33 |
|               | Howrah        | Garbata         | ...  | ...  | ...  | 0'20 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'74 | 0'50 | ...  | ...  | ...  | 0'22 | ...  | 1'24 |
|               |               | Diamond Harbour | ...  | ...  | ...  | 0'03 | 0'58 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'61 | 0'23 | 0'25 | 0'40 | ...  | 0'10 | 1'35 | 1'55 |
|               |               | Canning Town    | ...  | ...  | ...  | 0'19 | ...  | 0'27 | ...  | ...  | ...  | ...  | ...  | 0'28 | 0'30 | 0'43 | 0'39 | 0'31 | ...  | 0'26 | 0'47 | 0'17 |
|               |               | Alipore Jail    | ...  | ...  | ...  | 0'11 | ...  | 0'72 | ...  | ...  | ...  | ...  | ...  | 0'04 | 0'74 | 0'20 | 0'18 | 0'30 | ...  | 0'71 | 0'11 | 0'87 |
|               |               | Barackpore      | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'40 | 0'28 | 0'04 | 0'18 | 0'08 | 1'13 | ...  | 1'30 |
| 3             | Hooghly       | Bum-Duan        | ...  | ...  | ...  | 0'1  | 0'50 | 0'5  | ...  | ...  | ...  | ...  | 0'06 | ...  | 0'37 | 0'51 | 1'03 | 0'22 | ...  | ...  | 0'42 | 2'05 |
|               |               | Banshat         | ...  | ...  | ...  | 0'01 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'30 | 0'19 | 0'50 | ...  | ...  | 0'50 | 0'31 | 0'09 |
|               |               | Banshat         | ...  | ...  | ...  | 0'30 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'11 | 1'16 | 0'85 | 0'51 | 0'45 | ...  | 1'25 | 1'97 | 1'25 |
|               |               | Howrah          | ...  | ...  | ...  | 0'11 | 0'02 | 0'04 | ...  | ...  | ...  | ...  | 0'37 | ...  | 0'37 | 0'25 | 0'14 | 0'41 | ...  | 0'28 | 0'43 | 0'50 |
|               |               | Manse Lal       | ...  | ...  | ...  | 0'05 | 0'50 | 0'16 | ...  | ...  | ...  | ...  | 0'41 | ...  | 0'26 | 0'42 | 0'27 | 0'15 | ...  | ...  | 2'05 | 0'22 |
|               | Burdwan       | Chowdhurani     | ...  | ...  | ...  | 0'27 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'12 | 0'32 | 0'32 | 0'03 | ...  | 0'8  | 1'00 | 0'47 |
|               |               | Hooghly         | ...  | ...  | ...  | 0'14 | ...  | ...  | ...  | 0'09 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'31 | 0'35 | ...  | 1'00 | 1'32 | 0'47 |
|               |               | Jennabad        | ...  | ...  | ...  | 1'03 | 0'20 | ...  | ...  | 0'81 | ...  | ...  | ...  | ...  | 0'13 | ...  | 0'40 | ...  | ...  | 0'00 | ...  | 0'11 |
|               |               | Calcutta        | ...  | ...  | ...  | 0'38 | ...  | ...  | ...  | 0'08 | ...  | ...  | ...  | ...  | 0'20 | 0'02 | ...  | 0'13 | 0'03 | 0'25 | 0'07 | 0'00 |
|               |               | Calcutta        | 3'80 | ...  | ...  | 0'37 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'43 | 0'17 | ...  | 0'12 | ...  | 0'10 | 0'11 | 0'30 |
| 4             | Bankura       | Ranovering      | ...  | ...  | ...  | 0'73 | ...  | ...  | ...  | 0'54 | ...  | ...  | ...  | ...  | 1'80 | 0'28 | 0'11 | 0'15 | ...  | 0'46 | ...  | 0'25 |
|               |               | Mezker          | ...  | ...  | ...  | 0'11 | ...  | ...  | ...  | 0'10 | ...  | ...  | ...  | ...  | 0'23 | 0'10 | ...  | ...  | 0'03 | 0'08 | 0'10 | 0'40 |
|               |               | Bankura         | ...  | ...  | ...  | 0'20 | ...  | ...  | ...  | 0'25 | ...  | ...  | ...  | ...  | 0'08 | 0'05 | 0'40 | ...  | ...  | 0'12 | ...  | 2'40 |
|               |               | Bankura         | ...  | ...  | ...  | 0'27 | ...  | ...  | ...  | 0'50 | ...  | ...  | ...  | ...  | 0'20 | 0'02 | 0'54 | ...  | 0'23 | ...  | 0'12 | 2'40 |
|               |               | Bankura         | ...  | ...  | ...  | 0'54 | ...  | ...  | ...  | 0'50 | ...  | ...  | ...  | ...  | 1'19 | 0'54 | 0'19 | 0'41 | ...  | 0'41 | 1'18 | 0'10 |
|               | Bardhaman     | Bankura         | ...  | ...  | ...  | 0'87 | 0'05 | ...  | ...  | 0'50 | ...  | ...  | ...  | ...  | 0'3  | 0'08 | 0'16 | 0'10 | ...  | ...  | 1'21 | 0'81 |
|               |               | Bankura         | ...  | ...  | ...  | 0'14 | ...  | ...  | ...  | 0'10 | ...  | ...  | ...  | ...  | 0'43 | 0'08 | 0'16 | 0'41 | ...  | ...  | 0'54 | 0'10 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | 0'40 | ...  | ...  | 0'30 | ...  | ...  | 0'20 | ...  | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
| 5             | Bardhaman     | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               | Bardhaman     | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
| 6             | Bardhaman     | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               | Bardhaman     | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
| 7             | Bardhaman     | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |
|               |               | Bankura         | ...  | ...  | ...  | 0'36 | ...  | ...  | ...  | 0'45 | ...  | ...  | ...  | ...  | 0'30 | 0'11 | 0'15 | 0'10 | 0'09 | 0'15 | ...  | 0'42 |

## Bengal in June 1887.

| 11  | 22   | 23   | 24   | 25   | 26   | 27  | 28   | 29   | 30  | Number of rainy days. | Average number of rainy days. | Total rainfall for the month. | Average rainfall for the month. | Heaviest rainfall during the month. | Total rainfall from 1st January 1887 up to 30th June 1887. | Average rainfall from 1st January up to 30th June 1887. | Station.                        | District.     | Meteorological division. |
|-----|------|------|------|------|------|-----|------|------|-----|-----------------------|-------------------------------|-------------------------------|---------------------------------|-------------------------------------|--|---|---------------------------------|---------------|--------------------------|
| 51  | 0.07 | 0.10 | 0.02 | ...  | ...  | ... | 0.20 | 0.05 | ... | 8                     | 11.7                          | 1.81                          | 7.70                            | 0.85                                | 4.83   | 13.18   | Pooree                          | Pooree        | ORISSA.                  |
| 09  | ...  | 0.08 | ...  | ...  | ...  | ... | ...  | ...  | ... | 13                    | 13.8                          | 4.89                          | 9.42                            | 1.71                                | 8.32   | 15.44   | Khurda, Banpur                  | ...           | ...                      |
| 10  | ...  | ...  | ...  | ...  | ...  | ... | ...  | 0.18 | ... | 5                     | 11.5                          | 2.19                          | 9.24                            | 0.75                                | 18.15  | 17.77   | False Point, Gop.               | ...           | ...                      |
| 02  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 8                     | 8.8                           | 8.35                          | 10.81                           | 2.58                                | 15.44  | 16.29   | Jagatsingapore, Banki.          | Cuttack.      | ...                      |
| 01  | 0.02 | 1.14 | 0.24 | 1.81 | 0.01 | ... | ...  | 0.71 | ... | 13                    | 13.4                          | 15.23                         | 10.81                           | 6.00                                | 22.44  | 17.64   | Cuttack, Kendrapara, Jajpore.   | ...           | ...                      |
| 50  | 0.10 | ...  | 0.70 | ...  | ...  | ... | 0.80 | 1.60 | ... | 11                    | 7                             | 7.22                          | 7                               | 5.00                                | 16.93  | ?   | Dharmasalla, Satalpore.         | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 10                    | 10.8                          | ...                           | ...                             | ...                                 | ...  | ...   | Chandbali, Bindruk, Sorah.      | Balasore.     | ...                      |
| ... | ...  | 0.10 | ...  | ...  | ...  | ... | ...  | ...  | ... | 10                    | 11.4                          | 4.73                          | 9.01                            | 1.55                                | 24.31  | 19.18   | Balasore, Jellsore, Baripodah.  | ...           | ...                      |
| 58  | ...  | 0.20 | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | 12.0                          | 7.61                          | 10.77                           | 3.45                                | 11.09  | 19.55   | Contal, Saugor Island, Tumlook. | Midnapore     | ...                      |
| 57  | 0.06 | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 11                    | 14.5                          | 8.68                          | 11.23                           | 2.17                                | 17.01  | 19.98   | ...                             | ...           | ...                      |
| 17  | 0.58 | 1.95 | ...  | ...  | ...  | ... | ...  | ...  | ... | 9                     | 10.7                          | 9.50                          | 9.38                            | 2.50                                | 15.80  | 19.27   | ...                             | ...           | ...                      |
| 13  | 0.23 | 0.01 | ...  | ...  | ...  | ... | ...  | ...  | ... | 13                    | 13.2                          | 5.99                          | 9.76                            | 1.95                                | 18.58  | 19.62   | ...                             | ...           | ...                      |
| 45  | 0.00 | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | 13.8                          | 10.06                         | 10.00                           | 2.21                                | 22.05  | 20.19   | ...                             | ...           | ...                      |
| ... | ...  | 0.22 | ...  | ...  | ...  | ... | ...  | ...  | ... | 9                     | ?                             | 5.26                          | ?                               | 1.32                                | 15.83  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 11                    | ?                             | 8.54                          | ?                               | 3.15                                | 14.45  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 9                     | ?                             | 6.85                          | ?                               | 1.88                                | 10.01  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 6                     | ?                             | 8.28                          | 6.85                            | 1.24                                | 12.30  | 16.81   | ...                             | ...           | ...                      |
| 52  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 13                    | 16.1                          | 9.94                          | 9.80                            | 1.55                                | 15.14  | 20.86   | Diamond Harbour, Chasing Town.  | 24-Pargunnas. | ...                      |
| 71  | ...  | 0.20 | 0.25 | ...  | ...  | ... | ...  | ...  | ... | 17                    | ?                             | 9.79                          | ?                               | 2.99                                | 18.83  | ?   | ...                             | ...           | ...                      |
| 34  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 13                    | 16.9                          | 6.76                          | 10.16                           | 2.30                                | 18.94  | 20.98   | ...                             | ...           | ...                      |
| ... | ...  | 0.65 | ...  | ...  | ...  | ... | ...  | ...  | ... | 9                     | 14.0                          | 9.07                          | 9.01                            | 1.39                                | 20.56  | 19.43   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | 15.5                          | 7.06                          | 9.31                            | 2.00                                | 22.09  | 20.33   | ...                             | ...           | ...                      |
| 14  | 0.03 | 0.07 | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | 15.2                          | 3.71                          | 9.64                            | 0.74                                | 16.70  | 20.82   | ...                             | ...           | ...                      |
| ... | ...  | 0.32 | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | 15.1                          | 11.46                         | 10.82                           | 1.97                                | 21.13  | 23.11   | ...                             | ...           | ...                      |
| 33  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 15                    | 17.5                          | 1.81                          | 10.37                           | 0.93                                | 17.55  | 21.75   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 13                    | 14.9                          | 6.70                          | 9.03                            | 2.05                                | 14.40  | 19.58   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 10                    | 16.7                          | 4.44                          | 9.74                            | 1.00                                | 14.41  | 19.85   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 15                    | 14.5                          | 13.75                         | 10.30                           | 3.52                                | 24.58  | 22.41   | ...                             | ...           | ...                      |
| ... | ...  | 0.12 | ...  | ...  | ...  | ... | ...  | ...  | ... | 10                    | 14.4                          | 4.36                          | 9.35                            | 1.06                                | 14.47  | 19.20   | ...                             | ...           | ...                      |
| 13  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | 11.4                          | 5.08                          | 8.43                            | 2.20                                | 17.89  | 18.55   | ...                             | ...           | ...                      |
| 20  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | 15.8                          | 2.35                          | 9.54                            | 0.85                                | 19.79  | 19.48   | ...                             | ...           | ...                      |
| 35  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 10                    | 13.6                          | 11.89                         | 9.94                            | 4.07                                | 33.13  | 19.99   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | 14.1                          | 6.63                          | 8.15                            | 1.60                                | 16.62  | 14.75   | ...                             | ...           | ...                      |
| 39  | 0.90 | 0.34 | 0.00 | ...  | ...  | ... | ...  | ...  | ... | 15                    | ?                             | 7.18                          | ?                               | 0.90                                | 16.77  | ?   | ...                             | ...           | ...                      |
| 17  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 13                    | 15.4                          | 6.28                          | 9.71                            | 2.40                                | 14.21  | 17.60   | ...                             | ...           | ...                      |
| 27  | 0.00 | 0.39 | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | 13.6                          | 7.78                          | 10.07                           | 2.40                                | 15.84  | 19.06   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 9                     | 13.1                          | 5.68                          | 8.71                            | 1.21                                | 15.01  | 14.77   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | 15.6                          | 13.49                         | 10.30                           | 3.82                                | 24.93  | 17.14   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 10                    | ?                             | 4.14                          | ?                               | 1.01                                | 15.04  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 13                    | ?                             | 6.19                          | ?                               | 3.04                                | 13.72  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 8                     | ?                             | 3.10                          | ?                               | 0.65                                | 8.05   | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 6                     | ?                             | 3.83                          | ?                               | 1.50                                | 12.04  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | ?                             | 7.15                          | 8.05                            | 2.35                                | 19.12  | 15.80   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 13                    | ?                             | 4.90                          | ?                               | 1.25                                | 12.11  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 10                    | 15.5                          | 7.17                          | 10.25                           | 1.24                                | 23.36  | 16.52   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | 13.5                          | 5.79                          | 11.12                           | 1.31                                | 17.54  | 17.89   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 15                    | 14.1                          | 2.32                          | 9.02                            | 2.04                                | 25.57  | 16.09   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | ?                             | 6.45                          | ?                               | 1.01                                | 14.13  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 10                    | 12.3                          | 6.83                          | 9.54                            | 1.00                                | 18.34  | 20.68   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | 15.3                          | 8.33                          | 9.50                            | 1.38                                | 25.14  | 21.43   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 9                     | 14.3                          | 5.22                          | 9.24                            | 1.89                                | 19.72  | 23.44   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | 14.5                          | 5.97                          | 9.67                            | 3.07                                | 29.72  | 21.90   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 13                    | 17.1                          | 7.04                          | 11.10                           | 1.26                                | 21.90  | 24.41   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 17                    | 16.4                          | 7.39                          | 15.44                           | 1.30                                | 20.26  | 25.06   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | 16.1                          | 10.79                         | 11.25                           | 3.09                                | 24.30  | 28.20   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | 17.9                          | 13.46                         | 12.60                           | 3.93                                | 25.79  | 26.75   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 19                    | 16.8                          | 6.00                          | 11.21                           | 1.05                                | 14.05  | 24.00   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | 18.5                          | 2.78                          | 13.29                           | 1.47                                | 23.66  | 25.00   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 15                    | 16.5                          | 10.56                         | 12.76                           | 2.65                                | 19.24  | 26.17   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 17                    | 18.0                          | 10.32                         | 11.74                           | 2.65                                | 23.09  | 27.51   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | 12.5                          | 9.54                          | 9.91                            | 1.47                                | 18.50  | 24.84   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 12                    | 14.9                          | 13.14                         | 9.51                            | 2.51                                | 28.86  | 17.90   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 15                    | 13.2                          | 8.95                          | 9.63                            | 3.12                                | 24.01  | 18.39   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | 12.2                          | 9.54                          | 9.05                            | 3.06                                | 21.77  | 17.19   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 18                    | 13.5                          | 10.32                         | 9.07                            | 1.94                                | 27.56  | 17.31   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 19                    | 13.2                          | 11.70                         | 8.77                            | 3.29                                | 28.67  | 16.75   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 17                    | 14.4                          | 15.39                         | 9.23                            | 3.80                                | 37.25  | 18.29   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 15                    | ?                             | 12.05                         | ?                               | 2.81                                | 29.22  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 13                    | ?                             | 4.65                          | ?                               | 0.50                                | ?  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 24                    | 22.5                          | 19.20                         | 34.31                           | 0.20                                | 31.08  | 40.90   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 25                    | 20.6                          | 15.69                         | 23.32                           | 1.68                                | 34.11  | 40.50   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 22                    | ?                             | 14.47                         | ?                               | 1.97                                | 34.77  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 22                    | ?                             | 12.84                         | ?                               | 1.90                                | 37.54  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 26                    | 22.2                          | 16.04                         | 18.55                           | 1.61                                | 35.77  | 37.03   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 23                    | 21.3                          | 13.28                         | 21.33                           | 1.35                                | 24.90  | 37.12   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 18                    | 20.4                          | 9.80                          | 22.34                           | 1.01                                | 23.91  | 37.00   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 15                    | 49.0                          | 9.26                          | 16.43                           | 1.72                                | 24.65  | 24.47   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 22                    | 21.9                          | 9.04                          | 16.07                           | 1.40                                | 27.46  | 32.38   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 22                    | 21.5                          | 9.27                          | 21.49                           | 2.86                                | 27.64  | 35.54   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 14                    | ?                             | 10.52                         | ?                               | 2.50                                | 25.61  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 20                    | ?                             | 10.33                         | ?                               | 1.43                                | 21.11  | ?   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 18                    | 20.8                          | 12.96                         | 24.15                           | 2.24                                | 31.73  | 42.05   | ...                             | ...           | ...                      |
| ... | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  | ... | 19                    | 19.2                          | 17.32                         | 24.75                           | 2.90                                | 44.62  | 45.90   | ...                             | ...           | ...                      |

### Table of Rainfall recorded at Station

| Prological vision. | District.                    | Station.        | 1     | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17    | 18   | 19   |      |
|--------------------|------------------------------|-----------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|
| BENGAL             | Noncholly-<br>Furresipore... | Harishpore      | ...   | 0.51 | ...  | ...  | 0.02 | 0.02 | ...  | 0.25 | ...  | ...  | 0.23 | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Ranganj         | 1.18  | 0.16 | ...  | ...  | 0.04 | 1.05 | ...  | ...  | ...  | ...  | ...  | 0.06 | 0.31 | 1.58 | 0.25 | 0.50 | 1.11  | ...  | ...  |      |
|                    |                              | Madarijore      | 1.25  | ...  | ...  | ...  | 0.08 | ...  | 0.19 | ...  | ...  | ...  | ...  | 0.22 | 0.31 | 0.08 | 0.35 | 0.52 | 2.40  | ...  | ...  |      |
|                    |                              | Furresipore...  | 1.91  | 0.10 | ...  | 0.03 | ...  | 0.15 | ...  | ...  | ...  | ...  | ...  | 0.15 | 0.30 | ...  | 0.07 | ...  | 2.24  | ...  | ...  |      |
|                    | Dacca                        | Goalundo        | 2.39  | 0.16 | ...  | 1.04 | ...  | 1.05 | ...  | ...  | ...  | ...  | ...  | ...  | 1.8  | ...  | 0.21 | 0.14 | 2.40  | ...  | ...  |      |
|                    |                              | Munshigunge     | 0.51  | 0.72 | ...  | ...  | 0.00 | 0.02 | ...  | ...  | ...  | 0.80 | ...  | 0.05 | 0.05 | 0.32 | 0.24 | 0.60 | ...   | ...  | ...  |      |
|                    |                              | Dacca           | 0.35  | 0.04 | ...  | 1.41 | 1.03 | ...  | ...  | ...  | ...  | 0.31 | ...  | 0.17 | 0.04 | 0.21 | 1.03 | 0.29 | 0.31  | ...  | 0.42 |      |
|                    |                              | Naraingunge     | 0.30  | 0.27 | ...  | ...  | 0.47 | 0.36 | ...  | ...  | ...  | 0.06 | ...  | 0.1  | 1.1  | 0.4  | 0.81 | 0.29 | 0.75  | ...  | 0.12 |      |
|                    | Hill Tipperah                | Manickgunge     | 2.13  | 0.08 | ...  | ...  | 0.68 | 0.87 | ...  | ...  | ...  | ...  | ...  | 0.17 | 0.05 | 0.30 | 0.23 | 0.16 | ...   | 0.15 | 0.07 |      |
|                    |                              | Joydebpore      | 2.27  | ...  | ...  | 0.01 | 1.72 | 0.63 | ...  | 0.01 | ...  | 0.80 | 0.19 | 0.22 | 0.08 | 0.26 | 0.50 | 0.52 | 0.06  | 0.09 | 0.50 |      |
| BENGAL             | Tipperah                     | Agartola        | 0.50  | 0.06 | 0.30 | ...  | 1.75 | 0.18 | ...  | ...  | ...  | ...  | ...  | 0.27 | 0.20 | ...  | 0.37 | 1.05 | 1.25  | ...  | 0.87 |      |
|                    |                              | Oomilla         | 0.47  | 0.05 | 0.10 | 0.39 | 1.05 | 0.05 | ...  | ...  | 0.71 | 0.31 | ...  | 0.21 | 0.03 | 0.05 | 0.75 | 1.00 | 0.53  | ...  | 0.26 |      |
|                    |                              | Chandpore       | ...   | 1.40 | 0.10 | ...  | 0.50 | 0.30 | 0.10 | ...  | ...  | ...  | ...  | 0.30 | 0.50 | 0.10 | 0.30 | 0.63 | 0.70  | ...  | 0.31 |      |
|                    |                              | Brahmunberia    | 0.43  | 0.07 | 1.12 | 2.00 | 1.87 | 1.00 | ...  | ...  | ...  | 0.17 | ...  | 0.14 | 0.21 | ...  | 1.16 | 0.12 | 1.10  | ...  | 1.25 |      |
|                    | Mymensingh...                | Ramchandrapore. | 0.13  | 0.11 | 0.10 | 0.21 | 1.06 | 0.87 | ...  | ...  | ...  | 0.35 | 0.05 | 0.37 | 0.01 | 0.40 | 0.77 | ...  | ...   | 0.06 |      |      |
|                    |                              | Jasirnagar...   | 1.61  | 1.01 | 3.00 | 4.50 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1.81 | 0.00 | ...   | ...  | 1.00 |      |
|                    |                              | Dandkandi       | ...   | 0.74 | ...  | ...  | 1.71 | 0.22 | ...  | ...  | ...  | ...  | ...  | 0.08 | 1.24 | 0.13 | 0.50 | 0.04 | ...   | ...  | ...  |      |
|                    |                              | Kasbi           | 0.40  | 0.05 | 0.17 | ...  | 2.14 | 2.00 | ...  | ...  | ...  | ...  | ...  | 0.31 | ...  | ...  | 0.30 | 0.10 | 0.92  | 1.14 | ...  |      |
|                    | Puhna                        | Laksham         | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.31 | 0.4  | 0.21  | 1.02 | ...  | 0.20 |
|                    |                              | Kishoregunge    | 3.58  | 1.79 | 0.73 | 3.18 | ...  | 1.88 | ...  | ...  | ...  | ...  | ...  | 2.64 | 0.20 | 0.47 | 0.21 | 0.12 | 0.37  | 0.24 | 0.45 |      |
| Abia (Tangail)     |                              | 7.37            | 0.11  | ...  | 1.76 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.4  | 0.43 | ...  | ...   | 1.17 |      |      |
| Mymensingh         |                              | 5.20            | 0.50  | 0.10 | 2.77 | 0.05 | 1.77 | ...  | ...  | ...  | ...  | ...  | 0.09 | ...  | 0.73 | 0.86 | 0.72 | 0.16 | 1.00  | 2.20 |      |      |
| BENGAL             | Mokra                        | Jamailpore      | 6.81  | 0.62 | 0.23 | ...  | 0.50 | 0.20 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.15 | 0.22 | 0.34 | ...   | 2.31 | 0.09 |      |
|                    |                              | Netrokona       | 5.32  | 3.00 | ...  | ...  | 1.02 | 1.45 | 0.13 | ...  | ...  | ...  | ...  | ...  | ...  | 0.15 | 0.22 | 0.34 | ...   | 2.31 | 0.09 |      |
|                    |                              | Subornakhalley  | 5.40  | 0.14 | 0.38 | 0.10 | ...  | 1.05 | ...  | ...  | ...  | ...  | ...  | ...  | 0.72 | 0.00 | 0.46 | 0.61 | 1.45  | 0.50 | ...  |      |
|                    |                              | Durgapore       | 11.11 | 1.0  | 0.04 | ...  | 1.50 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.22 | 0.20 | 0.10 | 1.22  | 1.24 | 0.06 |      |
|                    | Rajshahye                    | Dewanganj       | 19.07 | ...  | ...  | 0.74 | ...  | 0.38 | ...  | 0.13 | ...  | ...  | ...  | ...  | ...  | 1.67 | 1.42 | 0.61 | 1.40  | 1.22 | 0.60 |      |
|                    |                              | Puhna           | 1.21  | 0.25 | ...  | 1.38 | 0.24 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.22 | 0.31 | ...  | 1.18  | ...  | 1.53 |      |
|                    |                              | Serajkunge      | 10.87 | ...  | 0.50 | 0.77 | 0.05 | 0.38 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.40 | 0.12 | 0.04 | 0.13  | 0.42 | 1.10 |      |
|                    |                              | Shepore         | 8.25  | ...  | ...  | 0.45 | 0.44 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.03 | 0.15 | 0.05 | 0.14  | 0.42 | 1.10 |      |
|                    | Maldah                       | Nowkhilla       | 10.40 | 0.05 | ...  | 0.42 | 0.44 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1.00 | 0.04 | 0.10  | 1.33 | 0.03 |      |
|                    |                              | Bogra           | 15.09 | 0.16 | 0.03 | ...  | 0.35 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.02 | 0.51 | 0.32 | 0.45  | 0.49 | 0.07 |      |
| Panohbibbi         |                              | 4.00            | ...   | ...  | 0.30 | ...  | 0.45 | 1.50 | 0.45 | ...  | 0.30 | ...  | ...  | ...  | 0.04 | ...  | 0.35 | 0.14 | 2.03  | 0.77 |      |      |
| Beaulah            |                              | 0.45            | ...   | ...  | 0.72 | 0.06 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.50 | 1.00 | ...  | ...   | ...  |      |      |
| BENGAL             | Dinapore                     | Nattore         | 1.00  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Naogaon         | 4.41  | ...  | ...  | ...  | 0.52 | ...  | 0.05 | ...  | ...  | ...  | ...  | ...  | 0.67 | ...  | 0.73 | 0.58 | ...   | 0.44 | 0.22 |      |
|                    |                              | Laipore         | 0.25  | ...  | ...  | ...  | 0.33 | 0.13 | ...  | ...  | ...  | ...  | ...  | ...  | 0.30 | 0.53 | 0.44 | 0.32 | 1.03  | 0.72 | ...  |      |
|                    |                              | Manda           | 2.38  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.15 | 1.50 | ...  | 2.50  | 0.30 | ...  |      |
|                    | Rangpore                     | Maldah          | 3.98  | ...  | ...  | ...  | 0.09 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Chanchal        | 0.06  | ...  | ...  | 0.05 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.30 | ...  | 0.35  | 1.00 | ...  |      |
|                    |                              | Gajol           | ...   | ...  | ...  | ...  | ...  | 1.35 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.19 | 0.39 | 0.55  | 0.85 | 0.34 |      |
|                    |                              | Sibganj         | 1.00  | ...  | ...  | ...  | ...  | 1.00 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.80 | 0.10 | 0.81  | 2.00 | ...  |      |
|                    | Rangpore                     | Mohadebpore     | 0.24  | ...  | 0.10 | ...  | ...  | 0.30 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.40 | 0.17 | 0.4  | 2.30  | ...  | ...  |      |
|                    |                              | Churamon        | 0.13  | ...  | 0.08 | 0.05 | ...  | 1.07 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.65 | 1.30 | 1.2  | ...   | 0.40 | ...  |      |
| Rangpore           |                              | 0.28            | 0.03  | ...  | 0.08 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.27 | 0.01 | 1.28 | 1.12 | 0.19  | 0.05 |      |      |
| Dinapore           |                              | 0.30            | 0.05  | 0.02 | ...  | 0.05 | 0.42 | ...  | 0.13 | ...  | ...  | ...  | ...  | ...  | 0.14 | 1.71 | 1.45 | 2.28 | 0.12  | 0.13 |      |      |
| BENGAL             | Julpigore                    | Haloorgbat      | 4.36  | ...  | 0.00 | ...  | 0.19 | 1.43 | ...  | ...  | ...  | ...  | ...  | ...  | 0.13 | 0.01 | 0.23 | 0.30 | 1.50  | 0.70 | 0.05 |      |
|                    |                              | Bhawanigunge    | 0.44  | 0.40 | 0.04 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.73 | 0.04 | 0.16 | 1.05  | 0.28 | ...  |      |
|                    |                              | (Gyabanda)      | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Rangpore        | 2.33  | 0.03 | 0.05 | 0.10 | ...  | 0.65 | 0.15 | ...  | ...  | ...  | ...  | ...  | ...  | 0.15 | 2.12 | 1.24 | 0.21  | 0.52 | ...  |      |
|                    | Cooch Behar...               | Kurigram        | 4.80  | ...  | 0.07 | 0.37 | ...  | 1.15 | 0.60 | ...  | 0.09 | ...  | ...  | ...  | ...  | 0.05 | 0.86 | 3.03 | 0.42  | 0.13 | ...  |      |
|                    |                              | Badagra         | 4.73  | ...  | 0.16 | ...  | 1.45 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.24 | 0.51 | 3.04 | 10.72 | 0.85 | ...  |      |
|                    |                              | (Nilphamari)    | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.00 | 0.80 | 0.28 | 7.78  | 2.15 | 0.30 |      |
|                    |                              | Ulipore         | 4.03  | ...  | 0.20 | 1.70 | ...  | 0.70 | 0.31 | ...  | 0.80 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    | Darjeeling Hill              | Julpigore       | 0.87  | ...  | 0.80 | ...  | 0.17 | 0.66 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Alkora Doar     | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
| Falaontia          |                              | 3.08            | ...   | ...  | ...  | 1.85 | 1.67 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  |      |      |
| Debiganj           |                              | 1.00            | 0.05  | ...  | ...  | 0.40 | 0.78 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  |      |      |
| BENGAL             | North Bhagul-<br>pore.       | Dinhatia        | 1.72  | ...  | 0.15 | 0.21 | 0.03 | 0.65 | 0.08 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Cooch Behar...  | 3.02  | ...  | 0.84 | 0.15 | 0.08 | 1.69 | 2.39 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Mickligunse...  | 1.83  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Matabhang...    | 2.41  | ...  | 0.02 | 0.34 | ...  | 1.36 | 0.31 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    | Purneah                      | Buxa            | 0.06  | 0.14 | 0.08 | 1.28 | 0.08 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Siliguri        | 0.05  | 0.17 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Darjeeling      | ...   | 0.21 | 0.02 | 0.03 | 0.02 | 0.75 | 0.10 | 0.01 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Kalimpung       | 0.03  | 0.17 | 0.18 | ...  | 0.04 | 0.10 | ...  | 0.23 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    | Moulgaon                     | Kisengunge      | 0.11  | 0.32 | ...  | 0.35 | ...  | 0.08 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Arracah         | 0.07  | ...  | ...  | 0.30 | 0.76 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
| Purneah            |                              | 0.06            | ...   | ...  | 0.28 | 0.27 | ...  | 2.37 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  |      |      |
| Gandouara          |                              | 3.00            | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  |      |      |
| BENGAL             | North Bhagul-<br>pore.       | Balaraspore     | 0.03  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Matiara         | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Kaliaganj       | 0.20  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Maddapore       | ...   | 0.22 | ...  | 0.20 | ...  | 0.32 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    | Durbhunga                    | Souppol         | ...   | 0.44 | ...  | 0.73 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Protapganj      | ...   | ...  | ...  | 0.06 | 0.28 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Tajpore         | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Durbhunga       | ...   | 0.80 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    | Moulgaon                     | Madhubani       | ...   | 0.84 | ...  | 0.11 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Bukera          | ...   | 1.45 | ...  | 0.01 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
| Bohera             |                              | ...             | ...   | ...  | 0.06 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  |      |      |
| Moulgaon           |                              | ...             | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  |      |      |
| Chumpanan          | Sitamarhi                    | ...             | 0.01  | ...  | 0.65 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  |      |      |
|                    | Moulgaon                     | ...             | 0.02  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  |      |      |
|                    | Hajipore                     | ...             | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  |      |      |
|                    | Pura                         | ...             | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  |      |      |
| BENGAL             | Sarun                        | Makha           | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Bukhar          | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Pupri           | ...   | 0.70 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  |      |
|                    |                              | Mothari         | ...   | 0.35 | ...  | 0.45 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |      |       |      |      |      |









**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS TAKEN IN ASSAM, DURING THE MONTH OF JUNE 1887.**

The month of June is, from a meteorological point of view, almost the most important month of the whole year in Bengal, for it is in this month that the south-west monsoon usually establishes itself over the province, and generally over the greater part of Northern India. It is also remarkable that the distribution of the rainfall in Bengal during June frequently foreshadows in a rough and general way the chief features of the distribution of the rains which may be expected during the south-west monsoon period. The cause of the setting in of the rains at the end of May or the beginning of June has been discussed in the monthly reports of previous years, and it is therefore not necessary to repeat this description. It has also been pointed out that the rainfall in the south-west monsoon is not due to a perfectly steady and continuous action, but that it occurs rather as a series of waves or pulsations, a strong wave of rainfall being followed by a period of comparative calm and absence of rainfall, and it is during the latter that frequently small barometric depressions or cyclonic storms are formed, generally over the sea area, and which, after developing for a few days, advance over the land, bringing heavy rainfall to the districts through which they pass. With reference to these storms, it may also be said that the longer the period during which they are forming the more intense they will be. So far also as has been ascertained up to the present time, it would appear that, during a comparatively weak monsoon, the periods of comparative cessation of rainfall are more frequent and are of longer duration than during a monsoon of normal strength, and thus weak monsoons are frequently characterized by the number and comparative intensity of the cyclonic storms or barometric depressions which visit the land, while during years when the monsoon is equal to or above its normal strength, these storms occur but seldom, and they are of little intensity.

The distribution of the normal rainfall in June is to a certain extent similar to that of April and May, but of course much heavier. The lines of equal rainfall run nearly north and south through the province, the heaviest falls occurring in east and parts of north Bengal, and the smallest in the western parts of Behar. In the former districts rainfall varies from 25 to 35 inches, while at Buxar it is less than 5 inches.

The most important meteorological features of June are, therefore, the date of the commencement of the south-west monsoon, its strength, the occurrence and paths of cyclonic storms and the amount and distribution of the rainfall.

*Establishment of the monsoon.*—Even in ordinary years it is almost impossible to state with any great precision the exact date on which the rains may have said to have broken over the province, and this year, owing to the formation of the small and very fierce cyclone which passed over Balasore on May 26th, and which brought up in its rear an inrush of monsoon winds, but which inrush died away shortly after, it is much more difficult than usual to assign any precise date for the breaking of the rains. It is true that in some districts rainfall was general and heavy from the time of the passage of the cyclone until the 1st or 2nd of June, but subsequent to this there was a very distinct break, which lasted from about the 5th up till the 12th or 13th of June, though in some parts of South Behar and Chutia Nagpur the rainfall did not again commence till the 14th. If therefore the advance of the cyclone with its attendant strong winds, drawing the rain-laden monsoon current after it, be looked upon as an accidental circumstance, for the cyclone might have travelled in any other direction, then it may be said that the ordinary south-west monsoon current began to blow over Bengal from about the 12th of June, and that it was thus a little later than usual. Even with this second advance of monsoon winds, however, another cyclonic storm was formed in front of it, but on this occasion the storm crossed the west coast of the Bay between Gopalpore and Vizagapatam.

*Strength of the monsoon.*—The monsoon current may vary in two ways, and its strength will depend on the two considerations of its velocity, and the depth or thickness of the current. No means are available for measuring the depth of the current, so that, in judging of the strength of the monsoon current from year to year, only its velocity can be measured and compared. The velocity can be measured accurately, but it will be seen that this alone can give only a rough approximation to truth. In the table below are given the actual daily velocity of the winds for June compared with the average for the same period at all the stations near the coast, from Diamond Island round to Gopalpore, at which winds have been registered for a sufficient length of time to give a reliable average:—

| STATIONS.      |     |     |     | Actual average wind velocity for June 1887. Miles per day. | Normal wind velocity in June. Miles per day. |
|----------------|-----|-----|-----|--|--|
| Diamond Island | ... | ... | ... | 191  | 203.8  |
| Akyab          | ... | ... | ... | 102  | 54.2   |
| Chittagong     | ... | ... | ... | 141  | 168.1  |
| Dacca          | ... | ... | ... | 173  | 175.0  |
| Jessore        | ... | ... | ... | 103  | 119.5  |
| Calcutta       | ... | ... | ... | 174  | 146.5  |
| Saugor Island  | ... | ... | ... | 381  | 338.1  |
| Cuttack        | ... | ... | ... | 120  | 97.6   |
| False Point    | ... | ... | ... | 286  | 249.2  |
| Gopalpore      | ... | ... | ... | 349  | 278.6  |

From this table it will be seen that at the stations from Gopalpore up to Calcutta wind velocities have been above the normal, but that at Jessore, Dacca and Chittagong winds have been below the normal in strength. These facts would naturally point to the inference that rainfall in East Bengal should be below the normal in the month under review, and this it will be subsequently seen is borne out by the actual results. On the other hand, the excess in the wind velocities at the western stations at the head of the Bay would point to the probability of increased rainfall at the western stations, but this inference is not supported by the facts, and generally speaking the rainfall at the western stations has been largely below the normal. This being the case, it would seem probable that, while the monsoon current blowing over Bengal was of greater velocity than usual over a considerable area, yet that it must have been considerably deficient in depth, thickness or volume, and that therefore the strength of the monsoon, which is the combination of velocity with volume has been in June decidedly lower than usual.

• *Meteorology of the month.*—As has been previously mentioned, the month of June opened with fairly general rainfall during the first day or two, the rainfall being due to the advance of monsoon winds which had followed after the Balasore cyclone. A period of comparative absence of rain then followed, during which another advance of monsoon winds was taking place in the Bay, in front of which, on about the 10th, a cyclonic storm commenced to form. The description of the formation of this storm will be found under the head of Barometric depression of the month. The storm having advanced inland on the morning of the 13th, the monsoon current which had been previously deflected away from Bengal by the storm, then commenced to pass over Bengal, and most districts reported rainfall from the 13th, though the rain did not reach Behar until the 14th and 15th. The winds blowing over Bengal became almost normal in direction after the storm had advanced inland, and a strong southerly and south-easterly current was reported up till the 16th. On this day, however, a strong westerly element appeared in the wind directions over the province, and at most of the western and southern stations winds were south-westerly. This setting in of westerly winds was apparently due to the extension of the influence of the Bombay branch of the monsoon current, which at this time was blowing very strongly. The westerly current still continued strongly pronounced on the 17th. These westerly winds, in driving back the easterly, south-easterly, and southerly monsoon winds which had previously been blowing from the Bay of Bengal, caused a considerable amount of interaction or interference, and therefore probably of ascensional motion, and consequently conditions became favourable for heavy rainfall, particularly in the north and east of the province, and at this time rainfall was extremely heavy at many of the stations in these districts.

The westerly current then commenced to decrease in force, and on the 19th a feeble whirl was formed close to the Sunderbuns. This also will be described under the barometric depressions of the month. This feeble storm broke up in South Behar about the 22nd, and the heavy rains which were accompanying it to a great extent ceased. At this time atmospheric pressure became largely above the normal, the monsoon winds fell off in strength, and a slight but distinct break in the rains ensued. This lasted till about the 26th or 27th, when pressure began to fall, and conditions became rather more favourable for rainfall; but quite up till the close of the month a very feeble monsoon only was blowing over the province, and rainfall became decidedly local and generally light in all districts except East and North Bengal and North Behar. As also is usually the case when a light monsoon is blowing, the rainfall during this period was particularly irregular in its distribution, and while some stations and districts received abundant rain, neighbouring stations, in which the meteorological conditions were apparently precisely similar, received little or no rain.

*Barometric depressions of the month.*—These were two in number, the first being large and somewhat intense, and the second merely a feeble whirl which only brought up heavy rain to the districts through which it passed.

*Cyclonic storm of June 10th to the 14th.*—Indications of unsettled weather first appeared off the Pegu coast on June 8th, but on the 9th they did not appear to have developed to any great extent. On the 10th a rather feeble cyclonic storm had clearly formed in the northern half of the Bay, which was accompanied by a very well marked cyclonic circulation of winds, and the centre of the storm was probably to the west of the centre of the Bay, and apparently opposite the coast between Gopalpur and Vizagapatam. On the 11th there was a decidedly rapid fall of pressure at the west coast stations of the Bay in the neighbourhood of the storm, at the same time wind velocities at Diamond Island and in the north of the Bay increased very decidedly, showing that the storm was gradually and rather considerably intensifying. Similar conditions prevailed on Sunday: pressure fell again at the coast stations and became very low, and wind velocities increased in the rear of the storm, and at Diamond Island blew very strongly, and it is probable that on this day the storm was of considerable strength, and weather over the northern part of the Bay was very squally, if not stormy. The storm was also drifting slowly in a westerly direction. It was thought desirable on this day to warn the ships proceeding down the River Hoogly of the existence of the storm, and on the afternoon signal No. 5 was hoisted, which signified the existence of a small cyclonic storm in the Bay, the centre of which would probably cross the coast to the south of False Point. On the 13th, at 10 A. M., the centre of the storm was almost over the coast about midway between Gopalpur and Vizagapatam. During the night of the 13th pressure at Gopalpur was about 29.3", showing that the storm was one of moderate intensity; but it must also be remembered that the centre of the storm was at least 80 miles from the nearest meteorological station, so that probably at its centre pressure was far lower

than that recorded. As the storm was passing inland, the storm signals were lowered on the afternoon of the 14th. Fairly strong winds were recorded in connection with the storm, but, as stated above, the meteorological stations were too far away to give any good record of the actual intensity of the storm. The storm afterwards drifted into the Central Provinces and subsequently filled up. Reports received from ships navigating the Bay at this time show that the storm gave rise to very strong winds and high sea, and generally to very bad weather in the centre of the Bay.

*Feeble whirl of June 19th to the 22nd.*—On the 19th, the 10 A. M. observations showed clearly that a very feeble whirl or barometric depression had formed over the Sunderbuns, the centre of the whirl being apparently only a short distance to the south-east of Saugor Island. On this day the wind direction at the stations at the head of the Bay showed a distinct cyclonic circulation in connection with the feeble whirl, but the wind velocities were in all cases light. On this day rainfall was fairly general in South-West Bengal and Orissa, and in some cases decidedly heavy in connection with the small depression, but the indraught towards it to a certain extent stopped the progress of the monsoon current over Bengal, and rainfall was to a great extent absent in East and North Bengal and in Behar. On the 20th, at 10 A. M., the very feeble storm had moved in a north-westerly direction, and its centre was between Burdwan, Ranigunge and Bancoorah, and apparently approaching Ranigunge, and round the storm wind direction showed a very complete cyclonic circulation. It had also intensified slightly on this day, and the depression was very distinctly perceptible, though the wind force in connection with it was small. The feeble storm, however, brought up a rather heavy burst of rainfall to the area affected by it, and by allowing the monsoon current to again advance over the land, rainfall extended to other parts of Bengal also, and on this day heavy rain was reported over a large part of the province. On the 21st the storm had again advanced in a north-westerly direction, and its centre was in South Behar. It was on this day probably becoming more feeble, and it was then a decidedly shallow depression, the centre of which was between Gya and Bhagulpore. On this day rainfall became lighter in South-West Bengal, Orissa, and to a certain extent in East Bengal, but the area of heavy rainfall extended to the northern districts of the province, and heavy rain fell in Behar and North Bengal. The feeble storm then commenced to break up, and its disappearance again produced heavy rain over the whole of the northern districts of the province, and on the 22nd the storm had scarcely any well-defined existence at all.

*Pressure*—Was at the commencement of the month slightly below the normal, but after about the 6th a slow increase of pressure commenced till about the 10th, when the pressure changes were governed by the existence of the cyclonic storm in the Bay. After the disappearance of the storm pressure rose steadily, and on about the 24th of June it became very largely above the normal over the whole of Bengal, the average excess being greater than a tenth of an inch, though the excess at the Assam stations was only about half this amount. Pressure subsequently commenced to fall, but even up to the close of the month it had not become normal, and pressure was generally in excess by small amounts averaging about 0.03 inch or 0.04 inch. For the whole month the variations from the normal have not been very large, and taking those stations in Bengal only, from which records have been obtained for a number of years, and whose averages can therefore be depended on, the variation of the mean pressure of the whole province for June has only been an excess of 0.015 inch. This excess has been very equally divided, for the largest variations are from an excess of 0.008 inch at False Point and Burdwan to one of 0.027 inch at Hazaribagh. In Assam also pressure has been very nearly normal for the month, Sibsagar showing an excess of 0.007 inch, Dhubri one of 0.006 inch, while Silchar shows an average defect of 0.004 inch.

*Temperature*—Was at the commencement of the month decidedly low over the province, as heavy rain had fallen in connection with the cyclone which passed over Balasore at the end of May. During the remainder of the month there have been somewhat large oscillations owing to there having been periods of heavy rain and of absence of rain, but for the whole month the variations for the normal are not very large, and for the stations in Bengal the variation is a defect of 0.9°. The variation is, however, a little unequal in different districts, Behar showing a defect of 2.5° and Chutia Nagpur one of 1.6°, while East and North Bengal show temperatures slightly in excess of the normal. In Assam the mean temperature for the month has been 1.5° in defect of the normal.

*Rainfall*—The rainfall statistics of Assam are only received from three stations, and the amounts recorded during June have been as follows:—Silchar the large amount of 26.41 inches, Dhubri 25.66 inches, and Sibsagar 15.47 inches.

The rainfall data for Bengal, on the other hand, are very complete and can therefore be discussed in detail. Generally speaking the rainfall in June for Bengal has been largely in excess of the normal in North Bengal and North Behar, and rather largely in defect over the remainder of the province. Compared with the normal for the period, the fall of the whole province of Bengal in June may be said to have been equal to 92 per cent. of the normal fall, but in different districts the falls are very unequal; the fall has been 39 per cent. in excess in North Bengal, 35 per cent. in excess in North Behar, 18 per cent. in defect in South-West Bengal, 21 per cent. in defect in East Bengal, 27 per cent. in defect in Chutia Nagpur, 30 per cent. in defect in South Behar, and 34 per cent. in defect in Orissa. The figures representing the rainfall of the month of June in

each meteorological division, calculated as a percentage of the normal, are included in the table below. This table really gives a condensed summary of the rainfall statistics of the present year up to the end of June for each meteorological division, the first six columns giving the actual monthly falls of the six months expressed as a percentage of the normal, while the seventh column shows the total fall for the six months expressed in the same way. In the table therefore 100 will represent a normal fall, a number above 100 as an excess fall, and so on :—

| Meteorological districts | February. | March. | April. | May. | June. | Actual rainfall of first six months expressed as a percentage of the normal fall for the period. |
|--------------------------|-----------|--------|--------|------|-------|--|
| Orissa                   | 119.      | Nil.   | 137    | 60   | 193   | 66   |
| South-West Bengal        | 232       | 263    | 56     | 139  | 82    | 165  |
| East Bengal              | 412       | 206    | 34     | 71   | 79    |  |
| North Bengal             | 530       | 274    | 114    | 168  | 159   | 149  |
| North Behar              | Nil.      | 127    | 109    | 177  | 135   | 147  |
| South Behar              | Nil.      | 268    | 188    | 423  | 70    | 160  |
| Chutia Nagpur            | Nil.      | 10     | 111    | 331  | 73    | 117  |

Taking up the rainfall more in detail, it is found that instead of the lines of equal rainfall running nearly north and south as they do in normal years in June, in the present instance they run from south-east to north-west. The centres of heaviest rainfall have been in the north-east of the province, at such stations as Cooch Behar, which has received 54.25 inches, Ahipore Duar in the Julpigoree district, which has received 47.88 inches, and Bagdogra (Rungpore district), Falacotta (Julpigoree district), and Matabhanga (Cooch Behar district) which have each received more than 40 inches. From these, as the centres of heaviest fall, the rainfall diminishes towards the west and south of the province, till many stations in these districts have received falls below 5 inches, and in some cases below 3 inches. Roughly speaking, a line drawn from Patuakhally in South-East Bengal in a north-westerly direction to near Bettiah in North Behar, divides the province by a line of 10-inch rainfall, the districts to the north having received amounts above, and those to the south below this amount. As examples of extremely small falls during the month, it may be mentioned that Pooree has only received 1.81 inches, False Point 2.19 inches, Barasat 3.71 inches, Burdwan 2.95 inches, Onda 3.10 inches, Jessore 2.65 inches, Aurangabad 2.58 inches, Rajauli (Gya district) 1.10 inches and Barhi (Hazaribagh district) 1.49 inches.

Compared with the normal fall, almost the whole of the north-eastern districts have received excess falls, the excess amounts in some instances being larger than 10 and 15 inches, while the whole of the remainder of the province has been in defect, generally by amounts ranging up to 4 inches, but which also in certain areas exceed 10 and 15 inches. The line of normal rainfall starts in the east of the province at about Brahmunberiah, passes through Dacca district, then through the Pubna and Rajshahye districts, then takes a dip to the south and skirts the Moorshedabad district, then passes to the north of the Sonthal Pergunnahs district, and from this point nearly follows along the line of the Ganges. To the north of this line the rainfall has been in excess and to the south in defect. The areas of largest defect comprise the southern and south-eastern parts of South-East Bengal, a portion of Central Behar, comprising parts of the Burdwan, Hooghly, Howrah, 24 Pergunnahs, Nuddea and Pubna districts, and also considerable parts of the Balasore, Pooree and Cuttack districts, though other parts of the Cuttack district are in considerable excess.

The following table gives full data for the comparison of the actual and the normal rainfall of the month of June in all districts of the province. The figures are derived from the average and actual rainfall of the rain-recording stations in each district, due allowance or weight being made for the area which each station represents. This gives a more accurate average than the arithmetical means given in the weekly and monthly meteorological tables. The first column gives the normal or average district rainfall as determined from the rainfall observations of the past 15 years. The second column gives the actual district rainfall as determined from the weighted actual rainfalls of the month at the reporting stations in each district. The third column expresses the ratio of the actual district rainfall of the past month to the normal rainfall as a percentage. The fourth column gives the same information as the third column in a slightly different form. It states as a percentage how much the district rainfall of the month varied in excess or defect from the

normal rainfall, and is hence the difference between the numbers in the third column and 100 :—

| DIVISION.         | DISTRICT.              | Normal district rainfall, June 1887. | Actual district rainfall, June 1887. | Percentage of actual to normal rainfall. | Percentage excess (+) or deficit (—) |
|-------------------|------------------------|--------------------------------------|--------------------------------------|--|--------------------------------------|
| Orissa            | Pooree ...             | 8.18                                 | 2.85                                 | 35                                       | —65                                  |
|                   | Cuttack ...            | 9.42                                 | 9.99                                 | 106                                      | + 6                                  |
|                   | Balasore ...           | 8.75                                 | 5.11                                 | 58                                       | —42                                  |
| South-West Bengal | Midnapore ...          | 9.90                                 | 6.92                                 | 70                                       | —30                                  |
|                   | 24-Pergunnahs ...      | 10.07                                | 7.00                                 | 74                                       | —26                                  |
|                   | Howrah ...             | 9.81                                 | 5.94                                 | 61                                       | —39                                  |
|                   | Hooghly ...            | 9.85                                 | 7.80                                 | 80                                       | —20                                  |
|                   | Burdwan ...            | 9.36                                 | 4.90                                 | 5  | —95                                  |
|                   | Bankoora ...           | 9.80                                 | 7.17                                 | 76                                       | —24                                  |
|                   | Beerbhoom ...          | 9.09                                 | 7.64                                 | 84                                       | —16                                  |
|                   | Nuddea ...             | 9.91                                 | 6.84                                 | 69                                       | —31                                  |
|                   | Khoolna ...            | 13.23                                | 10.55                                | 80                                       | —20                                  |
| East Bengal       | Jessore ...            | 12.14                                | 9.22                                 | 76                                       | —24                                  |
|                   | Moorshedabad ...       | 9.24                                 | 10.64                                | 115                                      | +15                                  |
|                   | Chittagong ...         | 26.98                                | 16.86                                | 62                                       | —38                                  |
|                   | Backergunge ...        | 19.41                                | 9.37                                 | 48                                       | —52                                  |
|                   | Noakholly ...          | 24.87                                | 13.83                                | 56                                       | —44                                  |
|                   | Furreedpore ...        | 12.88                                | 11.39                                | 88                                       | —12                                  |
|                   | Dacca ...              | 13.06                                | 9.41                                 | 72                                       | —28                                  |
|                   | Comilla ...            | 17.56                                | 13.75                                | 78                                       | —22                                  |
|                   | Mymensingh ...         | 17.75                                | 21.63                                | 139                                      | +39                                  |
| North Bengal      | Pubna ...              | 11.58                                | 13.18                                | 144                                      | +14                                  |
|                   | Bogra ...              | 13.53                                | 20.63                                | 152                                      | +52                                  |
|                   | Rajshahye ...          | 10.54                                | 9.18                                 | 87                                       | —13                                  |
|                   | Maldah ...             | 11.34                                | 12.16                                | 107                                      | + 7                                  |
|                   | Dinagpore ...          | 14.03                                | 18.81                                | 134                                      | +34                                  |
|                   | Rungpore ...           | 21.68                                | 31.66                                | 143                                      | +43                                  |
|                   | Cooch Behar ...        | 32.80                                | 43.50                                | 133                                      | +33                                  |
|                   | Julpigore ...          | 29. 9                                | 37.42                                | 129                                      | +29                                  |
|                   | Darjeeling ...         | 22.44                                | 23.60                                | 105                                      | + 5                                  |
| North Behar       | Purneah ...            | 13.40                                | 16.07                                | 120                                      | +20                                  |
|                   | North Bhagulpore ...   | 9.05                                 | 10.97                                | 121                                      | +21                                  |
|                   | Darbhanga ...          | 8.12                                 | 12.62                                | 155                                      | +55                                  |
|                   | Mozufferpore ...       | 7.17                                 | 11.42                                | 159                                      | +59                                  |
|                   | Chumparan ...          | 8.36                                 | 12.13                                | 145                                      | +45                                  |
|                   | Sarun ...              | 6.57                                 | 6.36                                 | 97                                       | — 3                                  |
| South Behar       | Shahabad ...           | 5.49                                 | 3.41                                 | 63                                       | —37                                  |
|                   | Gya ...                | 5.71                                 | 4.86                                 | 85                                       | —15                                  |
|                   | Patna ...              | 6.27                                 | 5.05                                 | 81                                       | —19                                  |
|                   | Monghyr ...            | 6.54                                 | 5.93                                 | 91                                       | — 9                                  |
|                   | South Bhagulpore ...   | 8.01                                 | 8.07                                 | 101                                      | + 1                                  |
|                   | Sonthal Pergunnahs ... | 8.87                                 | 6.23                                 | 70                                       | —30                                  |
| Chutia Nagpur     | Hazaribagh ...         | 8.06                                 | 5.23                                 | 65                                       | —35                                  |
|                   | Lohardugga ...         | 6.24                                 | 4.02                                 | 64                                       | —36                                  |
|                   | Singbhoom ...          | 8.27                                 | 5.72                                 | 69                                       | —31                                  |
|                   | Manbhoom ...           | 8.62                                 | 4.92                                 | 57                                       | —43                                  |

The following table gives the summary of the temperature and rainfall data of each of the seven Meteorological Divisions of the Province for the month of June 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                   |                               |                         |                        |                       |  | RAINFALL. |                 |            |                          |                                 |            |                      |                 |
|------------------------------|--------------------------------|-------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|--------------------------|---------------------------------|------------|----------------------|-----------------|
|                              | Highest observed during month. | Lowest observed during month. | Averages for month.     |                        |                       | Average mean of month above or below normal (mean of month). | Of month. |                 |            | Rainy days.              |                                 |            | Since 15th May 1887. |                 |
|                              |                                |                               | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average.  | Normal average. | Variation. | Average number in month. | Normal average number in month. | Variation. | Average.             | Normal average. |
|                              |                                |                               |                         |                        |                       |  |           |                 |            |                          |                                 |            |                      |                 |
| Orissa. ....                 | 106.4                          | 74.6                          | 99.0                    | 79.8                   | 85.4                  | 0  | 6.00      | 9.10            | -3.10      | 10.5                     | 13.1                            | -1.6       | 11.08                | 11.02           |
| South-West Bengal. ....      | 101.3                          | 71.3                          | 92.0                    | 78.9                   | 85.5                  | -0.5   | 8.34      | 10.20           | -1.86      | 13.5                     | 14.7                            | -1.2       | 13.00                | 12.80           |
| East Bengal. ....            | 94.3                           | 70.5                          | 88.0                    | 77.3                   | 82.7                  | +0.4   | 14.50     | 18.43           | -3.93      | 19.0                     | 19.3                            | -0.3       | 16.29                | 22.97           |
| North Bengal. ....           | 97.8                           | 68.8                          | 88.1                    | 76.5                   | 82.3                  | +0.7   | 23.90     | 17.21           | +6.69      | 17.1                     | 16.8                            | +0.3       | 35.07                | 22.31           |
| North Behar. ....            | 88.0                           | 69.6                          | 90.0                    | 77.4                   | 83.7                  | -2.7   | 11.53     | 8.51            | +3.01      | 12.5                     | 10.0                            | +2.5       | 19.68                | 9.93            |
| South Behar. ....            | 102.0                          | 69.0                          | 91.9                    | 79.0                   | 85.4                  | -2.3   | 4.86      | 6.91            | -2.05      | 9.7                      | 10.4                            | -0.7       | 12.84                | 8.11            |
| Chutia Nagpur. ....          | 99.0                           | 69.4                          | 90.0                    | 74.2                   | 82.1                  | -1.6   | 6.05      | 8.29            | -2.26      | 11.7                     | 13.7                            | -2.0       | 12.41                | 9.50            |
| Assam. ....                  | 95.6                           | 70.3                          | 86.5                    | 75.5                   | 81.2                  | -1.5   |           |                 |            |                          |                                 |            |                      |                 |

\* Chyebassa not included.

METEOROLOGICAL OFFICE, BENGAL ;  
The 9th June 1887.

ALEXANDER PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal.



Results of the Meteorological Observations taken at the Alipore Observatory from  
3rd to 9th July 1887.

| Month | Date | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 53 Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain.   | WEATHER.                          |
|-------|------|-----------------|-------------------------------------|-------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|-----------------------------------|
|       |      |                 |                                     |                                     | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |         |                                   |
| 1887. |      |                 |                                     | Inches.                             | °            | °        | °      | °        | °              | Inches          | °          | %         |                       |                 | Inches. |                                   |
| July  | 3d   | 95.0            | 3.0                                 | 29.603                              | 82.9         | 89.7     | 11.0   | 78.7     | 79.9           | 0.981           | 78.6       | 88        | E by S and SE         | 104             | 0.15    | Chiefly cloudy, o, f, p, d, t.    |
| "     | 4th  | 155.9           | 3.7                                 | 29.631                              | 83.0         | 88.7     | 10.5   | 78.2     | 79.5           | 0.961           | 78.0       | 85        | SE and S              | 101             | 0.14    | Chiefly cloudy, o, p. <i>P</i>    |
| "     | 5th  | 141.5           | 3.5                                 | 29.530                              | 82.5         | 88.0     | 9.8    | 78.2     | 79.1           | 0.950           | 77.7       | 86        | S and ENE             | 81              | 0.07    | Chiefly cloudy, o, f, d. <i>P</i> |
| "     | 6th  | 117.7           | 0.9                                 | 29.491                              | 80.6         | 81.7     | 8.0    | 76.7     | 78.5           | 0.954           | 77.8       | 91        | ESE and E by N        | 113             | 0.72    | Cloudy, o, f, d. <i>P</i>         |
| "     | 7th  | 137.7           | 0.2                                 | 29.532                              | 81.8         | 85.8     | 8.8    | 77.0     | 79.2           | 0.968           | 78.2       | 89        | ESE and SSE           | 91              | 1.18    | Chiefly cloudy, o, f, d, p.       |
| "     | 8th  | 121.8           | 0.7                                 | 29.530                              | 82.1         | 81.7     | 6.7    | 78.0     | 78.5           | 0.929           | 77.0       | 85        | WSW and SSW           | 126             | Nil     | Chiefly cloudy, o, f. <i>P</i>    |
| "     | 9th  | 113.0           |                                     | 29.451                              | 80.0         | 83.5     | 5.5    | 77.9     | 78.2           | 0.940           | 77.1       | 91        | SW and W              | 171             | 6.18    | Cloudy, o, f, d, p.               |

|  |     |     |     |         |                 |
|--|-----|-----|-----|---------|-----------------|
| The mean pressure of the seven days  | ... | ... | ... | Inches. | 29.517          |
| The average pressure of the corresponding period for 24 years, S. G.'s Office          | ... | ... | ... | ...     | 29.554          |
| The total number of hours of bright sunshine   | ... | ... | ... | Hours.  | 11.3            |
| The maximum possible number of hours of sunshine                                       | ... | ... | ... | ...     | 24.0            |
| The mean temperature of the seven days   | ... | ... | ... | ...     | 81.8            |
| The average temperature of the corresponding period for 24 years, S. G.'s Office       | ... | ... | ... | ...     | 83.8            |
| The extreme variation of temperature   | ... | ... | ... | ...     | 13.0            |
| The maximum temperature  | ... | ... | ... | ...     | 89.7            |
| The highest velocity of the wind in one hour   | ... | ... | ... | Miles.  | 16              |
| The highest pressure of wind on one square foot  | ... | ... | ... | lbs.    | Not measurable. |
| The mean relative humidity   | ... | ... | ... | %       | 88              |
| The average relative humidity of the corresponding period for 24 years, S. G.'s Office | ... | ... | ... | ...     | 85              |
| The total fall of rain from 3rd to 9th July 1887                                       | ... | ... | ... | Inches. | 8.44            |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | ...     | 2.30            |
| The total fall from 1st January to 9th July 1887                                       | ... | ... | ... | ...     | 26.53           |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | ...     | 24.93           |

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h., 10h., 16h. and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The month of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, t thunder,  $\Delta$  dew.

A. PEDLER,

For Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 11th July 1887.

## Meteorological Report of the Province of Be

| DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                            |                     |                      |                      |                     |                     |                           |                                   |                                 |                                     |
|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|----------------------------|---------------------|----------------------|----------------------|---------------------|---------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|
|                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                      |                     | TEMPERATURE.         |                      |                     |                     |                           |                                   |                                 |                                     |
|                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction.      | Mean wind velocity. | Highest during week. | Date.                | Lowest during week. | Date.               | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. |
|                        |                         |                                 |                            |                      |                            |                     |                      |                      |                     |                     |                           |                                   |                                 |                                     |
| Pooree                 | Gopalpore               | 29.579                          | 29.629                     | -0.018               | Calm                       | 1.01                | 89.2                 | 2nd July             | 79.8                | 5th, 8th July.      | 87.4                      | 80.2                              | 83.8                            | +0.8                                |
|                        | False Point             | 29.605                          | 29.624                     | -0.012               | Variable                   | 230                 | 90.5                 | 2nd, 3rd July.       | 75.6                | 6th "               | 88.3                      | 77.9                              | 83.1                            | -0.4                                |
| Cuttack                | Cuttack                 | 29.550                          | 29.631                     | +0.003               | Calm                       | 33                  | 90.4                 | 2nd "                | 78.4                | 5th, 7th July.      | 90.9                      | 79.3                              | 85.1                            | +0.6                                |
| Balasore               | Balasore                | 29.551                          | 29.619                     | -0.006               | Variable                   | 107.6               | 92.4                 | 2nd "                | 75.7                | 6th "               | 88.9                      | 78.1                              | 83.5                            | +0.3                                |
| South-West Midnapore   | Saugor Island           | 29.601                          | 29.627                     | -0.003               | Variable                   | 230                 | 91.2                 | 2nd "                | 78.0                | 6th "               | 89.3                      | 80.1                              | 84.7                            | +0.4                                |
| Midnapore              | Midnapore               | 29.489                          | 29.640                     | +0.010               | Variable                   | 79.0                | 94.3                 | 2nd "                | 76.3                | 2nd "               | 90.3                      | 77.9                              | 84.1                            | -0.2                                |
| 24-Pergunnahs          | Calcutta                | 29.603                          | 29.625                     | +0.007               | Southerly                  | 93                  | 91.5                 | 2nd "                | 76.7                | 6th "               | 88.1                      | 77.0                              | 83.0                            | -0.6                                |
| Howrah                 | Howrah                  | 29.531                          | 29.630                     | +0.019               | E                          | 58                  | 93.1                 | 3rd "                | 77.9                | 2nd "               | 91.5                      | 78.9                              | 85.2                            | +0.2                                |
| Bankoora               | Bankoora                | 29.308                          | —                          | —                    | Calm                       | 29.0                | 91.1                 | 3rd "                | 76.6                | 2nd "               | 90.2                      | 77.0                              | 81.1                            | —                                   |
| Barlyhoon              | Rancegange              | 29.301                          | —                          | +0.031               | ENE                        | 85.1                | 91.5                 | 5th "                | 76.8                | 4th "               | 88.8                      | 78.3                              | 83.6                            | -0.9                                |
| West Burdwan           | Berhampore              | 29.542                          | 29.640                     | +0.032               | E                          | 93.2                | 90.6                 | 5th "                | 76.3                | 3rd "               | 89.2                      | 78.1                              | 83.7                            | -1.2                                |
| Moordadabad            | Krishnagur              | 29.585                          | —                          | —                    | ESE                        | 80.0                | 93.3                 | 2nd "                | 76.8                | 2nd "               | 90.5                      | 78.2                              | 81.3                            | —                                   |
| Nuddea                 | Jessore                 | 29.616                          | 29.619                     | -0.016               | Southerly                  | 86.1                | 93.3                 | 2nd "                | 76.9                | 6th "               | 90.1                      | 78.7                              | 84.1                            | +0.1                                |
| Chittagong             | Chittagong              | 29.612                          | 29.701                     | +0.003               | SE                         | 131                 | 90.6                 | 4th "                | 74.5                | 5th "               | 86.7                      | 76.1                              | 81.4                            | 0                                   |
| Chittagong Hill Tracts | Demagiri                | —                               | —                          | —                    | Observations not received. |                     |                      |                      |                     |                     |                           |                                   |                                 | —                                   |
| Backergunge            | Barrisal                | 29.614                          | 29.634                     | +0.009               | SE                         | 79.9                | 89.8                 | 2nd, 4th July.       | 77.3                | 6th, 7th July.      | 87.1                      | 78.1                              | 82.6                            | +2.1                                |
| Noakhally              | Noakhally               | 29.612                          | 29.686                     | —                    | ESE                        | 73.9                | 88.6                 | 4th "                | 75.8                | 7th "               | 86.0                      | 77.2                              | 81.9                            | —                                   |
| Farredpore             | Farredpore              | 29.631                          | —                          | +0.025               | SE                         | 112                 | 87.0                 | 4th, 5th & 7th July. | 77.9                | 4th "               | 80.4                      | 78.8                              | 82.0                            | +0.3                                |
| Dacca                  | Dacca                   | 29.637                          | 29.669                     | +0.025               | SSE                        | 134                 | 90.1                 | 4th, 5th & 6th July. | 78.2                | 6th, 7th July.      | 88.5                      | 79.3                              | 85.9                            | +0.2                                |
| Comilla                | Comilla                 | 29.635                          | 29.671                     | +0.013               | SE                         | 95.3                | 90.4                 | 2nd, to 4th July.    | 75.8                | 8th "               | 88.7                      | 77.6                              | 82.2                            | +2.2                                |
| Mymensingh             | Mymensingh              | 29.636                          | —                          | +0.045               | E                          | 112                 | 90.3                 | 5th "                | 77.0                | 6th, 8th July.      | 87.5                      | 78.0                              | 82.8                            | +0.0                                |
| Bogra                  | Bogra                   | 29.673                          | 29.635                     | —                    | ESE                        | 98.7                | 90.8                 | 5th "                | 75.3                | 3rd "               | 84.0                      | 78.1                              | 83.1                            | —                                   |
| Patna                  | Sernajunga              | 29.669                          | 29.656                     | +0.020               | ENE                        | 96.5                | 90.6                 | 5th "                | 76.7                | 7th, 8th July.      | 88.4                      | 78.1                              | 83.3                            | +0.8                                |
| Rajshahy               | Rampore Beaulah.        | 29.579                          | 29.648                     | +0.053               | ENE                        | 72.9                | 91.3                 | 5th "                | 71.7                | 3rd "               | 89.2                      | 73.4                              | 81.3                            | -2.5                                |
| Maldah                 | Maldah                  | 29.439                          | —                          | —                    | SE                         | 29.4                | 91.4                 | 2nd "                | 75.3                | 3rd "               | 89.6                      | 78.3                              | 83.9                            | —                                   |
| Dinagpore              | Dinagpore               | 29.542                          | 29.602                     | +0.055               | ENE                        | 102                 | 89.6                 | 5th, & 8th July.     | 76.1                | 3rd "               | 84.4                      | 78.0                              | 83.2                            | +0.2                                |
| Rangpore               | Rangpore                | 29.554                          | 29.679                     | +0.110               | Calm                       | 65                  | 90.8                 | 3rd "                | 74.7                | 5th "               | 89.2                      | 77.5                              | 83.4                            | +0.4                                |
| Jalpigore              | Jalpigore               | 29.596                          | 29.684                     | +0.019               | Easterly                   | 70.9                | 90.0                 | 5th "                | 74.8                | 3rd, 5th, 7th July. | 87.2                      | 75.5                              | 81.4                            | -0.3                                |
| Coch Behar             | Darjeeling              | 29.016                          | —                          | +0.027               | NE                         | 55                  | 70.1                 | 3rd "                | 55.6                | 4th, 6th, 7th July. | 65.5                      | 56.4                              | 61.0                            | -0.5                                |
| Purneah                | Purneah                 | 29.568                          | 29.663                     | +0.050               | Calm                       | 21.1                | 90.2                 | 3rd, & 7th July.     | 70.6                | 3rd, 4th July.      | 84.5                      | 78.0                              | 83.3                            | -1.4                                |
| Mozufferpore           | Mozufferpore            | —                               | —                          | —                    | Observations suspended.    |                     |                      |                      |                     |                     |                           |                                   |                                 | —                                   |
| Darbhanga              | Darbhanga               | 29.468                          | 29.634                     | +0.036               | ESE                        | 144                 | 90.9                 | 5th, July            | 77.0                | 6th, "              | 89.5                      | 78.8                              | 84.2                            | 0                                   |
| Chumparan              | Modihari                | 29.502                          | 29.618                     | +0.036               | SW                         | 195.1               | 92.2                 | 3rd "                | 75.4                | 6th "               | 89.4                      | 77.2                              | 83.3                            | +0.5                                |
| Saran                  | Chupra                  | 29.421                          | —                          | +0.034               | E                          | 12.4                | 95.0                 | 2nd "                | 77.1                | 3rd "               | 91.8                      | 79.1                              | 85.5                            | +0.6                                |
| Shahabad               | Barua                   | 29.557                          | 29.611                     | +0.032               | ESE                        | 225.9               | 92.1                 | 7th "                | 78.0                | 3, 4, 6 & 8 July.   | 89.3                      | 78.7                              | 84.0                            | +2.0                                |
| Gya                    | Gya                     | 29.557                          | 29.596                     | +0.032               | E                          | 188.4               | 91.4                 | 2nd, & 5th July.     | 76.7                | 4th "               | 89.4                      | 78.3                              | 84.6                            | +0.6                                |
| Patna                  | Patna                   | 29.522                          | 29.596                     | 0                    | NNE                        | 75                  | 92.9                 | 3rd, & 8th July.     | 77.3                | 6th "               | 90.8                      | 78.8                              | 85.3                            | -0.1                                |
| South Bhagulpore       | Bankpore                | 29.540                          | 29.622                     | +0.031               | SE                         | 127                 | 91.4                 | 3rd, & 5th July.     | 77.2                | 6th "               | 90.1                      | 79.3                              | 84.7                            | -1.1                                |
| Monghyr                | Bhapulpore              | 29.454                          | 29.618                     | +0.031               | South-easterly.            | 66.1                | 90.4                 | 8th "                | 77.0                | 2nd, to 4th July.   | 88.5                      | 78.3                              | 85.3                            | -0.4                                |
| Sentinal Pergunnahs    | Doonaka                 | 29.135                          | —                          | —                    | South-easterly.            | 3.05                | 88.1                 | 3rd, 5th July.       | 75.8                | 2nd "               | 87.0                      | 76.6                              | 81.8                            | —                                   |
| Hazaribagh             | Hazaribagh              | 27.643                          | 29.636                     | +0.035               | SE                         | 219                 | 87.5                 | 6th "                | 71.7                | 6th "               | 84.9                      | 73.5                              | 79.2                            | -0.7                                |
| Lejardunga             | Ranchee                 | 27.517                          | 29.620                     | +0.010               | Variable                   | 122.0               | 87.0                 | 3rd "                | 71.1                | 6th "               | 84.8                      | 72.4                              | 78.6                            | -0.6                                |
| Mauniboon              | Chyebassa               | 28.847                          | —                          | —                    | SSE                        | 59.6                | 94.6                 | 2nd "                | 76.4                | 6th "               | 90.8                      | 77.6                              | 84.2                            | —                                   |
| Assam                  | Sonsagar                | 29.293                          | 29.723                     | +0.040               | SW                         | 85                  | 92.6                 | 8th "                | 76.5                | 8th "               | 90.3                      | 77.6                              | 83.9                            | +0.4                                |
|                        | Dibr                    | 29.564                          | 29.686                     | +0.011               | Calm                       | 117                 | 89.2                 | 7th "                | 76.3                | 5th "               | 85.2                      | 77.7                              | 81.5                            | -1.3                                |
|                        | Silchar                 | 29.600                          | 29.703                     | -0.006               | Calm                       | 68                  | 93.5                 | 4th & 5th July.      | 75.3                | 5th, 6th July.      | 91.0                      | 76.4                              | 83.7                            | +0.0                                |

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the readings during the same period for the

for the week ending Friday, the 8th of July 1887.

| DISTRICT OBSERVATIONS.      |   |   |                    |              |                     |              |                      |                    |                               |                              |              |            |                 | Representative station. | DISTRICT. |
|-----------------------------|---|---|--------------------|--------------|---------------------|--------------|----------------------|--------------------|-------------------------------|------------------------------|--------------|------------|-----------------|-------------------------|-----------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing stations. | RAINFALL.          |              |                     |              |                      |                    |                               |                              |              |            |                 |                         |           |
|                             |   |   | Of week.           |              | Since 1st of month. |              | Since 16th May 1887. |                    | Average number of rainy days. | Normal number of rainy days. |              |            |                 |                         |           |
|                             |   |   | Mean for district. | Normal mean. | Mean for district.  | Normal mean. | Variation.           | Mean for district. |                               |                              | Normal mean. | Variation. |                 |                         |           |
| 76                          | 6.6                                       | 4.67                                    | —                  | —            | —                   | —            | —                    | —                  | —                             | —                            | —            | —          | Gopalpore       | Pooree                  |           |
| 77                          | 7.9                                       | 3.21                                    | 2.16               | 2.50         | 2.50                | 2.50         | 12.87                | 3.7                | False Point                   | —                            | —            | —          | False Point     | —                       |           |
| 72                          | 8.0                                       | 0.61                                    | 2.59               | 2.98         | 2.98                | 2.98         | 14.52                | 8.5                | Cuttack                       | —                            | —            | —          | Cuttack         | —                       |           |
| 80                          | 6.4                                       | 4.04                                    | 1.94               | 2.38         | 2.38                | 2.38         | 13.22                | 3.8                | Balasore                      | —                            | —            | —          | Balasore        | —                       |           |
| 86                          | 8.1                                       | 3.43                                    | 3.43               | 2.98         | 3.44                | 3.00         | +0.44                | 14.10              | 15.12                         | -1.02                        | 4.7          | 4.2        | Saugor Island   | South-West Midnapore    |           |
| 79                          | 5.7                                       | 1.64                                    | 1.23               | 2.85         | 2.13                | 3.00         | -0.87                | 14.53              | 14.44                         | +0.09                        | 3.3          | 8.6        | Midnapore       | South 24-Pargunnahs     |           |
| 82                          | 9.4                                       | 3.10                                    | 2.01               | 2.51         | 2.41                | 2.75         | -0.34                | 12.09              | 15.41                         | -3.32                        | 4.1          | 4.6        | Calcutta        | 24-Pargunnahs           |           |
| 75                          | 9.1                                       | 2.08                                    | 2.13               | 2.42         | 2.38                | 2.56         | -0.18                | 17.38              | 18.87                         | +3.51                        | 4.3          | 3.9        | Burdwan         | Howrah                  |           |
| 84                          | 6.6                                       | 2.02                                    | 2.06               | 2.53         | 3.06                | 2.86         | +0.20                | 14.81              | 14.56                         | +0.25                        | 3.8          | 4.5        | Bankoora        | Burdwan                 |           |
| 82                          | 7.6                                       | 1.46                                    | 3.90               | 2.50         | 4.38                | 2.73         | +1.65                | 18.38              | 14.67                         | +3.71                        | 5.5          | 4.9        | Raneegunge      | Bankoora                |           |
| 84                          | 9.3                                       | 3.14                                    | 4.01               | 2.83         | 5.23                | 3.19         | +2.04                | 26.07              | 11.81                         | +11.26                       | 5.0          | 4.5        | Berhampore      | Beerbhoom               |           |
| 78                          | 8.1                                       | 1.56                                    | 1.91               | 3.02         | 2.72                | 3.27         | -0.55                | 16.10              | 16.52                         | -0.42                        | 4.2          | 4.3        | Krishnaghar     | West Burdwan            |           |
| 81                          | 9.1                                       | 1.16                                    | 1.38               | 2.84         | 1.43                | 3.04         | -1.61                | 12.91              | 18.00                         | -5.09                        | 4.1          | 4.6        | Jessore         | Moorshedabad            |           |
| 82                          | 9.0                                       | 3.91                                    | —                  | 6.22         | —                   | 6.75         | —                    | 42.60              | —                             | —                            | —            | —          | Chittagong      | Jessore                 |           |
| 88                          | 9.3                                       | 1.23                                    | 2.91               | 4.44         | 3.06                | 4.77         | -1.72                | 14.05              | 28.58                         | -14.53                       | 5.5          | 5.7        | Barrisal        | Khodha                  |           |
| 84                          | 3.6                                       | 4.50                                    | 3.09               | 5.72         | 3.14                | 6.35         | -3.21                | 19.85              | 39.02                         | -19.17                       | 4.0          | 5.9        | Noakholly       | Chittagong Hill Tracts  |           |
| 83                          | 3.0                                       | 0.65                                    | 0.82               | 2.94         | 0.82                | 3.11         | -0.29                | 13.26              | 20.25                         | -6.99                        | 3.7          | 4.3        | Furzedpore      | Backergunge             |           |
| 82                          | 7.9                                       | 0.78                                    | 0.95               | 3.51         | 0.95                | 3.69         | -2.74                | 13.26              | 21.21                         | -8.95                        | 4.5          | 4.8        | Dacca           | Noakholly               |           |
| 81                          | 6.0                                       | 2.30                                    | —                  | 3.23         | —                   | 3.41         | —                    | 25.17              | —                             | —                            | —            | 5.1        | Commillah       | Furzedpore              |           |
| 85                          | 7.0                                       | 1.77                                    | 2.05               | 3.21         | 2.31                | 3.53         | -1.22                | 20.12              | 24.51                         | -4.41                        | 3.8          | 4.5        | Mymensingh      | Dacca                   |           |
| 81                          | 8.4                                       | 3.12                                    | 2.73               | 3.54         | 3.10                | 3.75         | -0.65                | 31.26              | 20.24                         | +11.02                       | 5.0          | 4.9        | Bogra           | Tipperah                |           |
| 85                          | 8.0                                       | 1.82                                    | 3.49               | 3.06         | 4.10                | 3.40         | +0.70                | 19.03              | 18.37                         | +0.66                        | 4.5          | 4.4        | Serajunge       | Mymensingh              |           |
| 82                          | 4.9                                       | 2.21                                    | 2.35               | 3.70         | 2.86                | 3.94         | -1.08                | 16.26              | 17.08                         | -0.82                        | 4.0          | 4.5        | Rampore Beaulah | Bogra                   |           |
| 85                          | 6.4                                       | 3.68                                    | 3.81               | 3.77         | 4.16                | 1.02         | +0.14                | 25.82              | 18.23                         | +7.59                        | 6.0          | 5.4        | Maddah          | Pabna                   |           |
| 84                          | 6.0                                       | 2.16                                    | 3.65               | 3.87         | 3.74                | 4.23         | -0.49                | 36.02              | 20.51                         | +15.51                       | 5.8          | 4.9        | Dinapore        | Rajshahiye              |           |
| 86                          | 4.6                                       | 2.52                                    | 2.55               | 4.06         | 2.81                | 4.60         | -1.85                | 17.66              | 22.11                         | -4.45                        | 3.5          | 4.1        | Rangpore        | Maddah                  |           |
| 90                          | 7.7                                       | 7.06                                    | 6.85               | 6.12         | 6.59                | 7.06         | -1.47                | 60.97              | 45.86                         | +15.11                       | 4.8          | 5.4        | Jal-poree       | Dinapore                |           |
| 91                          | 9.1                                       | 8.67                                    | 7.52               | 7.88         | 7.95                | 9.62         | -1.67                | 48.18              | 43.74                         | +4.44                        | 6.3          | 6.0        | Darjeling       | Rangpore                |           |
| 83                          | 5.4                                       | 2.24                                    | 2.26               | 4.68         | 3.11                | 5.05         | -1.94                | 32.11              | 18.49                         | +13.62                       | 4.8          | 4.9        | Purneah         | Cooch Behar             |           |
| 85                          | 6.3                                       | 4.10                                    | 1.83               | 3.63         | 2.14                | 4.06         | -1.92                | 19.66              | 12.32                         | +7.34                        | 5.0          | 3.8        | Mozufferpore    | Darjeling Hill District |           |
| 77                          | 8.1                                       | 3.61                                    | 3.34               | 5.79         | 4.37                | 1.12         | +0.25                | 19.25              | 13.22                         | +6.03                        | 4.5          | 3.6        | Mothur          | Purkash                 |           |
| 82                          | 7.7                                       | 3.68                                    | 3.71               | 3.85         | 3.85                | 4.22         | -0.38                | 14.72              | 11.55                         | +3.17                        | 5.0          | 4.1        | Chupra          | North Bhagulpore        |           |
| 70                          | 6.6                                       | 0.60                                    | 1.15               | 2.58         | 1.16                | 2.83         | -1.67                | 10.73              | 8.71                          | +2.02                        | 3.3          | 3.7        | Buxar           | Mozufferpore            |           |
| 81                          | 7.4                                       | 1.67                                    | —                  | —            | —                   | —            | —                    | —                  | —                             | —                            | —            | —          | Arrah           | Darbhanga               |           |
| 72                          | 6.9                                       | 0.49                                    | 3.07               | 2.52         | 3.41                | 2.98         | +0.43                | 13.27              | 9.68                          | +3.59                        | 4.8          | 3.7        | Gya             | Mothur                  |           |
| 82                          | 9.1                                       | 2.22                                    | 2.38               | 2.95         | 2.55                | 3.51         | -0.96                | 15.18              | 10.88                         | +4.30                        | 4.5          | 4.3        | Bankipore       | Shamparan               |           |
| 79                          | 3.9                                       | 1.23                                    | 2.75               | 2.67         | 4.41                | 3.11         | +1.30                | 18.79              | 11.35                         | +7.44                        | 3.6          | 4.2        | Bhagulpore      | Sartan                  |           |
| 86                          | 6.0                                       | 1.25                                    | 1.71               | 2.88         | 4.07                | 3.39         | +0.77                | 22.17              | 14.27                         | +7.90                        | 4.3          | 4.3        | Doonka          | Dehrae                  |           |
| 82                          | 10.0                                      | 1.88                                    | 2.24               | 3.12         | 2.51                | 3.42         | -0.91                | 14.24              | 13.26                         | +0.98                        | 4.8          | 4.6        | Hazribagh       | Shalabad                |           |
| 81                          | 8.0                                       | 3.56                                    | 2.78               | 2.55         | 3.03                | 2.85         | +0.18                | 16.70              | 11.97                         | +4.73                        | 3.8          | 4.4        | Ranchee         | Arrah                   |           |
| 70                          | 7.7                                       | 1.29                                    | 1.46               | 2.22         | 1.56                | 2.51         | -1.05                | 16.60              | 13.20                         | +3.40                        | 3.0          | 4.8        | Chyconassa      | Gya                     |           |
| 85                          | 9.7                                       | 3.40                                    | —                  | —            | —                   | —            | —                    | —                  | —                             | —                            | —            | —          | Sibsagar        | Patna                   |           |
| 90                          | 7.3                                       | 2.21                                    | —                  | —            | —                   | —            | —                    | —                  | —                             | —                            | —            | —          | Dibrugarh       | Bankipore               |           |
| 80                          | 9.1                                       | 5.28                                    | —                  | —            | —                   | —            | —                    | —                  | —                             | —                            | —            | —          | Shichar         | South Bhagulpore        |           |

years. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.  
denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall, the normal mean denotes the total rainfall at the station during the year.







**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVA-  
TIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
8TH OF JULY 1887.**

DURING the previous week the monsoon current blowing over the province had been decidedly light, and in consequence the average rainfall had been much below the normal in the Bay, however, the monsoon current which had been blowing was fairly strong. The same conditions have obtained during the greater part of the present week, and the monsoon current appears to have been partially stopped by the generation of a feeble whirl in the northern half of the Bay, and which only reached the land on the 7th. The whirl was formed very slowly and never intensified to any extent, and yet it apparently affected the monsoon current blowing over Bengal and made it decidedly weaker. The principal feature in the meteorology of the week has therefore been the formation and advance of this whirl. On Saturday, the 2nd instant, pressure became comparatively low off the Arakan coast, and winds showed a slight tendency to circulation along this coast. On the following day these indications of the formation of a feeble barometric depression or whirl were confirmed, and it was probably on this day near the centre of the Bay and south of a line joining Akyab and Gopalpore. On Monday, the 4th, the whirl had developed to a sufficient extent to cause a distinct cyclonic circulation of winds over the whole of the northern half of the Bay, and on this day probably the centre of the whirl or feeble depression was to the west of the centre of the Bay, and to the east-south-east of Gopalpore. On Tuesday, the 5th, it had distinctly developed and had advanced in a north-westerly direction, the centre being to the south of Saugor Island and about east-north-east of False Point. Notwithstanding that it had distinctly developed, it was still exceedingly feeble, and the wind velocities in connection with it were very small, though the circulation was completely cyclonic. On the 6th it had again advanced, and on this day apparently the centre was close to Saugor Island, but it was clear that it was not developing to any extent, but that it was rather becoming more feeble. On Thursday, the 7th, it had passed inland, but it had weakened to such an extent that it had almost disappeared, and on the 8th it had quite filled up. For the whole period of its existence the winds accompanying it, as judged by the coast stations, were comparatively weak, but at sea it probably gave rise to strong winds and squally weather. In its advance it brought rather heavy rain, and on the 6th Balasore, Jelasore, Contai, Saugor Island, Devog, and other stations each reported about 2 inches of rain.

Though the depression was such a feeble one, yet it to a certain extent, by the indraught towards it, stopped the monsoon current from spreading over Bengal, and thus rainfall has been in defect in nearly all districts, the defects being particularly noticeable in East and North Bengal, in North Behar and in Chutia Nagpur: that is, in those districts which did not feel the effects of the rainfall which accompanied the storm. With the advance of the storm inland, and its disappearance, conditions have now become decidedly more favourable, and the strong monsoon current which has been blowing in the Bay should be able to advance uninterruptedly over Bengal and to give good rainfall.

*Pressure.*—The depression above described was of so feeble a nature that it had not any considerable effect on the general pressure of the province, excepting to make the average pressure of the south-western stations for the week comparatively low. Over the greater part of the province the mean pressure for the week has been slightly above the normal, the excess ranging about as high as 0.05" at Purneah. The general excess pressure at all the stations except those affected by the depression has not been larger than about 0.03", and when all the stations in the province are considered from which records have been received for several years, and which therefore give reliable averages, the mean weekly variation is only an excess of 0.019". At False Point, on the other hand, pressure has been in defect by 0.012", and at Gopalpore the defect has been 0.018". In Assam pressure has been in excess by 0.015", the seat of principal excess being Sibsagar.

*Temperature.*—The variations of temperature during the week have not been large, and the mean temperatures have been nearly normal. For the whole province the average variation for this period is less than a tenth of a degree, so that it may be said the general temperature has been normal. In the various districts East Bengal shows a slight excess temperature and Chutia Nagpur a slight defect. In Assam temperature has been quite normal on the average for the week.

*Rainfall.*—As has been previously stated, has been decidedly below the normal in almost all districts. Compared with the normal, and expressed as a percentage of the normal fall, the rainfall in each meteorological district becomes—Orissa 101 per cent., South-West Bengal 96 per cent., East Bengal 76 per cent., North Bengal 80 per cent., North Behar 69 per cent., South Behar 80 per cent. and Chutia Nagpur 64 per cent. Taking all these as having an equal value in the calculation, the rainfall in the province may be said to have equalled 81 per cent. of the normal for the period.

As is usually the case, when a light monsoon is blowing, the distribution of the rainfall has been decidedly irregular. Thus in the following districts the rainfall has been very considerably smaller than would be indicated by the above numbers:—Midnapore, Houghly, Khoolna, Jessore, Furreedpore, Dacca, Rungpore, Mozufferpore and Bhagulpore. Centres of comparatively heavy rainfall, on the other hand, have occurred in the following districts:—Beerbhoom, Berhampore, Chumpanun and Gya.





# MEMORANDUM.

THE table appended to this memorandum furnishes the following particulars in connection with the mortuary statistics of the districts in Bengal for the month of December 1886:—

1. That 187,707 deaths occurred among a population of 66,163,884, representing an annual death-rate of 33.96 per 1,000, against 32.04 per 1,000 in the preceding month, and 27 per 1,000 in the corresponding month of the preceding year, indicating, as compared with both the periods, (especially with the latter), a considerable improvement in the registration of the events.

2. That the undermentioned districts furnished the highest proportions of deaths:—

| Districts.    |     |                  | Districts.  |     |                  |
|---------------|-----|------------------|-------------|-----|------------------|
|               |     | Ratio per mille. |             |     | Ratio per mille. |
| Rungpore      | ... | 61.56            | Pubna       | ... | 41.52            |
| Backergunge   | ... | 58.20            | Dinajpur    | ... | 40.14            |
| Nuddea        | ... | 53.52            | Hughli      | ... | 39.48            |
| Dacca         | ... | 53.28            | Murshidabad | ... | 39.48            |
| Jalpaiguri    | ... | 49.80            | Jessore     | ... | 38.88            |
| Shahabad      | ... | 49.56            | Bhagulpore  | ... | 38.00            |
| 24-Pergunnahs | ... | 49.08            | Midnapore   | ... | 34.20            |
| Rajshahye     | ... | 48.00            | Howrah      | ... | 34.04            |
| Puri          | ... | 47.88            | Purneah     | ... | 33.60            |
| Balasore      | ... | 47.16            | Monghyr     | ... | 32.52            |
| Khulna        | ... | 46.46            | Burdwan     | ... | 32.40            |
| Bogra         | ... | 46.20            | Maldah      | ... | 32.40            |
| Birbhum       | ... | 42.36            | Noakhali    | ... | 29.76            |
| Serampore     | ... | 42.12            | Chumparun   | ... | 29.64            |

3. That the principal diseases proved fatal at the following rates:—

|                  |     |     | Ratio per mille during— |                |
|------------------|-----|-----|-------------------------|----------------|
|                  |     |     | December 1886.          | December 1885. |
| Cholera          | ... | ... | 4.32                    | 2.16           |
| Small pox        | ... | ... | .02                     | .03            |
| Fever            | ... | ... | 24.12                   | 20.04          |
| Bowel-complaints | ... | ... | 1.08                    | .96            |
| Injury           | ... | ... | .12                     | .12            |
| Other causes     | ... | ... | 4.08                    | 3.36           |

indicating chiefly in comparison with the mortality of the corresponding month of the preceding year, a considerable increase of mortality from cholera and fever, particularly from the latter.

4. That the following districts returned the highest death-rates per 1,000 of their populations from the abovementioned diseases, excepting small-pox, bowel-complaints and injury, which do not appear to have presented any local exacerbations:—

| Cholera.      |     |                  | Fever.        |     |                  | Other causes. |     |                  |
|---------------|-----|------------------|---------------|-----|------------------|---------------|-----|------------------|
|               |     | Ratio per mille. |               |     | Ratio per mille. |               |     | Ratio per mille. |
| Dacca         | ... | 20.52            | Rajshahye     | ... | 45.00            | Puri          | ... | 23.52            |
| Nuddea        | ... | 18.84            | Rungpore      | ... | 44.40            | Backergunge   | ... | 15.00            |
| 24-Pergunnahs | ... | 16.32            | Jalpaiguri    | ... | 43.80            | Sarun         | ... | 10.32            |
| Rungpore      | ... | 14.64            | Shahabad      | ... | 43.56            | Birbhum       | ... | 9.72             |
| Howrah        | ... | 9.72             | Bogra         | ... | 39.00            | Balasore      | ... | 9.60             |
| Serampore     | ... | 9.48             | Backergunge   | ... | 38.52            |               |     |                  |
| Puri          | ... | 8.88             | Pubna         | ... | 37.92            |               |     |                  |
| Balasore      | ... | 7.20             | Dinajpur      | ... | 36.84            |               |     |                  |
| Faridpore     | ... | 6.24             | Khulna        | ... | 35.76            |               |     |                  |
| Khulna        | ... | 6.00             | Jessore       | ... | 32.42            |               |     |                  |
| Birbhum       | ... | 5.88             | Nuddea        | ... | 30.72            |               |     |                  |
| Murshidabad   | ... | 5.52             | Murshidabad   | ... | 30.60            |               |     |                  |
| Jessore       | ... | 4.80             | Maldah        | ... | 29.64            |               |     |                  |
| Midnapore     | ... | 4.68             | Purneah       | ... | 29.52            |               |     |                  |
| Burdwan       | ... | 4.44             | Hughli        | ... | 28.32            |               |     |                  |
| Cuttack       | ... | 4.20             | Bhagulpore    | ... | 27.84            |               |     |                  |
| Jalpaiguri    | ... | 3.84             | Monghyr       | ... | 27.48            |               |     |                  |
| Backergunge   | ... | 3.36             | Birbhum       | ... | 26.28            |               |     |                  |
| Purneah       | ... | 3.36             | Chumparun     | ... | 25.68            |               |     |                  |
| Tipperah      | ... | 3.24             | 24-Pergunnahs | ... | 21.60            |               |     |                  |
| Bogra         | ... | 2.64             | Burdwan       | ... | 23.28            |               |     |                  |
| Mozufferpore  | ... | 2.52             | Noakhali      | ... | 23.28            |               |     |                  |
| Mymensing     | ... | 2.16             | Balasore      | ... | 23.04            |               |     |                  |
|               |     |                  | Midnapore     | ... | 22.92            |               |     |                  |
|               |     |                  | Dacca         | ... | 22.68            |               |     |                  |
|               |     |                  | Serampore     | ... | 21.48            |               |     |                  |

5. That the mortality of the month distributed under the heads of Sex, Class and Age, stood as follows:—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |     |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |     | Ratio per mille. |
| Males   | ... | 35.88            | Christians          | ... | 22.80            | Under 1 year         | ... | 188.04           |
| Females   | ... | 32.04            | Hindus              | ... | 32.28            | 1 and under          | ... | 39.72            |
| Ratio of male deaths to every 100 female deaths | ... | 110              | Mahomedans          | ... | 38.76            | 5 " " 10 "           | ... | 20.40            |
|   |     |                  | Budhiats            | ... | 12.48            | 10 " " 15 "          | ... | 16.44            |
|   |     |                  | Other classes       | ... | 18.48            | 15 " " 20 "          | ... | 24.00            |
|   |     |                  |                     |     |                  | 20 " " 30 "          | ... | 24.12            |
|   |     |                  |                     |     |                  | 30 " " 40 "          | ... | 25.80            |
|   |     |                  |                     |     |                  | 40 " " 50 "          | ... | 32.28            |
|   |     |                  |                     |     |                  | 50 " " 60 "          | ... | 46.56            |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 79.08            |

B. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

The 11th July 1887.

**DINRIK.**

[illegible]

**TOTAL FOR THE PROVINCE**



## MEMORANDUM.

DURING the week ending 25th June 1887 the returns from the principal Municipalities in Bengal furnished the following particulars :—

1. That births and deaths were registered in these Municipalities in the proportions per 1,000 of population of 13·3 and 20·2, respectively, as opposed to 17·3 and 18 per 1,000 in the preceding week ending 18th June, indicating a sensible improvement in the registration of deaths with a large retrogression in that of births.

2. That the highest proportions of births were returned by the Comillah and Arrah Municipalities, viz., at the rates of 38·5 and 38·3 per 1,000 of their populations, respectively, and of deaths by the Puri, Bhagulpore and Gya Municipalities, viz., at 12·8, 34·4 and 32·8 per 1,000 respectively.

3. That as compared with the results of the preceding week, there was a noticeable increase of mortality from cholera, and only fractional variations in the death-rates from the rest of the diseases; *vide* figures given below :—

|                  |     |     |     |     | Ratio per <i>mille</i> during the weeks ending— |                 |
|------------------|-----|-----|-----|-----|---|-----------------|
|                  |     |     |     |     | 25th June 1887.                                 | 18th June 1887. |
| Cholera          | ... | ... | ... | ... | 3·5   | 2·4             |
| Small-pox        | ... | ... | ... | ... | ·1  | ·2              |
| Fever            | ... | ... | ... | ... | 7·5   | 7·0             |
| Bowel-complaints | ... | ... | ... | ... | 2·3   | 2·2             |
| Injury           | ... | ... | ... | ... | ·4  | ·3              |
| Other causes     | ... | ... | ... | ... | 6·4   | 5·9             |

4. That the Municipalities named below appear to have suffered the most from the diseases (excepting small-pox and injury, which exhibited no local severity) implicated in the foregoing table :—

| Cholera.            |                          | Fever.  |                          | Bowel-Complaints. |                          | Other causes. |                          |
|---------------------|--------------------------|---------|--------------------------|-------------------|--------------------------|---------------|--------------------------|
|                     | Ratio per <i>mille</i> . |         | Ratio per <i>mille</i> . |                   | Ratio per <i>mille</i> . |               | Ratio per <i>mille</i> . |
| Puri                | ... 77·6                 | Puri    | ... 29·4                 | Puri              | ... 12·6                 | Gya           | ... 16·4                 |
| Patna               | ... 5·5                  | Purneah | ... 20·8                 |                   |                          | Bhagulpore    | 11·8                     |
| Dhurbhanga          | ... 5·5                  |         |                          |                   |                          |               |                          |
| Bhagulpore          | ... 4·5                  |         |                          |                   |                          |               |                          |
| Gya                 | ... 2·7                  |         |                          |                   |                          |               |                          |
| Suburbs of Calcutta | 2·3                      |         |                          |                   |                          |               |                          |

It will be noticed that cholera prevailed with very great severity in the Puri town, its prevalence being, no doubt, associated with the presence of pilgrims in that town for the *Rath Jatra* festival which took place this month.

5. That the death-rates in relation to *Sex*, *Class* and *Age*, stood as noted below :—

| According to Sex.                               |                          | According to Class. |                          | According to Age.    |                          |
|---|--------------------------|---------------------|--------------------------|----------------------|--------------------------|
|   | Ratio per <i>mille</i> . |                     | Ratio per <i>mille</i> . |                      | Ratio per <i>mille</i> . |
| Males   | ... 20·3                 | Christians          | ... 13·0                 | Under 1 year         | ... 162·9                |
| Females   | ... 20·2                 | Hindus              | ... 22·6                 | 1 and under 5 years  | ... 30·4                 |
| Ratio of male deaths to every 100 female deaths | 113                      | Mahomedans          | ... 15·3                 | 5 " " 10 " "         | ... 52·2                 |
|   |                          |                     |                          | 10 " " 15 " "        | ... 8·6                  |
|   |                          |                     |                          | 15 " " 20 " "        | ... 7·6                  |
|   |                          |                     |                          | 20 " " 30 " "        | ... 12·1                 |
|   |                          |                     |                          | 30 " " 40 " "        | ... 13·4                 |
|   |                          |                     |                          | 40 " " 50 " "        | ... 15·6                 |
|   |                          |                     |                          | 50 " " 60 " "        | ... 27·9                 |
|   |                          |                     |                          | 60 years and upwards | ... 41·6                 |

R. LIDDERDALE, M.D., *Deputy Surgeon-General*,  
Sanitary Commissioner for Bengal.

The 11th July 1887.



# SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 13, 1867

ACCORDING TO—

Age.

Class.

THE NAMES OF MUNICIPALITIES.

DEATHS AMONG—

RATIO PER 1,000 OF POPULATION PER ANNUM.

DEATHS.

RATIO PER 1,000 OF POPULATION PER ANNUM.

|                      | Christians. | Hindus. | Mahomedans. | Buddhists. | Other classes. | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and up. |
|----------------------|-------------|---------|-------------|------------|----------------|---------------|----------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------|
| Bardwan              | 6           | 2       | 132         | 132        | 132            | 2             | 1                    | 2                     | 1                      | 1                      | 2                      | 1                      | 1                      | 1                      | 284              |
| Midnapore            | 6           | 2       | 130         | 144        | 130            | 3             | 1                    | 2                     | 1                      | 1                      | 2                      | 1                      | 1                      | 1                      | 159              |
| Hughli and Chinsurah | 8           | 3       | 131         | 131        | 131            | 3             | 1                    | 2                     | 1                      | 1                      | 2                      | 1                      | 1                      | 1                      | 101              |
| Serampore            | 7           | 3       | 144         | 144        | 144            | 3             | 2                    | 2                     | 1                      | 1                      | 2                      | 1                      | 1                      | 1                      | 154              |
| Utterpara            | 2           | 3       | 135         | 135        | 135            | 6             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 265              |
| Howrah               | 16          | 3       | 133         | 76         | 133            | 18            | 10                   | 2                     | 2                      | 2                      | 1                      | 1                      | 1                      | 1                      | 2000             |
| Bali                 | 1           | 56      | 134         | 232        | 134            | 18            | 10                   | 2                     | 2                      | 2                      | 1                      | 1                      | 1                      | 1                      | 188              |
| Suburbs of Calcutta  | 1           | 4       | 112         | 112        | 112            | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 511              |
| Kishanagar           | 1           | 4       | 112         | 112        | 112            | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 501              |
| Ranaghat             | 1           | 4       | 112         | 112        | 112            | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 530              |
| Sanitpore            | 11          | 11      | 277         | 277        | 277            | 2             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 453              |
| Jessore              | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Ranpore Beaulah      | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Derjiling            | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Dacca                | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Naraingunge          | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Chittagong           | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Comillah             | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Petna City           | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Gya                  | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Arach                | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Mosferpore           | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Durbhanga            | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Chupra               | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Bhaupore             | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Monohr               | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Purneah              | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| Puri                 | 1           | 5       | 262         | 53         | 262            | 3             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 186              |
| TOTAL                | 8           | 297     | 130         | 226        | 163            | 96            | 64                   | 31                    | 19                     | 15                     | 63                     | 60                     | 45                     | 61                     | 418              |

## CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 9th July 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>9TH JULY 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>10TH JULY 1886. |                     |          |
|--------------------|---|---------------------|----------|--|---------------------|----------|
|                    | Number of<br>boats.                         | Weight of<br>cargo. | Tollage. | Number of<br>boats.                          | Weight of<br>cargo. | Tollage. |
|                    | No.   | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... | 499   | 76,385              | 1,239    | 143  | 23,910              | 404      |
| Jute ...           | 27  | 14,600              | 249      | 13   | 6,950               | 122      |
| Firewood ...       | 181   | 75,330              | 1,201    | 52   | 17,525              | 262      |
| Other articles ... | 772   | 2,26,715            | 3,333    | 603  | 1,47,060            | 2,024    |
| Total ...          | 1,479                                       | 3,93,030            | 6,022    | 811  | 1,95,465            | 2,812    |





**General remarks on the fluctuation of principal staples carried over the East Indian Railway during 5 weeks ended 28th May 1887.**

**INCREASES.**

**Coal and coke.**—The increase was both in the despatches for upward and downward coal, the former was due to despatches from Karmatar for the North-West Railway, and from Sitarampur to Cawnpore, Delhi and stations on the Tirhoot State Railway, and the latter was chiefly due to despatches to the Eastern Bengal State Railway carried over the Jubilee Bridge *via* Naihati.

**Cotton.**—This increase was due to large stocks at despatching stations.

**Wheat.**—Due to good demand in Calcutta.

**Rice (husked and unhusked).**—The increase was principally in the despatches from Raneegunge and stations on the Loop line to stations in the Dinapore district, Allahabad, Jubbulpore, and Cawnpore, owing to low rates at the sending stations and to comparatively high prices prevailing in Behar and the North-West Provinces.

**Opium.**—Due to increased despatches to meet Government requirements.

**Railway Material, Foreign.**—The increase was in the despatches from Howrah to Chowra for the Indain-Midland Railway, and from Bombay to Manikpur for the same system.

**Salt.**—There was a large increase in the despatches from Howrah due to the fall in the price of imported salt.

**DECREASES.**

**Piece-goods, European.**—Due to the markets at Calcutta and in the North-West Provinces being very dull, and to fewer marriage ceremonies having taken place during the period.

**Turmeric.**—This decrease was principally in the despatches from Howrah, and may be ascribed in some measure to the competition of the inland steamers, and to stations in the North-West obtaining some of their supplies from Madras.

**Gunny.**—This decrease was principally in long distance traffic, and may be ascribed to the absence of any large demand in the Punjab and Oudh and the North-West Provinces, owing to the partial failure of the crops.

**Pulses.**—The decrease was general, and may be ascribed, in the case of the stations in the Dinapore district, in some measure to the cultivation of wheat having taken the place of pulses. In the North-West and Punjab the crop of pulses appears to have suffered in the same way as other crops.

**Other rain and spring crops.**—The same remarks apply as in regard to pulses.

**Hides.**—This decrease is said to be due to abundant pasture in the Dinapore district, resulting in less cattle mortality than usual during the dry season.

**Seeds.**—The decrease was chiefly in the despatches of linseed from stations Luckeeserai to Cawnpore. It is believed that the stock of linseed at stations in the Dinapore district is very large, and that merchants are holding back their despatches for a rise in prices in Calcutta.

**Sugar, refined and unrefined.**—The remarks made in the report for April 1887 may be repeated; there is still a deficiency of sugar at the exporting stations in the Dinapore district, and the Oudh and Mohilkund Railway is supplying Rajputana by way of Aligarh.

**Government stores.**—The decrease was principally in the despatches from Howrah.

**Tobacco.**—Due to poor crops and short land traffic from the Assam-Bihar State Railway *via* Shahobgunge Ghât.

N. ST L. CARTER, *Traffic Manager.*

TRAFFIC MANAGER'S OFFICE, JAMALPUR, the 9th July 1887.

## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for the last 12 days of June 1887, on 22½ miles open.

|   | COACHING TRAFFIC.     |               | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|---------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.     | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
| Rs. A. P.   |                       |               | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Rs. for the week...   | 32,029                | 8,817 8 0     | 11,153 0                         | 852 10 0   | 17 0 0                      | 8,887 2 0       | 1,533                    | 126          | 1,659  |
| do of railway...  | .....                 | 882 12 11     | .....                            | 15 13 7    | 0 12 0                      | 399 6 0         | .....                    | .....        | .....  |
| ious 24 weeks of half-...   | 494,713*              | 1,30,670 9 0* | 2,02,785 30†                     | 7,017 4 0† | 190 7 0‡                    | 1,37,893 4 0    | 22,607                   | 1,150        | 23,756 |
| Total for 26 weeks...   | 527,642               | 1,39,104 1 0  | 2,13,878 30                      | 7,369 14 0 | 216 7 0                     | 1,40,780 6 0    | 24,140                   | 1,285        | 25,425 |
| COMPARISON.   |                       |               |                                  |            |                             |                 |                          |              |        |
| corresponding last 11 previous year...  | 26,770†               | 6,700 8 11    | -50,216 30                       | -1,869 4 0 | 6 6 6                       | 4,987 11 5      | 1,468                    | 128          | 1,596  |
| of railway correspond- ing of previous year...  | .....                 | 305 3 1       | .....                            | -83 0 0    | 0 4 8                       | 221 14 9        | .....                    | .....        | .....  |
| corresponding date of 1 year...   | 520,008               | 1,38,067 0 3  | 1,97,520 10§                     | 6,789 1 0§ | 179 8 11§                   | 1,45,065 10 2   | * 25,608                 | 2,736        | 28,344 |
| d number of passengers 6,881 and Rs. 1,474 0 0 } on account of differences between the approximate and audited returns to week ended 29th May 1887.<br>Mds. 362 and deducted " 3 0 0 }<br>to other earnings " 16 0 0 }<br>6d Mds. 97-20 and deducted " 0 1 0 } on account of supplemental Return to quarter ended 31st March 1887.<br>to other earnings " 1 8 0 }<br>7d Mds. 788-30 and " 5 11 0 } on account of supplemental Return to quarter ended 31st March 1886.<br>to other earnings " 0 8 0 } |                       |               |                                  |            |                             |                 |                          |              |        |

imate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR THE LAST 11 DAYS OF JUNE 1886. |                  | RECEIPTS FOR THE LAST 12 DAYS OF JUNE 1887. |           | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH JUNE 1886. |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JUNE 1887. |                  | Total increase in 1887. |                 | Total decrease in 1886 |       |
|---|------------------|---|-----------|---|----------------------|---|------------------|-------------------------|-----------------|------------------------|-------|
| Receipts.                                   | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked.                                      | Mean mileage worked. | Total receipts.                                       | Per mile worked. | Mean mileage worked.    | Total receipts. | Per mile worked.       |       |
| Rs.   | Rs.              |   | Rs.       | Rs.   |                      | Rs.   | Rs.              |                         | Rs.             | Rs.                    | Rs.   |
| 4,938                                       | 222              | 22½   | 8,887     | 399   | 22½                  | 72,732  | 3,269            | 22½                     | 74,733          | 3,359                  | 2,001 |

## INDIAN MIDLAND RAILWAY.

Approximate Return of Traffic for the last 12 days of June 1887, on 42 miles open.

|  | COACHING TRAFFIC.     |              | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|--------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Receipts.    | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
| Rs. A. P.  |                       |              | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Rs. for the period...  | 4,008                 | 1,930 3 0    | 12,948 30                        | 2,895 3 0   | 46 0 0                      | 4,971 6 0       | 363                      | .....        | 1,008  |
| do of railway...   | .....                 | 45 15 4      | .....                            | 68 14 11    | 1 1 6                       | 115 15 9        | .....                    | .....        | .....  |
| ious 24 weeks of half-...  | 68,433*               | 31,054 12 9* | 11,65,175 0†                     | 70,609 1 0† | 768 7 3‡                    | 1,02,420 5 0    | 4,689                    | 14,017       | 18,696 |
| Total for 26 weeks...  | 72,501                | 32,984 15 9  | 11,85,123 30                     | 73,504 4 0  | 802 7 3                     | 1,07,291 11 0   | 4,952                    | 14,603       | 19,614 |
| COMPARISON.  |                       |              |                                  |             |                             |                 |                          |              |        |
| corresponding last 11 previous year...   | 4,516†                | 1,886 15 0   | 6,519 20                         | -2,223 2 0  | 26 4 6                      | -309 14 6       | 692                      | 232          | 924    |
| of railway correspond- ing of previous year...   | .....                 | 44 14 10     | .....                            | -52 14 11   | 0 10 0                      | -7 6 1          | .....                    | .....        | .....  |
| on 1st April to corre- sponding date of previous year  | 32,442                | 14,280 5 4   | 1,73,119 20                      | 11,686 8 8  | 266 6 9                     | 26,113 4 4      | 4,470                    | 3,174        | 7,644  |
| * Added No. of passengers 895 and Rs. 7 0 0 } On account of differences between the approximate and audited returns to week ended 28th May 1887.<br>† Do. Mds. 391 and deducted " 1,931 0 0 }<br>‡ Do. to other earnings " 14 0 0 }<br>§ Added Mds. 6 and " 1 6 0 } On account of supplemental return to quarter ended 31st March 1887.<br>† Do. to other earnings " 2 0 0 } |                       |              |                                  |             |                             |                 |                          |              |        |

imate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR THE LAST 11 DAYS OF JUNE 1886. |                  | RECEIPTS FOR THE LAST 12 DAYS OF JUNE 1887. |           | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH JUNE 1886. |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JUNE 1887. |                  | Total increase in 1887. |                 | Total decrease in 1886. |        |
|---|------------------|---|-----------|---|----------------------|---|------------------|-------------------------|-----------------|-------------------------|--------|
| Receipts.                                   | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked.                                      | Mean mileage worked. | Total receipts.                                       | Per mile worked. | Mean mileage worked.    | Total receipts. | Per mile worked.        |        |
| Rs.   | Rs.              |   | Rs.       | Rs.   |                      | Rs.   | Rs.              |                         | Rs.             | Rs.                     | Rs.    |
| -810  | -7               | 42  | 4,871     | 116   | 42                   | 26,112  | 622              | 42                      | 52,809          | 1,263                   | 26,407 |

# BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for the last 12 days of June 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the last 12 days of June                | 40,509                | 15,390 0 0         | 50,000 0                         | 3,700 0 0  | 3,500 0 0                   | 22,500 0 0      | 6,401                    | 2,439        | 8,839   |
| Or per mile of railway                                    | 324                   | 122 0 0            | 400 0                            | 30 0 0     | 28 0 0                      | 180 0 0         | .....                    | .....        | .....   |
| For previous 26 weeks of half-year                        | 617,471               | 2,10,240 0 0       | 1,005,434 0                      | 67,175 0 0 | 1,191 0 0                   | 72,91,096 0 0   | 91,709                   | 34,615       | 126,323 |
| Total for 26 weeks  | 657,971               | 2,51,540 0 0       | 10,55,131 0                      | 70,875 0 0 | 4,691 0 0                   | 3,07,106 0 0    | 98,169                   | 37,054       | 135,223 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |         |
| Total for corresponding 11 days of previous year          | 37,902                | *16,889 0 0        | 32,777 0                         | 2,274 0 0  | (b) 21,139 0 0              | 40,352 0 0      | 6,150                    | 1,930        | 8,110   |
| Per mile of railway corresponding period of previous year | 304                   | 135 0 0            | 626 0                            | 18 0 0     | .....                       | 153 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year              | (a) 667,293           | 2,38,325 0 0       | 8,65,333 0                       | 53,651 0 0 | 21,905 0 0                  | 3,17,911 0 0    | 100,571                  | 34,355       | 134,926 |

\* Includes amount Rs. 3,801 on account of Post Office earnings.

† Audited up to week ending 7th May 1887.

(a) Corrected with half-yearly Revenue Account.

(b) Includes Rs. 19,930 interest on rolling-stock taken over by Eastern Bengal State Railway.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR LAST 11 DAYS OF JUNE 1886. |           |                  | RECEIPTS FOR LAST 12 DAYS OF JUNE 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH JUNE 1887. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JUNE 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 125                                     | 40,352    | 323              | 125                                     | 22,500    | 180              | 125   | 1,75,168        | 108              | 125   | *1,61,125       | 101              | .....                   | 11,933                  |

\* Audited up to week ending 7th May 1887.

## NALHATI STATE RAILWAY.

Approximate Return of Traffic for the last 12 days of June 1887, on 27½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|--------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.    | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for 12 days                               | 5,274                 | 1,918 0 1          | 20,555 30                        | 1,389 3 0    | 31 13 9                     | 3,338 0 10      | 878                      | 425          | 1,308  |
| Or per mile of railway                                  | 195                   | 70 0 0             | 747 0                            | 50 15 0      | 1 3 0                       | 122 8 0         | .....                    | .....        | .....  |
| For previous 26 weeks of half-year                      | 72,337                | 27,398 15 11       | 2,80,204 10                      | 17,152 13 0  | 595 2 3                     | 45,174 15 2     | 12,788                   | 7,028        | 20,214 |
| Total for the half-year                                 | 77,607                | 29,505 0 0         | 3,09,560 0                       | 18,541 0 0   | 627 0 0                     | 45,473 0 0      | 13,661                   | 8,363        | 21,524 |
| COMPARISON.   |                       |                    |                                  |              |                             |                 |                          |              |        |
| Total for corresponding period of previous year         | 3,763                 | 1,538 6 3          | 17,250 30                        | 1,216 0 0    | 21 6 0                      | 2,775 13 5      | 799                      | 406          | 1,130  |
| Per mile of railway corresponding week of previous year | 138                   | 56 7 0             | 634 0                            | 44 16 0      | 0 13 0                      | 101 14 0        | .....                    | .....        | .....  |
| Total to corresponding date of previous year            | *80,212               | 28,379 14 6        | 2,09,584 30                      | 15,870 13 10 | 610 11 0                    | 44,891 7 4      | 13,323                   | 6,851        | 20,274 |

\* Includes figures for Supplementary Traffic return.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR LAST 11 DAYS OF JUNE 1886. |           |                  | RECEIPTS FOR LAST 12 DAYS OF JUNE 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH JUNE 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JUNE 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         |                         |
| 27½                                     | 2,776     | 102              | 27½                                     | 3,338     | 123              | 27½   | 24,335          | 803              | 27½   | 24,612          | 908              | 277                     | .....                   |

## TIRHOOT STATE RAILWAY.

• *Approximate Return of Traffic for the last 12 days of June 1887, on 249 miles open.*

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|--|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.  |
| Rs. A. P.  |                       |                    | Mds. s.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| For 12 days on 249 miles of railway ...            | 67,689                | 22,884 0 6         | 3,16,438 20                      | 28,339 5 6    | 5,910 7 1                   | 57,134 6 1      | 8,683                    | 13,455       | 22,138  |
| As 24 weeks of half-year ...                       | 928,058               | 3,53,468 6 6       | 40,74,913 20                     | 3,97,916 10 6 | 78,328 8 11                 | 8,29,677 9 11   | 137,644                  | 143,196      | 282,834 |
| for the half-year ...                              | 985,098               | 3,76,244 0 0       | 43,91,377 0                      | 4,26,250 0 0  | 84,234 0 0                  | 8,96,772 0 0    | 147,327                  | 157,649      | 304,976 |
| COMPARISON.  |                       |                    |                                  |               |                             |                 |                          |              |         |
| Corresponding period of year on 246 miles open ... | 55,205                | 18,929 0 4         | 2,45,217 20                      | 24,163 5 0    | 5,598 6 11                  | 49,689 12 3     | 7,831                    | 7,539        | 15,370  |
| of railway correspond- of previous year ...        | 225                   | 78 15 0            | 907 0                            | 98 3 0        | 2 0 0                       | 177 2 0         | .....                    | .....        | .....   |
| corresponding date of year ...                     | (a) 911,281           | 3,46,439 9 6       | 34,01,054 8                      | 3,49,955 6 5  | 87,611 1 9                  | 7,78,028 1 8    | 121,704                  | 138,628      | 260,332 |

• Steam-boat earnings excluded in calculating "Total earnings per mile of railway."  
(a) Includes figures of Supplementary Traffic return.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tirhoot State Railway.*

| RECEIPTS FOR LAST 11 DAYS OF JUNE 1886. |                  |                      | RECEIPTS FOR LAST 12 DAYS OF JUNE 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH JUNE 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JUNE 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|---|------------------|----------------------|---|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                               | Per mile worked. | Mean mileage worked. | Receipts.                               | Per mile worked. | Mean mileage worked. | Total receipts.                                       | Per mile worked. | Mean mileage worked. | Total receipts.                                       | Per mile worked. | Mean mileage worked. |                         |                         |
| Rs.                                     | Rs.              |                      | Rs.                                     | Rs.              |                      | Rs.   | Rs.              |                      | Rs.   | Rs.              |                      | Rs.                     |                         |
| 48,680                                  | 198              | 249                  | 57,134                                  | 229              | 246                  | 4,48,127  | 1,822            | 24,821               | 4,73,740  | 1,909            | 25,013               | .....                   | .....                   |



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JULY 20, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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### RESOLUTION ON THE REPORT ON INLAND EMIGRATION FOR THE YEAR 1886.

#### GENERAL DEPARTMENT—INLAND EMIGRATION.

*Calcutta, the 18th July 1887.*

#### RESOLUTION.

READ—

The Report on Inland Emigration for the year 1886.

The report is submitted by Dr. Grant, who continued to hold the office of Superintendent of Inland Emigration during the year. The appointment of Medical Inspector of Emigrants was held by Dr. McConnell for the first six months, and by Dr. Chandra for the last six months of the year. Dr. Richards superintended emigration arrangements at Goalundo till the end of June 1886, when he was deputed to another station, and during the rest of the year the work of superintendence and medical inspection of emigrants at Goalundo was performed by the Sub-divisional Officer, Mr. Müller, and by Dr. Bose.

2. Arrangements were made during the year for the medical inspection of emigrants at Mugra, Jaipur Hât, Dhubri, Goalundo and Naraingunge, with a view to the removal and treatment of those who might be found to be suffering from cholera or

Administrative measures.

similar diseases. Instructions were issued to prevent these necessary examinations being made the occasion of undue detention. A revised scale of establishment was sanctioned for the office of the Embarkation Agent at Goalundo, whereby an annual saving of Rs. 240 has been effected. It has been arranged, since the close of the year, on a proposal made by the Chief Commissioner of Assam, that Station-Masters on the Eastern Bengal State Railway and Northern Bengal State Railway shall telegraph to the Embarkation Agent at Dhubri reports of cases of cholera occurring among passengers travelling by rail to that station.

3. A daily steamer service between Naraingunge, Cachar, and Sylhet was introduced on the 1st January 1887, and it is confidently hoped that employers will avail themselves freely of the facility which has been in this way afforded to emigration, and thus put an end to the excessive mortality from cholera, so prevalent among coolies in the long and tedious boat journeys up-stream.

4. In the Resolution upon last year's report, it was noticed that there existed a tendency towards the substitution of free emigration to the labour districts for recruitment under Act, I of 1882. This conclusion has been amply confirmed by the experience of the year 1886, in which only 13,069 labourers and their dependents were registered under the Act, as against 16,404 in 1885, and 31,157 in 1884. Three contractors worked throughout the year, against five in 1885 and six in 1884: 106 recruiters were employed, as against 147 in 1885 and 211 in 1884, and the recruiters registered on an average 27 emigrants, as against an average of 30 in 1885 and 33.55 in 1884. On the other hand, it appears that the number of free emigrants to Assam increased from 9,320 to 13,134: the number of free emigrants to Cachar and Sylhet is not known.

5. In recruiting under the Act, the tendency is to substitute the agency of garden sardars for that of contractors. The contractors, who formerly had in their hands by far the greater part of the business, engaged during the year 1886 only 2,945 coolies; the garden sardars as many as 10,124. The contractors work chiefly for the gardens of Sylhet and Cachar.

6. The Lieutenant-Governor notices with pleasure that it was not found necessary to cancel the license of any recruiter during the year. Of the garden sardars one was deprived of his license for misconduct, which consisted in engaging a married woman without the consent of her husband. Some licensed female recruiters were employed during the year, but apparently without much success.

7. The statement showing the districts from which emigrants come has, like some of the other tables attached to the report, lost most of its original value, inasmuch as it relates only to coolies recruited through contractors, who now form but a small fraction of the whole body. Some information as to the numbers recruited by garden sardars is given in the body of the report, but it is very incomplete. On the whole, however, it is clear that Hazaribagh, the Sonthal Pergunnahs, Monghyr, Bankura, Gya, and Midnapore are the chief recruiting grounds.

8. Dr. Grant is able to give complete particulars only as to the transport of emigrants registered by contractors, as the others travel independently. As in the preceding year, all the emigrants registered by contractors were brought in the first place to Calcutta, none going to Goalundo direct. Of the 2,945 persons registered during the year, 2,885 arrived in the Calcutta depôts, nine were discharged and 51 deserted. After the addition of 221 persons remaining from the previous year, and of two infants born in the depôts, the number lodged in the Calcutta depôts in 1886 was 3,108. Of these 2,422 departed for Goalundo, and 16 travelled by rail to Dhubri. The remainder were disposed of as follows:—Fifteen were rejected, 204 discharged, 265 deserted, 7 died, 138 remained in the depôts at the close of the year, and 41 were not accounted for by a contractor who closed his depôt. Of these last persons, Dr. Grant writes:—"It is probable that the coolies were allowed to leave the depôt to be engaged elsewhere, in order to avoid the payment to them of compensation, which would have been awarded them had they been discharged in the usual way with the knowledge and consent of the Superintendent of

#### Recruitment.

#### Districts of recruitment.

#### Transport.

Emigration." This irregularity should be borne in mind in the event of the contractor seeking a renewal of his license.

9. The following table compares the details of the diminution in number of the emigrants during their stay at the depôts with the corresponding particulars for 1885 :—

|                                    | YEAR.   |             |         |             |
|------------------------------------|---------|-------------|---------|-------------|
|                                    | 1885.   |             | 1886.   |             |
| Daily average strength ... ..      | 29.07   |             | 18.34   |             |
| Daily sick ... ..                  | 1.17    |             | 0.66    |             |
|                                    | Number. | Percentage. | Number. | Percentage. |
| Rejections, including relatives .. | 58      | 1.30        | 22      | 0.70        |
| Ditto, excluding relatives ...     | 32      | 0.72        | 15      | 0.48        |
| Discharges ... ..                  | 386     | 8.68        | 204     | 6.56        |
| Desertions ... ..                  | 274     | 6.16        | 265     | 8.52        |
| Deaths from cholera ... ..         | 5       | 0.11        | 1       | 0.03        |
| Total deaths from other causes ... | 9       | 0.20        | 6       | 0.19        |

10. The figures for 1886 compare favourably with those for the preceding year under every head except "Desertions," as to which the Superintendent observes :—

"As regards desertions, since coolies who abscond carry their reasons with them, it is of course impossible, except in the few instances where deserters return to depôt after having failed in obtaining employment elsewhere, to ascertain the causes of desertion; but especially in view of the small demand for contractors' coolies during the past year, it is not unlikely that most of the desertions were due to the desire for immediate employment, and consequent disinclination to wait in depôt for the chance of being selected by employers. All coolies who had completed their month's residence in depôt, and expressed a desire to leave, as they had not been found work, were, after payment to them of compensation, returned in the usual manner, at the expense of the contractor, to the place of registration."

11. The Lieutenant-Governor agrees with the Sanitary Commissioner in considering that the improved statistics of sickness and mortality show that the sanitary arrangements of the depôts are now better, and that the supervision is more close. Every person admitted into the depôts was vaccinated. With regard to rejections, Dr. Chandra points out in his report that, although the number is small, it might be still further reduced if greater strictness were observed in the medical inspection of emigrants before they are despatched from the recruiting districts. This observation is supported by the figures given on page 10 of Dr. Grant's report, which show that four emigrants after they had been accepted in the interior as fit were rejected in Calcutta for idiocy and one for double cataract. The attention of medical officers will be drawn to this subject.

12. In tracing the history of the contractors' coolies after their departure from Calcutta, it is satisfactory to find that there were no casualties on the journey to Goalundo, and only one death, that of a newly born infant, in the depôts at that station, which are said to have been exceptionally healthy. The number accommodated in these depôts was 2,433, of whom 847 were despatched to the Assam Valley, 1,219 to Cachar and 361 to Sylhet. Among the Assam emigrants three deaths (two from cholera) occurred during the steamer voyage to the tea districts, and on the boat journeys to Cachar and Sylhet 13 emigrants deserted and 18 died (14 from cholera).

13. Particulars of the journey of sardari emigrants are incomplete, since the way-bills were not always returned to the Superintendent, as they should have been. But from the information furnished, it is evident that the mortality among coolies of this class during their journey by boat to Sylhet and Cachar was, as in previous years, very great. Out of 4,624 persons accounted for in the way-bills, as many as 216 died from cholera, and 33 from other causes, the percentage of deaths being 5.38. Some information should have been given as to the stage of

the journey in which the mortality occurred, and it is requested that this may now be furnished in a supplementary report. The excessive mortality among the coolies taken by sardars in boats to Cachar and Sylhet has long been the great drawback to the system of emigration, and it is hoped that a change will be effected now that the India General Steam Navigation Company have established a line of steamers, by the aid of which a great part of the voyage can be accomplished without delay or risk. The table given on page 16 of Dr. Grant's report also shows that 42 of these emigrants deserted, and that 22 were left behind *en route*. These particulars have been ascertained in consequence of the return of a larger number of way-bills than in former years, and the Lieutenant-Governor desires that Dr. Grant will continue his efforts to effect a further improvement in this respect.

14. Of the engagements entered into by contractors' labourers, not quite 10 per cent. were for a term of five years, and the remainder were for three years. Of labourers recruited by garden sardars and placed on contract in the recruiting districts, nearly 43 per cent. were made for five years. On this subject Dr. Grant writes:—

"It seems reasonable to conclude that coolies, under the influence of garden sardars, in whom they would be likely to have more confidence than in contractors' recruiters, would show less reluctance to engaging for five years than contractors' coolies, and this result may, I think, be in great part attributed to that cause."

It is to be observed that of 8,682 contracts made before the Embarkation Agent at Dhubri during the year, only 348 or 4 per cent. were made for three years, and all the remainder for five years. It would thus appear that coolies generally contract for the shorter period when the engagement is made in their own district, for the longer term when it is concluded at the end of the journey from Bengal.

15. The Lieutenant-Governor tenders his thanks to Dr. Grant for his efficient supervision of inland emigration during the year.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

*Secretary to the Government of Bengal.*



ANNUAL REPORT ON THE POLICE ADMINISTRATION OF THE  
TOWN OF CALCUTTA AND ITS SUBURBS FOR THE  
YEAR 1886.

RESOLUTION.  
POLICE.

*Calcutta, the 16th July 1887.*

READ—

The Annual Report on the Police Administration of the Town of Calcutta and its Suburbs for the year 1886.

Read also—

The Annual Reports of the Chief Presidency Magistrate, and the Presidency Magistrate of the Northern Division, on the Criminal Administration of their Courts for the year 1886.

The Reports for the year 1885 and the orders of Government thereon.

The following comparative table shows the total number of cognizable and non-cognizable cases reported in the Town and Suburbs of Calcutta during the year 1886 and two preceding years:—

|                |                 |     | 1884.  | 1885.  | 1886.  |
|----------------|-----------------|-----|--------|--------|--------|
| Cognizable     | { Penal Code    | ... | 4,638  | 4,132  | 5,049  |
|                | { Miscellaneous | ... | 16,010 | 13,948 | 19,336 |
| Non-cognizable | { Penal Code    | ... | 12,248 | 9,692  | 8,538  |
|                | { Miscellaneous | ... | 18,692 | 19,999 | 21,017 |
| Total          |                 |     | 51,588 | 47,771 | 53,940 |

An increase of over 6,000 cases is at first sight a very formidable increase; but an examination of the figures in the appended returns for the two years shows that there has not been any real increase of crime. For instance, in the town, cases of grievous hurt have increased from 21 to 37, and house-breakings from 130 to 170, but, as a counterpoise, there were only 1,699 cases of theft and 138 of criminal and house-trespass against 1,858 and 186 respectively in 1885. The increase is to be looked for under the head of nuisances and one or two local or special Acts, as is manifest from the following figures:—

|  |     | 1885. | 1886. |
|--|-----|-------|-------|
| Offences under Stage Carriage Act  | ... | 1,161 | 1,823 |
| Cognizable public and local nuisances  | ... | 322   | 1,284 |
| Miscellaneous offences in streets under Act IV (B.C.), 1866, as amended by Act II (B.C.), 1886, sections 66, 68, 68A, 70 | ... | 4,604 | 7,956 |
| Cruelty to Animals Act I (B.C.), 1869  | ... | 2,829 | 3,389 |

As regards the last head, it is said that an increased agency for the detection of cases was employed by the Society for the Prevention of Cruelty to Animals; but the report does not explain the increased number of prosecutions under the Hackney Carriage Act. The increase under the head of public and local nuisances is no doubt in a great measure due to the opinion expressed by Sir Rivers Thompson in paragraph 7 of last year's Resolution, that cases of obstruction in the streets could be adequately dealt with under section 283 of the Penal Code. As regards miscellaneous offences in the streets, an amending Act was passed during the year empowering the police to arrest persons committing nuisances, found drunk, or guilty of riotous or indecent behaviour in the streets. Under Acts II and IV (B.C.) of 1866 the police had no such power. The new powers, which have always been exercised by the police in the mofussil, were much required, and appear to have been freely used. At the same time it is worthy of note that the number of non-cognizable nuisances under Chapter XIV of the Penal Code has decreased from 4,625 to 3,611. These offences comprise the adulteration of food and drugs, the sale of noxious food, the sale of any drug or medical preparation as a different drug or medical preparation, making the atmosphere noxious to health, negligence with regard to poisons, or machinery, or in pulling down buildings, and every kind of public nuisance not specially provided for. The Commissioner has made no serious attempt to give any reason for this large decrease of 1,000 cases. He merely remarks that "the decrease under the head of public nuisances occurred in consequence of the

amendment of the Police Act;" but it is obvious that the offences of drunkenness and riotous or indecent behaviour have no connection with the offences above enumerated. It is true that section 68A of the amending Act II (B. C.) of 1886, punishes the commission of ordinary nuisances in the streets, an offence which, prior to the passing of that Act, could only be dealt with under section 290 of the Penal Code; but Sir Steuart Bayley thinks it very unlikely that in 1885 the police could have applied for summonses under that section in as many as 1,000 cases. In the Government Resolution on the Report for 1884, the police were specially directed not to exceed their legal powers in this respect, and as a consequence the number of public nuisances fell from 6,469 in 1884 to 4,625 in 1885. A still further decrease of 1,000 cases requires some explanation, especially as there is reason to believe that some of the offences under the non-cognizable sections of Chapter XIV of the Penal Code, above enumerated, are of frequent commission. Complaints are not infrequently made in the vernacular newspapers of the sale of noxious articles of food, and many native gentlemen consider the adulteration of drugs and medicines to be so rife that they get all prescriptions made up by high class European chemists in spite of the comparatively high prices charged by them.

2. *Arrests and convictions in the Town and Suburbs.*—The number of persons arrested and summoned rose from 46,781 in 1885 to 54,309 in 1886. The number in 1884 was 54,888. The number of persons convicted was 46,815 against 39,600 in 1885. The percentage of convictions for cognizable offences under the Penal Code rose from 65 to 74, and under special and local laws from 93·54 to 94·22, while, as regards non-cognizable offences, there was a slight decrease in the ratio from 80·10 to 79·28. Out of 12,880 persons arrested for street offences, 12,090 were convicted, the increase being due to the amended Police Act referred to in the preceding paragraph. The increase in the number of convictions under the Hackney Carriage Act was 697, and under the Cruelty to Animals Act, 1,123. Out of a total of 11,219 Penal Code convictions in the Town and Suburbs, 6,314 persons were Hindus, 4,392 Mahomedans, 488 Christians, 15 Jains and Buddhists, and 8 Jews.

3. *False cases.*—There are said to have been only 130 false cases out of a total of 47,204 reported in the Town, and only 43 out of 6,736 reported in the Suburbs. In accordance with the orders contained in the Resolution on the Report for 1885, all complaints laid through a mistake of fact or law have been omitted from the returns. The Commissioner states that prosecutions were instituted in 82 cases; but, as was pointed out in last year's Resolution, it is incorrect and misleading to designate as prosecutions cases in which compensation is awarded to an accused person under section 552 of the Criminal Procedure Code. From the appended returns it appears that in the Town only 17 cases were instituted under the sections dealing with false evidence, false charges, and cognate offences, and process was issued in 43 only. The results were not satisfactory, 11 persons being acquitted and 2 convicted. The Commissioner has rightly omitted to insert in column 6 of Statement A, Part II, the cases which the Chief Magistrate reported to have been instituted of his own motion. From the particulars furnished by the latter, it is evident that prosecutions were not instituted under section 476, but that merely a sanction was given under section 195 of the Criminal Procedure Code. In the Suburbs there were 28 cases, 10 being instituted by the Magistrates *suo motu*; of 25 persons actually appearing before the Magistrates 13 were acquitted and 12 convicted. Again this year the Presidency Magistrates do not appear in a single instance to have availed themselves of the provisions of section 487 of the Criminal Procedure Code, which empowers them to try cases of false evidence, false charge, and other cognate offences committed before themselves. Sir Steuart Bayley requests that in future figures may be given in the body of the report distinguishing the number of actual *prosecutions* for false charges from those cases in which awards of compensation are made to accused persons. These figures have had to be ascertained, as last year, from the appended returns.

4. *Property stolen and recovered.*—The total value of the property stolen in Town and Suburbs rose from Rs. 97,504 to Rs. 1,19,249, while the percentage recovered rose from 49·65 to 51·83, almost the same percentage as in

1883, the figures for 1884 being abnormal for the reason stated in last year's Resolution.

5. *Ratio of cognizable crime to area and population.*—The ratio of cognizable crime to area and population in the Town and Suburbs was as follows:—

|         | Area in square miles. | Population. | Proportion of true crime to each square mile. | Proportion of crime to population. |
|---------|-----------------------|-------------|---|------------------------------------|
| Town    | 7.8                   | 433,219     | 2,606.66                                      | 1 to 21.39                         |
| Suburbs | 23                    | 251,439     | 170.61  | 1 to 61.06                         |

In this table cases under special and local laws, as well as under the Penal Code, are taken into account. Taking into computation only Penal Code offences, the ratio of criminality falls in the Town to 1 to 112.41, and in the Suburbs to 1 to 230.80. This difference would be very striking but for the fact that large portions of the Suburbs are more rural than urban. The number of cases not inquired into under section 157 of the Criminal Procedure Code was 326 against 219 in 1885. The Lieutenant-Governor does not consider this increase to call for any special remark.

6. *Cognizable crime in the Town.*—The following statement shows the number of true cognizable cases reported within the Town during the last three years:—

| Crime.  | 1884.  | 1885.  | 1886.  |
|---|--------|--------|--------|
| Abatement of offence not committed                            | .....  | 1      | .....  |
| Class I. Offences against the State, public tranquillity, &c. | 32     | 37     | 43     |
| .. II. Serious offences against the person                    | 223    | 167    | 186    |
| .. III. Serious offences against person and property          | 162    | 139    | 190    |
| .. IV. Minor offences against the person                      | 69     | 40     | 50     |
| .. V. Minor offences against person and property              | 2,309  | 2,156  | 2,085  |
| .. VI. Other offences not specified above                     | 2,020  | 1,855  | 3,419  |
| Special and local laws  | 12,389 | 10,391 | 14,359 |
| Total   | 17,204 | 14,786 | 20,332 |

The large increase under class VI and under special and local laws has already been sufficiently explained. The most satisfactory feature is perhaps that there were only two murders against five in 1885, and an average of six during the last five years. In one of these murders no clue could be obtained, though a reward of Rs. 500 was offered. The other was a case in which a low caste Mahomedan hacked his wife to pieces with a *dao*, because she objected to his intimacy with his son's mistress. He was executed. There were two cases of culpable homicide against four in 1885, and only one case of rape against an average of seven in the five preceding years. Other offences against the person do not call for any special remarks.

As regards offences against property, cases of house-breaking (including lurking house-trespass) increased from 146 to 193, the number in 1884 being 160. As many as 107 cases were detected, the ratio of detection thus rising from 49.31 to 55.95. The large majority of the house-breakings were of a petty character, as many as 53 having occurred during the day. Of the houses broken into 99 were *kutcha* and 67 *pucca*. The cases reported are in the ratio of 1 to 2,244 of the population; in 1884-85 the ratio of similar offences in England and Wales was 1 to every 10,310 of the population, but rose to 1 to 2,016 in the metropolis. It must be borne in mind that, owing to the number of *kutcha* houses, a burglary in India is in very many instances little more than a theft. Numbers of houses have no proper doors or fastenings, and a petty thief, who enters a mud hut by untying the string of an enclosing *jhump*, or a mat hut by cutting a hole in it, is classed in the returns as a burglar. Having regard to the very different circumstances of Calcutta and an English town, Sir Stuart Bayley agrees with the Commissioner that Calcutta is remarkably free from serious cases of house-breaking, and this fact shows that the ward and watch of the Town are kept up in an efficient manner.

The number of thefts was 1,607 against 1,640 in 1885 and 1,790 in 1884 while the cases detected increased from 772 to 856, and persons convicted from 831 to 930. These figures are satisfactory. There were 290 cases of criminal breach of trust against 261 in 1885. The persons convicted included 15 carters and 45 manjhees. As the Commissioner remarks, the police have little control over the evidence in these cases, restitution being frequently made out of court.

There were 96 cases under the Gambling Act against 65 in 1885, and an average of 78 during the five preceding years. Under the Stage Carriage Act there were 1,816 cases and 1,665 convictions, against 1,154 cases and 1,031 convictions in 1885. This increased activity of prosecution has not been explained. Sir Stuart Bayley is informed that there have been more prosecutions owing to the persistent disregard of the rule of the road shown by drivers, and especially drivers of bullock-carts, but such cases appear to fall under section 66<sup>(s)</sup> of the Police Act, and not under the Hackney Carriage Act. No details of any sort are given, and Sir Stuart Bayley would like to know whether any of these prosecutions were under section 29 of the Act for omission to put up the table of fares, in English, Urdu, and Bengali, inside the carriage. This direction of the law is frequently disregarded altogether, and it is important that this direction of the law should be enforced in the interests of strangers and others visiting the town. Cases under the Police Act (street offences) rose from 4,604 to 7,956, the cause of which has been explained above. 98·87 per cent. of the persons placed before the Magistrates were convicted. The increase in the number of cases under the Shipping Acts was natural, as during the year 621 steamers and 425 sailing ships entered the port against 574 steamers and 389 sailing vessels in 1885. There were 5,820 convictions under the Act for the Prevention of Cruelty to Animals against 5,069 in 1885. Only 30 persons were discharged by the Magistrate. The Society is to be congratulated on the results of its increased exertions and employment of a larger number of agents.

7. *Cognizable crime in the Suburbs.*—The following is a comparative statement of true cognizable crime during the past three years:—

| Crime.                                     |     | 1884. | 1885. | 1886.  |
|--|-----|-------|-------|--------|
| Class I.—Offences against the State, &c.   | ... | 7     | 16    | 27     |
| .. II.—Serious offences against the person | ... | 98    | 88    | 62     |
| .. III.—Ditto ditto person and property    | ... | 95    | 96    | 115    |
| .. IV.—Minor offences against the person   | ... | 23    | 23    | 35     |
| .. V.—Ditto ditto property                 | ... | 706   | 617   | 658    |
| .. VI.—Other offences not specified above  | ... | 641   | 678   | 787    |
| Special and local laws                     | ... | 1,401 | 1,450 | 2,241  |
| Total                                      | ... | 2,971 | 2,998 | 3,925. |

The increase of 927 cases occurred mainly under the head of Street offences punishable under the amended Police Act. The most significant feature in the returns is that there were no cases of murder, attempts at murder, or rape, and only one case of culpable homicide. Cases of grievous hurt decreased from 25 to 17, and there was only one case of highway robbery: cases of house-breaking (including cases of lurking house-trespass) have exhibited a steady increase during the past five years—56 in 1882, 101 in 1884, and 125 in 1886. This fact is attributed to the increasing numbers of coolies employed at the railway and dock-works in the Suburbs. The ratio of detections and convictions rose from 30·89 and 75·00 in 1885 to 39·20 and 84·21 in 1886. Of the buildings broken into only 20 were *pucca* and 74 *kutchas*; 17 were entered during the day and 77 by night. The number of thefts was 454 against an average of 445 during the past five years.

8. *Non-cognizable crime in the Town.*—The number of non-cognizable offences reported in the Town was 26,759 against 27,256 in 1885. There were 19 cases of forgery against 12 in 1885. One of these cases was characterized by a remarkable amount of daring in the offender, Gopal Chunder Dutt, the medical attendant of the Rajah of Mymensingh. The Rajah was anxious to obtain the privilege of exemption from personal attendance in the Civil Courts, and Gopal Chunder Dutt succeeded in cheating him out of Rs. 5,500 by presenting him with forged documents purporting to have been written by the Private Secretary to the Lieutenant-Governor and the Secretary of State for India. In another case a notorious gang of swindlers were sentenced to

terms of imprisonment ranging from three months to seven years for cheating the Assistant Secretary to the Maharajah of Tipperah to the extent of Rs. 5,000. There were 430 miscellaneous proceedings under the Code of Criminal Procedure, 413 being under Chapter XXXVI (Maintenance) and 17 under Chapter VIII (Security for keeping the peace or for good behaviour). There were no cases under Chapters IX or XXXV; Chapters X, XI, XII do not apply to the Town of Calcutta. There was one important case under the Post Office Act, in which some registered postal bags were stolen from the General Post Office. The accused, Chuttoo Kahar, was sentenced to five years' rigorous imprisonment.

9. *Non-cognizable crime in the Suburbs.*—The number of offences under this head increased from 2,435 to 2,796, the increase being almost entirely in conservancy prosecutions.

10. *Suicides.*—The number of persons who committed suicide in the Town and Suburbs was 71 against 54 in the preceding year, 56 being Hindus, 11 Mahomedans and 4 Christians (all men). The preponderance of Hindus is striking, as the number of Hindus is not much more than double that of Mahomedans. The favourite methods of suicide were hanging (29 persons) and opium (23). The number of accidental deaths was 275 against 247 in 1885. As many as 111 were from drowning, 38 were caused by falls from trees and buildings, 26 persons were run over by carriages and horses, and 91 were due to other causes not specified. 163 drivers of either public or private carriages were prosecuted for rash and furious driving, and 145 were convicted. Eight servants of the Tramway Company were prosecuted, but only one man was fined.

11. *Arms Act.*—The importation of fire-arms increased from 1,109 to 1,205, no fewer than 1,031 being imported by European firms. There was a considerable increase in the inland transport of arms and ammunition from Calcutta. The number of weapons sold by licensed dealers in Calcutta was 3,929 against 2,889 in the previous year. Of these 2,207 were guns of native manufacture imported from Monghyr.

12. *European Vagrancy Act.*—Forty-five persons were admitted to the Workhouse under section 5 of the Act. Three persons were deported under section 17 of the Act to Melbourne, London and Sydney. One was a tea-taster by profession, another a medical practitioner, and the third a jockey. Cases have come before the Lieutenant-Governor, from which it appears that men have been declared vagrants and sent to the Workhouse three or four times. Section 30 of the Act declares that, when a European British subject has been once declared a vagrant, or has been convicted under section 22 or section 23, he shall be subject, beyond the limits of the Presidency towns, to the provisions of sections 109 and 110 of the Code of Criminal Procedure. There is reason to believe that vagrants are not infrequently sent to Calcutta by mofussil Magistrates, and their attention will be drawn to the above section. If, on inquiry from the Commissioner of Police, they find that a man has been once declared a vagrant, they will be at liberty, if they think proper in the particular case, to deal with him under the provisions of the Criminal Procedure Code.

13. *Fire-Brigade Act.*—Twelve fires occurred in the Town and River, ten in the Suburbs, and fifteen in Howrah, resulting in a loss of property estimated at Rs. 1,75,750. The most serious fire was that in which a range of jute godowns in Nimtollah Ghat Street was burnt down. In the river the ship *J. W. Parker*, laden with jute and shell-lac, was burnt, the loss being estimated at Rs. 1,00,000. This fire was attended with the loss of one life.

14. *Strength and cost of the Police.*—The total cost of the Police in the Town was Rs. 4,74,544 against Rs. 4,59,344 in the previous year, and that of the Suburban Police was Rs. 1,62,187 against Rs. 1,53,810. The cost of the River Police was Rs. 31,140, of Government guards Rs. 46,176, and of additional constables Rs. 33,184. The cost of the Town Police was met as follows:—

|                                  | Rs. |     |     |          |
|----------------------------------|-----|-----|-----|----------|
| Paid by Calcutta Municipality... | ... | ... | ... | 3,07,586 |
| Government contribution ...      | ... | ... | ... | 1,02,528 |
| Fees and fines ...               | ... | ... | ... | 64,430   |

The increased expenditure, both in the Town and Suburbs, was mainly due to repairs of buildings.

15. *The Police Force.*—The number of up-countrymen in the force was 1,907, while there were only 189 Bengalis, the number having again fallen from 219 in 1885. The reason for the paucity of Bengalis is the same as that given in former reports, namely, that they do not care to undergo the fatigue, exposure, and severe discipline which police duty entails. The casualties in the force amounted to 375 or 12·14 per cent. against 10·88 per cent. in the previous year. Only 13 members were punished judicially against 33 in 1885. 102 men were dismissed against 54 in 1885 and 114 in 1884; only eight men deserted against an average of 22 in the five preceding years. There were 29 recorded deaths, giving a death-rate of only 9·39 per thousand; but these figures show only the number who die in hospital. It is said that a large number, who do not recover in hospital, go home on sick leave and die in their own country. The difficulty which the Commissioner states is experienced in getting good recruits is a serious matter. It is said that many new hands, after a few months' service, resign in order to take up such posts as durwans, in which they have an easy time and little or no responsibility. Owing to the increasing demand for labour in Calcutta and the higher wages given, it will no doubt be extremely difficult to maintain the force in its present state of efficiency, unless the pay of the constables is raised.

16. *Miscellaneous.*—During the year 115 certificates were granted for hotels and shops for the sale of excisable articles in the Town, and 39 in the Suburbs. Besides the above, licenses for 55 native eating-houses in the Town, and 14 in the Suburbs, were granted under orders of Government issued in October last. The form for licenses approved by Government in 1866 fixed the opening and closing hours at 5 A.M. and 10 P.M. respectively. The Commissioner asked that the closing hour might be extended to 2 A.M. Sir Rivers Thompson, while according his sanction, expressed his opinion that the hour was a very late one, and might be susceptible of some reduction. The Commissioner should now report whether it is necessary that these eating-houses should remain open so late as 2 A.M. In 1885 there was some discussion between the Police and the Excise Department as to the closing-hour for hotels, and it was then decided that late-closing licenses might be given up till 2 A.M., but that no music, dancing, or other entertainment should be allowed without the special permission of the Commissioner of Police. The chief cause of complaint on the part of the police was that their duties were seriously enhanced by their being kept up till late hours, and that premises licensed as hotels were converted into drinking-saloons, music, and dancing halls, in which a good deal of disorder prevailed. It should have been stated in the present report whether the additional condition for the police certificate granted under section 37 of Act IV (B.C.) of 1866 has enabled the police to exercise an adequate control over those places of entertainment, and whether, as a matter of fact, they are conducted in an orderly and proper manner. This is a matter of police regulation, and as such should have been alluded to in a report dealing with the police. 1,219 licenses for musical processions were granted during the year. Property to the value of Rs. 20,077 was picked up and brought to the Police Office, and of this 72·29 per cent. was restored to the owners.

17. *Old offenders.*—311 previously-convicted offenders were again convicted during the past year—19 by the Court of Sessions, and 292 by Magistrates. Of these, 61 persons had been convicted more than three times. The number of old offenders re-convicted in the Suburbs was 65. 131 notorious offenders were photographed on their release from jail, and their names registered by the Detective Department.

18. *Judicial work.*—13,583 cases were instituted in the Northern Division, 11,865 in the Southern Division, and 19,903 before the Bench of Presidency Magistrates. The corresponding figures in 1885 were 10,171, 11,051, and 19,131.

Of 44,904 persons appearing before the Courts, 40,263 were convicted and 4,547 acquitted. The ratio of convictions in cognizable cases was 94·76 in the Northern Court, 92·77 in the Southern Court, and only 62·05 in the Bench Courts; the corresponding figures in non-cognizable cases (excluding conservancy prosecutions) being 77·54, 79·62, and 51·90. The total amount of fines imposed in the Southern Division was Rs. 35,187-9-9, of which

Rs. 32,061-9-9 was realised; the corresponding figures in the Northern Division were Rs. 27,020-7 and Rs. 24,456-11. Sentences of whipping were passed on 79 persons, and eight juvenile offenders were sent to the Alipore Reformatory.

19. *Benches*.—The Chief Magistrate has again to animadvert on the infrequent and irregular attendance of many of the Honorary Magistrates. On this point he remarks: "The Benches of Honorary Magistrates have during the past year got through an appreciable amount of solid work; at the same time I think it desirable to suggest that the work so rendered would be more effective and of larger benefit to the public if performed with a more consistent regard for the duties and responsibilities which are entailed upon the office of a Magistrate." Mr. Reily points out the difficulty he has had to contend with in constituting the Benches and arranging for the work. It seems that requests to give early intimation of inability to attend are sometimes not complied with, and it often happens that, on the day fixed, only one of the three Magistrates invited is present. Sometimes one of the Magistrates appears more than an hour after the appointed time, and thus late sittings necessitate ~~more~~ frequent adjournments, thereby causing additional expense and trouble to the parties concerned. These evils are occasionally enhanced by the tendency to break up the sitting of a bench too early, before getting through the day's file of cases. The Chief Magistrate even states that he has occasionally been compelled to send out one of the assistants of his office charged with a sort of roving commission to entreat one or more of the Magistrates named in the list furnished to him to attend the Court. This "searching in highways and bye-ways" is by no means a creditable feature of the Bench administration in Calcutta. At the same time the Chief Magistrate bears testimony to the cheerful alacrity with which many of the Honorary Magistrates take their share of the work, and to the readiness evinced by a few others to attend the Court on the shortest notice, often at considerable inconvenience to themselves. Sir Stuart Bayley has carefully perused the list of attendance of Honorary Magistrates, and observes with satisfaction that eleven gentlemen have attended Bench sittings twice a month and oftener, one having attended on an average once a week. He desires to thank these gentlemen for the assistance rendered by them to the administration of justice.

25. *Personnel of the Force*.—Sir H. Harrison was Commissioner throughout the year, while the office of Deputy Commissioner was held successively by Mr. J. Lambert, the late Mr. Hugh Wilkins, Mr. A. B. Barnard, and Colonel Wilkinson. The names of the Superintendents and other subordinate officers favourably mentioned have been noted.

ORDER.—Ordered that copies of this Resolution be forwarded to the Commissioner of Police, Calcutta, for information and for communication to the Presidency Magistrates, and to the Commissioner of the Presidency Division, for information.

Ordered also that a copy of this Resolution be published in the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

*Offg. Chief Secretary to the Govt. of Bengal.*



NET GRANTS TO GOVERNMENT SCHOOLS IN BENGAL.

GENERAL DEPARTMENT—EDUCATION.

Calcutta, the 16th June 1887.

RESOLUTION.

READ—

Correspondence from 1868 to 1877 on the subject of net grants to Government schools in the Lower Provinces.

Letter No. 2139, dated the 26th March 1886, from the Officiating Director of Public Instruction.

Report, of the Committee appointed under Government orders Nos. 95-97T—G, dated the 30th April 1886, to revise the assignments to net grant schools.

Letter No. 636T—G, dated the 27th August 1886, to the Director of Public Instruction.

Letter No. 7747, dated the 8th December 1886, from the Director of Public Instruction.

Letter No. 302, dated the 18th April 1887, to the Director of Public Instruction.

Letter No. 3072, dated the 3rd May 1887, from the Director of Public Instruction.

The Government of India, in a Resolution dated the 31st December 1868, directed that higher class Government schools should be divided into classes with a fixed scale of charges; that each class of schools should be allowed an assignment for a fixed term, on condition that a certain local income was realised, the Government assignment being carefully revised at the expiration of the term fixed; and that any surplus produced by local receipts should be recognized as assets belonging to the school. With reference to these orders, a Committee was appointed in 1872 to report on the amount of the grants which should be given to the different zillah schools. On proposals made by this Committee, and approved by Government, all collegiate and zillah schools were classified, a net grant was assigned to each for a period of five years, and it was provided that the unexpended balance at the end of each year should not lapse to Government, but

\* For reasons stated in paragraph 18 of the Report of the Committee of 1886, the Revising Committee of 1877 did not take cognizance of the Hindu and Hare Schools. The increase of six schools since 1877 is thus explained—

| Schools added since 1877. | Schools which have ceased to be Government Schools. |
|---------------------------|---|
| Palanow.                  | Howrah.   |
| Julpigoree.               | Hindu.  |
| Patna City.               | Hare.   |
| Taki.                     |   |
| Khulna.                   |   |
| Darjeeling Middle         |   |
| English.                  |   |
| Chittagong Collegiate.    |   |
| Midnapore ditto.          |   |
| Rajshahye ditto.          |   |

should be re-granted to the school in addition to the fixed annual grant. In 1877 the net grants were revised. The Revising Committee adopted, as a principle of revision, the rule that the existence of a large surplus balance at the credit of any school should be a reason for reducing the Government grant; and by the orders of Government approving the revision, the total annual expenditure on net grants was reduced from Rs. 1,05,171 to Rs. 98,271. The grants sanctioned in 1877 have never undergone formal revision, but the aggregate amount has by degrees increased to Rs. 1,15,138, partly on account of the establishment of new schools\*, and partly owing to the introduction of the system of granting periodical increments to the salaries of teachers.

2. Revision of the net grants.

Accordingly, in May 1886, a Committee, consisting of the gentlemen named in the margin, was appointed for the purpose of revising the assignments to net grant schools. The report

received from the Committee was considered by the Lieutenant-Governor in August last but the issue of final orders upon the subject has been postponed on account of the uncertainty which existed as to the amount of the funds which would be available in future years for the purpose of assisting secondary education.

MEMBERS OF THE COMMITTEE.  
Mukerji  
Bahadur.



3. The first recommendation made by the Committee is that the system of contract contingencies should not be maintained in schools supported by net grants. In this view the Lieutenant-Governor entirely agrees, and in fact the contract system was withdrawn from all net grant schools under orders conveyed in Financial Department's letter No. 921T—F, dated 22nd June 1886.

4. The Committee proceed to consider the best method of reconciling the system of fixed net grants with the existence of a graded service, in which salaries rise by periodical increments independently of the financial condition of the school in which the increase takes place. They recommend that net grants should be fixed for three years an estimate of the average expenditure of those years, prospective increments being taken into account. The Lieutenant-Governor accepts this recommendation, subject to the qualification stated by Sir Alfred Croft in paragraph 7 of his letter of the 8th December 1886 that the Director shall continue to have a discretionary power with regard to increase of allotments.

5. The next proposal of the Committee (paragraph 11) is that minimum rates of fees in net grant schools should be fixed as follows—

*For schools on an English basis.*

|                            |     |     |     | A month. |    |    |
|----------------------------|-----|-----|-----|----------|----|----|
|                            |     |     |     | Rs.      | A. | P. |
| First and second classes   | ... | ... | ..  | 2        | 8  | 0  |
| Third and fourth „         | ... | ... | ..  | 2        | 0  | 0  |
| Fifth class                | ... | ... | ..  | 1        | 8  | 0  |
| Sixth „                    | ... | ... | ..  | 1        | 4  | 0  |
| Seventh and eighth classes | ... | ... | ..  | 1        | 0  | 0  |
| Ninth class                | ... | ... | ... | 0        | 12 | 0  |

*For schools on a Vernacular basis.*

|                          |     |     |     | A month. |    |    |
|--------------------------|-----|-----|-----|----------|----|----|
|                          |     |     |     | Rs.      | A. | P. |
| First and second classes | ... | ... | ... | 2        | 8  | 0  |
| Third and fourth „       | ... | ... | ... | 2        | 0  | 0  |
| Fifth and sixth „        | ... | ... | ... | 1        | 4  | 0  |
| Seventh and eighth „     | ... | ... | ... | 0        | 12 | 0  |
| Ninth and tenth „        | ... | ... | ... | 0        | 8  | 0  |
| Eleventh class           | ... | ... | ... | 0        | 4  | 0  |

Sir Alfred Croft, in supporting this proposal, remarks that the fees shown above are at present exceeded in many schools in advanced localities. He also notices that the suggestion is in full accordance with the recommendations of the Education Commission. The Lieutenant-Governor sanctions the scale of fees proposed on the understanding that it shows only minimum rates.

6. The Committee proceed to recommend that, when the standard scale of fees is adopted, School Committees should be allowed to make additions to their school buildings, except where there is a probability of the establishment in the locality of private institutions. In this connection the Committee refer to the Bengal Government letter, dated 28th October 1871, in which mention is made of additions to school buildings as a proper mode of utilising surplus balances. The orders now in force on this subject are contained in the following extract from paragraph 12 of the Resolution on the Report of the Director of Public Instruction for 1881-82 :—

“ Mr. Rivers Thompson is of opinion that the growing demand for English learning should not be met by indefinite extensions of the accommodation now afforded by zillah schools, but that endeavours should be made by limiting the numbers admitted to those schools, to give free play to the efforts of private enterprise, and to the healthy spirit of competition which it engenders \* \* \*. He would have it understood that he is not disposed to view with favour any extension of existing accommodation in Government high schools, unless there be no probability that in the particular locality private enterprise will not supply what is wanted.”

The Lieutenant-Governor does not consider it necessary to alter the rule here laid down.

7. The subject of contributions to schools by municipalities is under consideration, and will not be dealt with in this Resolution.

8. The financial result of the Committee's revision of the net grants of schools is as follows :—

|                                      | Existing<br>allotment.<br>Rs. | Revised<br>allotment.<br>Rs. |
|--------------------------------------|-------------------------------|------------------------------|
| Zillah schools ... ..                | 75,588                        | 71,700                       |
| Collegiate and branch schools ... .. | 39,850                        | 36,270                       |
| Total ... ..                         | 1,15,438                      | 1,08,030                     |

In addition to the reduction made by the Committee, the Director of Public Instruction has suggested further economies in the net grants amounting to Rs. 2,890. Against the reduction of Rs. 10,298 must be set the sum of Rs. 3,600 to remain in the Director's hands for increasing net grants in special cases. The whole saving therefore amounts to Rs. 6,698, which has been

\* The Midnapore School will receive a grant-in-aid of Rs. 1,000 per annum debitable to the grant-in-aid allotment.

increased by Rs. 7,500\* by the recent transfers of the Midnapore and Berhampore Collegiate Schools to local management. The revision sanctioned by the Lieutenant-Governor is shown in the statement

appended to this Resolution. The grants made will run for three years from 1st April 1887, but they may be revised within that period to the extent of any contributions which may be made by municipalities.

9. In paragraphs 17 to 19 the Committee make proposals with regard to the Howrah, Hindu, and Hare Schools. No net grant has been proposed for the Howrah School, and upon this subject further information will be obtained from the Director of Public Instruction, as it is not clear how the institution can be maintained without assistance. With regard to the Hindu and Hare Schools which now together cost Government Rs. 6,000 a year, the Committee suggest (1) that the establishment should be reduced; (2) that the prize allowance should be cut down from Rs. 400 to Rs. 200 a year; (3) that the fee rates in the higher classes of the Hare School should be raised to Rs. 5 a month, so as to correspond with those in force in the Hindu School; and (4) that, if possible, the two institutions should be placed under one head-master as soon as such an arrangement can conveniently be carried out. Sir Alfred Croft considers the first three proposals just stated to be sound, and the Lieutenant-Governor, agreeing with the Director, desires that they be carried out. Sir Alfred Croft does not think that it would be possible to carry out the last proposal that the two schools should be placed under one head-master, and the Lieutenant-Governor concurs in this view.

10. With reference to the remarks made by the Committee in paragraph 23 of their report on the check exercised over the accounts of net grant schools, the Lieutenant-Governor accepts the Director's explanations to the effect that the checks are in fact sufficient.

11. Sir Steuart Bayley desires that the thanks of Government may be conveyed to the members of the Committee for their careful report.

ORDER.—Ordered that a copy of this Resolution be forwarded to the Director of Public Instruction for information and guidance, and for favour of the report called for above regarding the Howrah School.

Ordered also that a copy be forwarded to the Finance and Commerce and Home Departments of the Government of India, and to the Accountant-General, Bengal, and Financial Department of this Office, for information.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

*Secretary to the Govt. of Bengal.*

The following statement shows the existing and revised grants :—

Table of grants for Zillah Schools.

| Circles.                    | Schools.                                 | Present grant. | Proposed grant. | Increase. | Decrease. |
|-----------------------------|--|----------------|-----------------|-----------|-----------|
|                             | CLASS I (300 PUPILS AND UPWARDS).        | Rs.            | Rs.             | Rs.       | Rs.       |
| Presidency                  | Baraset                                  | 1,920          | 1,800           | .....     | 120       |
|                             | Jessore                                  | 2,400          | 2,100           | .....     | 300       |
| Western                     | Beerbhoom                                | 2,100          | 2,100           | .....     | .....     |
|                             | Utterparah                               | 1,200          | 1,200           | .....     | .....     |
| Rajshahye                   | Rangpore                                 | 1,800          | 1,800           | .....     | .....     |
|                             | Mymensingh                               | 1,800          | 2,100           | 300       | .....     |
| Eastern                     | Barisal                                  | 2,100          | 2,100           | .....     | .....     |
|                             | Cominillah                               | 2,100          | 1,200           | .....     | 900       |
|                             | Noakhally                                | 2,400          | 1,500           | .....     | 900       |
|                             | Arrah                                    | 1,800          | 1,800           | .....     | .....     |
|                             | Chhapra                                  | 1,428          | 1,200           | .....     | 228       |
| Behar                       | Patna City                               | 3,000          | 3,000           | .....     | .....     |
|                             | Gya                                      | 2,100          | 600             | .....     | 1,500     |
|                             | Bhagulpore                               | 3,000          | 1,800           | .....     | 1,200     |
|                             | Monghyr                                  | 1,800          | .....           | .....     | 1,800     |
|                             | CLASS II (175 AND LESS THAN 300 PUPILS). |                |                 |           |           |
| Presidency                  | Barrackpore                              | 1,320          | 1,200           | .....     | 120       |
|                             | Taki                                     | 1,080          | 1,200           | 120       | .....     |
|                             | Khoolna                                  | 1,800          | 1,800           | .....     | .....     |
| Western                     | Howrah                                   | .....          | .....           | .....     | .....     |
|                             | Bankoora                                 | 2,100          | 2,100           | .....     | .....     |
|                             | Pubna                                    | 2,400          | 1,500           | .....     | 900       |
| Rajshahye                   | Bogra                                    | 3,000          | 1,800           | .....     | 1,200     |
|                             | Dinagpur                                 | 2,100          | 1,920           | .....     | 180       |
|                             | Jalpigoree                               | 2,400          | 2,400           | .....     | .....     |
| Eastern                     | Furzedpur                                | 2,100          | 1,800           | .....     | 300       |
| Behar                       | Mozufferpur                              | 2,100          | 2,100           | .....     | .....     |
| Presidency (Chutia Nagpur). | Ranchi                                   | 2,400          | 2,100           | .....     | 300       |
|                             | Puruleah                                 | 2,100          | 2,100           | .....     | .....     |
| Western (Orissa)            | Balasore                                 | 2,100          | 2,100           | .....     | .....     |
|                             | CLASS III (UNDER 175 PUPILS).            |                |                 |           |           |
| Behar                       | Motihari                                 | 2,400          | 2,400           | .....     | .....     |
|                             | Dumka                                    | 1,800          | 2,400           | 600       | .....     |
|                             | Maldah                                   | 1,400          | 2,100           | 700       | .....     |
|                             | Purneah                                  | 2,400          | 2,700           | 300       | .....     |
|                             | Palamow                                  | 1,800          | 1,800           | .....     | .....     |
| Presidency (Chutia Nagpur.) | Hazaribagh                               | 2,100          | 2,100           | .....     | .....     |
|                             | Chybassa                                 | 2,340          | 3,000           | 660       | .....     |
| Western (Orissa)            | Pooree                                   | 2,400          | 3,000           | 600       | .....     |
| Rajshahye                   | Darjeeling M.E.                          | 1,000          | 1,320           | 320       | .....     |
|                             |  | 75,588         | 69,240          | 3,600     | 9         |

Table of grants for Branch and Collegiate Schools.

| SCHOOLS.           | Present grant. | Proposed grant. | Increase. | Decrease. |
|--------------------|----------------|-----------------|-----------|-----------|
|                    | Rs.            | Rs.             | Rs.       | Rs.       |
| Hindu              | .....          | .....           | .....     | .....     |
| Hare               | .....          | .....           | .....     | .....     |
| Hooghly Branch     | 1,200          | 600             | .....     | 600       |
| Hooghly Collegiate | 6,750          | 5,400           | .....     | 1,350     |
| Krishnaghur ditto  | 5,050          | 4,200           | .....     | 850       |
| Dacca ditto        | 6,150          | 4,300           | .....     | 1,850     |
| Chittagong ditto   | 2,000          | 2,000           | .....     | .....     |
| Cuttack ditto      | 3,000          | 3,000           | .....     | .....     |
| Midnapur ditto     | 1,000          | 1,000           | .....     | .....     |
| Berhampur ditto    | 5,050          | .....           | .....     | 5,050     |
| Patna              | 7,250          | 6,600           | .....     | 650       |
| Rajshahye          | 2,400          | 2,400           | .....     | .....     |
|                    | 38,650         | 28,800          | .....     | 9,850     |

**REPORT ON THE WORKING OF THE LICENSED WAREHOUSE AND  
FIRE-BRIGADE ACT, 1883, IN THE TOWN OF CALCUTTA FOR THE  
YEAR 1886-87.**

*The 16th July 1887.*—The following report is published for general information.

COLMAN MACAULAY,

*Secretary to the Government of Bengal.*

No. 13, dated Calcutta, the 29th June 1887.

From—H. J. S. Corron, Esq., c.s., Offg. Chairman of the Corporation of the Town of Calcutta.

To—The Secretary to the Government of Bengal, Municipal Department.

I HAVE the honour to submit the following report, under section 30 of Act IV (B.C.) of 1883, of the jute screw and warehouses in the Town of Calcutta for the year ended 31st March 1887.

2. At the close of last year, there were 71 sanctioned warehouses on the register within the limits of the town. Of these, the licenses of two warehouses were cancelled during the year for default of payment of license fees, viz. (1) for Nos. 178 to 178-4, Upper Chitpore Road, and 2 to 2-2, Ramkanto Bose's Street, and (2) for Nos. 193, Durmahatta Street, and 55 Strand, thus reducing the number at the end of the year to 69, of which a complete list arranged according to the Acts under which they were originally licensed is appended to this report.

3. Three applications were received during the year—(1) from the Managing Agent, India Pressing Company, Limited, asking sanction to construct six jute godowns on land No. 58, Nimitollah Ghât Street; (2) from Baboo Suroop Chunder Roy, requesting a license to use the existing godowns at No. 135, Durmahatta Street, as a jute warehouse; and (3) from Baboo Mothoora Mohun Roy, soliciting license for storing jute in the newly-built godowns at No. 13-5, Hurro Chunder Mullick's Street. Of these three applications, (1) was sanctioned at the special meeting held on the 30th September 1886, and (2) and (3) were under consideration at the close of the year.

4. The license fees realized during the year from these 69 warehouses amounted to Rs. 21,250, or Rs. 1,237-8 less than last year. This falling off is owing to the assessments of some of the warehouses having been reduced, and the owners of two warehouses not having renewed their licenses.

5. During last year there was no case of fire, nor any infringement of the Jute Act on the part of the licensees.

6. The subjoined statement will show the receipts and disbursements of the Jute Warehouse Fund during the year under review.

*Abstract Account of Receipts and Disbursements of the Jute Warehouse Fund*  
Dr. Ch.  
*for 1886-87.*

|                                 | Rs.    | A. | P. | Rs.    | A. | P. |                                 | Rs.    | A. | P. | Rs.    | A. | P. |
|---------------------------------|--------|----|----|--------|----|----|---------------------------------|--------|----|----|--------|----|----|
| License fees                    | 21,250 | 0  | 0  |        |    |    | 20 per cent. for establishment. | 4,257  | 9  | 7  |        |    |    |
| Miscellaneous receipts          | 38     | 0  | 0  |        |    |    | Contribution to Fire Brigade.   | 17,030 | 6  | 5  |        |    |    |
|                                 |        |    |    | 21,288 | 0  | 0  | • •                             |        |    |    | 21,288 | 0  | 0  |
| Total Rs.                       | .....  |    |    | 21,288 | 0  | 0  | Total Rs.                       | .....  |    |    | 21,288 | 0  | 0  |
| <hr/>                           |        |    |    |        |    |    |                                 |        |    |    |        |    |    |
| 20 per cent. for establishment. | 4,257  | 9  | 7  |        |    |    | Paid for establishment...       | 3,568  | 0  | 0  |        |    |    |
|                                 |        |    |    |        |    |    | Do. contingencies               | 63     | 7  | 9  |        |    |    |
|                                 |        |    |    |        |    |    | Balance                         | .....  |    |    | 3,631  | 7  | 9  |
|                                 |        |    |    |        |    |    |                                 |        |    |    | 626    | 1  | 10 |
| Total Rs.                       | 4,257  | 9  | 7  |        |    |    | Total Rs.                       | .....  |    |    | 4,257  | 9  | 7  |

*Complete List of Jute Warehouses licensed in the Town of Calcutta for the year  
1886-87.*

| No.   | Name of street and number of premises.        | Names of license-holders.                   | Annual assessment. | Annual license fee. |
|---|---|---|--------------------|---------------------|
| LICENSED UNDER SECTIONS 4-6, ACT II (B.C.) OF 1872.         |   |   |                    |                     |
|   |   |   | Rs.                | Rs.                 |
| 1   | 1, Aheereetollah Street ...                   | Korum Chand ...                             | 1,200              | 200                 |
| 2   | 169, Ditto ...                                | Kissen Chand Bhoom Sing ...                 | 3,000              | 300                 |
| 3   | 170, Ditto ...                                | Radhamoy, Sreenath Dey Chowdhury, &c. ...   | 1,368              | 200                 |
| 4   | 172, Ditto ...                                | Sristydhur Dey ...                          | 1,020              | 200                 |
| 5   | 87 to 87-53, Durmahatta Street ...            | Baksiram, Agent ...                         | 9,000              | 900                 |
| 6   | 195, Ditto ditto ...                          | Sreedhur Mondul ...                         | 480                | 50                  |
| 7   | 138-39, Ditto ditto ...                       | Ditto ...                                   | 360                | 50                  |
| 8   | 7, Doorga Churn Mookerjee's Street.           | Peary Mohun Biswas ...                      | 360                | 50                  |
| 9   | 4, Hurro Chandra Mullick's St.                | Prohlad Chandra Shaw ...                    | 800                | 100                 |
| 10  | 6, Ditto ditto ...                            | Juggeshur Halder ...                        | 1,200              | 200                 |
| 11  | 14, Ditto ditto ...                           | Gobin Chandra Dutt ...                      | 1,860              | 200                 |
| 12  | 23, Ditto ditto ...                           | Juggatmohun Shaw ...                        | 900                | 100                 |
| 13  | 25, Ditto ditto ...                           | Prohlad Chandra Shaw ...                    | 1,200              | 200                 |
| 14  | 27, Ditto ditto ...                           | Bissumbhur Mullick ...                      | 600                | 100                 |
| 15  | 28, Ditto ditto ...                           | Benode Pehary Khan ...                      | 720                | 100                 |
| 16  | 28, Jorabagan Street                          | Rameshur Aitch ...                          | 984                | 100                 |
| 17  | 31 to 31-4, Manick Bose's Ghât Street.        | Sreemotee Nobinkissoree Dassee ...          | 900                | 100                 |
| 18  | 8, Noyan Soor's Ghât Street ...               | Goorogobind Shaw and others ...             | 1,200              | 200                 |
| 19  | 56, Strand Road ...                           | Chumroo Sing ...                            | 1,680              | 200                 |
| 20  | 57, Ditto ...                                 | Judoonath Shaw Chowdhury ...                | 1,740              | 200                 |
| 21  | 6, Sobha Bazar Street                         | Bamachurn Ghose ...                         | 960                | 100                 |
| 22  | 7, Ditto ...                                  | Chandra Seekur Sreekanth Shaw Pramanick ... | 960                | 100                 |
| 23  | 12, Ditto ...                                 | Parbutty Churn Soor ...                     | 600                | 100                 |
| 24  | 67, Ditto ...                                 | Dookhiram Dass ...                          | 780                | 100                 |
| 25  | 71-1, Ditto ...                               | Deno Nath Shaw ...                          | 720                | 100                 |
| 26  | 73, Ditto ...                                 | Muthoora Kanto Shaw ...                     | 3,792              | 400                 |
| 27  | 91-92, Ditto ...                              | Sreedhur Mondul ...                         | 1,596              | 200                 |
| 28  | 98-2, Ditto ...                               | Juggobondoo, Sarat Chandra Shaw.            | 580                | 100                 |
| LICENSED UNDER SECTION 7, ACT II (B.C.) OF 1872.            |   |   |                    |                     |
| 29  | 20, Bonomally Sircar's Street...              | Denobondoo Nundy and others ...             | 420                | 50                  |
| 30  | 206, Chitpore Road                            | Kany Lall Khan ...                          | 2,400              | 300                 |
| 31  | 247-48, Ditto ...                             | Messrs. Finlay, Muir & Co. ...              | 21,000             | 2,000               |
| 32  | 16, Hurro Chandra Mullick's Lane.             | Moharaj Anundo Mohun Shaw ...               | 900                | 100                 |
| 33  | 26-27, Jorabagan Street                       | Peary Mohun Dutt ...                        | 1,476              | 200                 |
| 34  | 67-27-11-1-A, Strand Road ...                 | Secretary, I. G. S. N. Co., Ltd. ...        | 3,078              | 400                 |
| 35  | 3 to 3-3, Sobha Bazar Street                  | Lolit Mohun Shaw and others ...             | 7,920              | 800                 |
| 36  | 10, Ditto ...                                 | Radhanath Laljee Mohun Shaw ...             | 2,800              | 300                 |
| 37  | 95-96, Ditto ...                              | Juggut Mohun Shaw ...                       | 2,400              | 300                 |
| 38  | 98, Ditto ...                                 | Sittanath Shaw Chowdhury ...                | 3,000              | 300                 |
| LICENSED UNDER ACT II OF 1872 AS AMENDED BY ACT II OF 1875. |   |   |                    |                     |
| 39  | 144, Durmahatta Street ...                    | Secretary to the Port Commrs.               | 4,800              | 500                 |
| 40  | 42-43, Doorga Churn Mookerjee's Street.       | Kirtee Chunder Mitter ...                   | 4,320              | 500                 |
| 41  | { 45, Ditto and }<br>{ 202-1, Chitpore Road } | Ishur Chunder Mitter ...                    | 1,800              | 200                 |

| No. | Name of street and number of premises. | Names of license-holders.            | Annual assessment. | Annual license fee. |
|-----|--|--------------------------------------|--------------------|---------------------|
|     |  |                                      | Rs.                | Rs.                 |
| 42  | 24, Hurro Chunder Mullick's Lane.      | Khetter Mohun Biswas ...             | 300                | 50                  |
| 43  | 36, Manick Bose's Ghât Street          | Sreemutty Kaminee Dassee ...         | 3,000              | 300                 |
| 44  | 7, Noyan Soor's Ghât Lane ...          | Shumbhoonath and Gobindnath Chowdry. | 1,000              | 100                 |
| 45  | 67-2 and 67-31-H-1, Strand Road        | Messrs. Stauley and Co. ...          | 28,236             | 2,000               |
| 46  | 67-27-H-1-B, Strand Road ...           | Secretary, I. G. S. N. Co., Ltd      | 3,078              | 400                 |
| 47  | 98-3, Sobha Bazar Street ...           | Juggobundhoo, Sarat Chunder Shaw.    | 1,800              | 200                 |
| 48  | 100, Ditto ...                         | Sreedhur Sham Dass Mondul ...        | 1,500              | 200                 |

## LICENSED UNDER SECTION 6, ACT V (B.C.) OF 1879.

|    |                                       |  |        |       |
|----|---------------------------------------|--|--------|-------|
| 49 | 76-2 and 80, 80-1, Durmahatta Street. | Behary Lall Pyne ...                               | 3,300  | 400   |
| 50 | 143 and 143-1, Durmahatta Street.     | Goorogobind Shaw ...                               | 9,000  | 900   |
| 51 | 202, Durmahatta Street ...            | Gobind Chand Dutt and another                      | 6,000  | 600   |
| 52 | 5, Doorga Churn Mookerjee's Street.   | Adhar Chunder Shaw ...                             | 1,380  | 200   |
| 53 | 6, Doorga Churn Mookerjee's Street.   | Doyal Chand Shaw ...                               | 1,372  | 200   |
| 54 | 5, Hurro Chunder Mullick's Street.    | Juggobundhoo, Soshee Mohun Shaw Pramanick.         | 1,440  | 200   |
| 55 | 16, Hurro Chunder Mullick's Street.   | Gooroo Churn Shaw ...                              | 960    | 100   |
| 56 | 9, Noyan Soor's Ghât Lane ...         | Nobin Chunder Coondoo ...                          | 1,200  | 200   |
| 57 | 46, Manick Bose's Ghât Street         | Nittanund Shaw ...                                 | 2,160  | 300   |
| 58 | 1, Noyan Soor's Ghât Lane ...         | Sabeetree Soondary Dassee ...                      | 840    | 100   |
| 59 | 62, Nimtollah Ghât Street ...         | Managing Agent, India Pressing Company Limited ... | 12,300 | 1,200 |
| 60 | 5, Sobha Bazar Street ...             | Bissumbhur Mullick ...                             | 2,500  | 300   |
| 61 | 90, Ditto ...                         | Debnath Shaw and others ...                        | 2,400  | 300   |

## LICENSED UNDER SECTION 6, ACT IV (B.C.) OF 1883.

|    |  |   |       |     |
|----|--|---|-------|-----|
| 62 | 13-6, Hurro Chunder Mullick's Street ... | Bissonath, Luchmeenath Pramanick ...                | 960   | 100 |
| 63 | 43, Nimtollah Ghât Street ...            | Managing Agent, India Pressing Company, Limited ... | 3,000 | 300 |
| 64 | 82, Ditto ...                            | Judoonath Shaw Chowdhury ...                        | 2,400 | 300 |
| 65 | 67-9, Strand Road ...                    | Messrs. Macneill and Company ...                    | 6,600 | 700 |
| 66 | 5, Aheerettollah Street ...              | Ram Lall Ghose ...                                  | 1,800 | 200 |
| 67 | 98-1, Sobha Bazar Street ...             | Juggobundhoo, Sarat Chunder Shaw Chowdhury ...      | 900   | 100 |
| 68 | 11, Hurro Chunder Mullick's Street ...   | Dwarka Nath Shaw ...                                | 1,320 | 200 |
| 69 | 44, Manick Bose's Ghât Street            | Debendro Deb Dass ...                               | 1,800 | 200 |

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government during the week ending the 16th July 1887.

| No.                       | District and date of return.        | Rainfall at Sudder station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|---------------------------|-------------------------------------|---------------------------------------|---|
| <b>BENGAL.</b>            |                                     |                                       |   |
| <i>Western Districts.</i> |                                     |                                       |   |
| <b>BURDWAN DIV.</b>       | 1 Burdwan. July 16, '87             | 6.06                                  | Weather—bright and hot. Prospects of crops good after timely and sufficient rain. Common rice has risen to about 21 seers per rupee. Public health good.  |
|                           | Culna                     ...       | 3.28                                  |   |
|                           | Cutwa                   ...         | 5.73                                  |   |
|                           | Raneegunge           ...            | 3.90                                  | Weather—seasonable. Transplanting of rice, both early and late, is proceeding throughout the district. Prices of food-grains have slightly risen. Public health good.   |
|                           | 2 Bankura                 " 16, '87 | 4.47                                  |   |
|                           | Bishenpore           ...            | 6.33                                  | Weather—very unsettled. High winds with showers at constant intervals. Paddy seedlings are coming up well and sugarcane is thriving. Cattle-pox is spreading and is causing considerable damage.  |
|                           | 3 Beerbhoom             " 16, "     | 2.64                                  |   |
|                           | Bampos Haut         ...             | 1.28                                  | Heavy downpour at the beginning of the week; weather sultry at its end. State and prospects of crops excellent.   |
|                           | 4 Midnapore             " 16, '87   | 7.44                                  |   |
|                           | 5 Hooghly                " 16, "    | 6.86                                  | Weather—seasonable. Rainfall though less than the average amount has sufficed for present needs. <i>Ass</i> rice doing well. Transplanting of <i>amun</i> going on. Public health good.   |
| <b>PRESIDENCY DIV.</b>    | Serampur             ...            | 3.25                                  |   |
|                           | Jehanabad            ...            | 3.15                                  | Rain throughout the district. Prospects favourable. Transplanting of <i>amun</i> seedlings in progress.   |
|                           | Howrah                 " 16, "      | 3.47                                  |   |
|                           | Oolooberiah         ...             | 4.45                                  |   |
|                           | <i>Central Districts.</i>           |                                       |   |
|                           | 6 24-Pargahs. July 16, '87          | ...                                   | Weather—seasonable with some heavy showers of rain. Crops promise well. Agricultural operations are being carried on. Prices easy. Public health generally good.  |
|                           | 7 Nuddea                 " 16, "    | 1.72                                  |   |
|                           | Kushtoa              ...            | 2.38                                  | Weather—showery with occasional sunshine. East wind. Rice, jute, indigo on churs and sugarcane promise well. <i>Ass</i> on churs being harvested. Transplanting of <i>amun</i> going on, but retarded for want of rain. Indigo manufacture begun. Fever rather prevalent. Rivers rising rapidly.  |
|                           | Meherpore            ...            | 1.88                                  |   |
|                           | Chudanga             ...            | 1.37                                  | Weather—cloudy with average rainfall except in the Sudder sub-division. Ploughing and planting continue, and rice crops doing well. Public health good.   |
|                           | Ranaghat             ...            | 1.63                                  |   |
|                           | 8 Khoolna                " 16, '87  | 1.06                                  | Weather—sultry. Paddy plants doing well. More rain wanted. Public health good.  |
|                           | 9 Jessore                " 16, "    | 1.95                                  |   |
| <b>RAJSHAHY DIV.</b>      | Jhenidah            ...             | 1.03                                  | Weather—very hot. Rain at intervals. Transplanting of <i>haimanti</i> paddy going on. <i>Til</i> , sugarcane, and jute doing well. Public health good.  |
|                           | Magurah             ...             | 1.13                                  |   |
|                           | Narail                ...           | 0.25                                  | Weather—clear and hot. Present prospects fair.  |
|                           | Bongong              ...            | 1.74                                  |   |
|                           | 10 Moorsshedabad        " 16, '87   | 1.91                                  | Weather—fair. Prospects of crops, where not injured by floods, are favourable. Public health generally good.  |
|                           | Talbagh             ...             | 3.91                                  |   |
|                           | Kandi                 ...           | 2.32                                  | Weather—hot. Dry weather during week has been favourable for harvesting <i>ass</i> . Planting of <i>amun</i> about half finished. All crops doing well except where injured by floods. Public health fair.  |
|                           | Jungipur             ...            | 3.87                                  |   |
|                           | 11 Dinagpore            " 16, '87   | 1.80                                  | Weather—windy in the first part of the week and after that hot and close. Crops uninjured by floods are good, but rain is now wanted. Public health fair.   |
|                           | Thakurgaon          ...             | 0.65                                  |   |
| <b>RAJSHAHY DIV.</b>      | 12 Rajshahy             " 16, '87   | 2.09                                  | Seasonable rain. Prospects of crops good. General health good.  |
|                           | Nattor                ...           | 1.15                                  |   |
|                           | Nowgong             ...             | 1.87                                  | A heavy gale for two days. Terai excessively hot. Constant showers. State and prospect of crops good.   |
|                           | 13 Ranpur                " 16, "    | 1.00                                  |   |
|                           | Gaibanda            ...             | 0.76                                  | A break in the rains, with very hot weather, varied by cool breezes and showers occasionally. Some west winds during week were favourable to early rice, which, however, has been much choked by weeds. Transplanting of late rice in high lands is now checked by dry weather, while up to the present low ground has been more or less flooded. On the whole, prospects are no, very favourable. Cholera still lingers. |
|                           | Kurigram            ...             | 0.57                                  |   |
|                           | Nilphamari          ...             | 0.76                                  | Weather—sultry. Rain almost every day. Harvesting of jute going on. Paddy plants being transplanted. Prospects continue good. Public health generally good.   |
|                           | 14 Hogra                 " 16, '87  | 0.56                                  |   |
|                           | Sherpur             ...             | 1.09                                  | Weather—cloudy and rainy. Prospects of crops good. General health good.   |
|                           | Nowkhilla           ...             | 1.46                                  |   |
| <b>DACCA DIVISION.</b>    | 15 Pubna                 " 16, '87  | 3.7                                   | Weather—hot and rainy. High east wind for about three days continuously. Cultivation of <i>amun</i> going on. General health good.  |
|                           | Feraigunge          ...             | 2.04                                  |   |
|                           | 16 Darjeeling            " 16, '87  | 10.40                                 | Weather—hot with strong winds. Rivers falling. Prospects of crops good. Transplanting of rice has begun.  |
|                           | 17 Julpigoree            " 16 "     | 1.96                                  |   |
|                           | <i>Eastern Districts.</i>           |                                       |   |
|                           | 18 Dacca. July 16, '87              | 3.04                                  |   |
|                           | Manickgunge         ...             | 3.1                                   | Weather—cloudy and rainy. Prospects of crops good. General health good.   |
|                           | Munshigunge         ...             | 4.20                                  |   |
|                           | Narsingunge         ...             | 4.07                                  | Weather—hot and rainy. High east wind for about three days continuously. Cultivation of <i>amun</i> going on. General health good.  |
|                           | 19 Farreedpore          " 16, '87   | 1.65                                  |   |
|                           | Goalnada            ...             | 2.5                                   | Weather—hot and rainy. High east wind for about three days continuously. Cultivation of <i>amun</i> going on. General health good.  |
|                           | Madaripore          ...             | 1.17                                  |   |
| <b>DACCA DIVISION.</b>    | 20 Backergunge          " 15, '87   | 2.26                                  | Weather—hot with strong winds. Rivers falling. Prospects of crops good. Transplanting of rice has begun.  |
|                           | 21 Mymensingh          " 15, '87    | 0.58                                  |   |
|                           | Jamalpur            ...             | 0.93                                  |   |
|                           | Kishoregunge        ...             | 1.19                                  |   |
|                           | Attea                ...            | 1.05                                  |   |
|                           | Netrokona           ...             | 1.64                                  |   |

| No.                             | District and date of return. | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|---------------------------------|------------------------------|---------------------------------------|--|
| <b>BENGAL—contd.</b>            |                              |                                       |  |
| <i>Eastern Districts—contd.</i> |                              |                                       |  |
| CHITTAGONG DIV.                 | 22 Chittagong, July 19, '87  | 0.95                                  | Weather—variable. Ample rain in south of district. More rain wanted in other parts. Prospects of <i>aus</i> fair. <i>Amun</i> being transplanted. Prices stationary. Cholera still reported.   |
|                                 | 23 Noakhally „ 15, „         | 3.35                                  | Occasional showers, but not yet sufficient rain, strong south-easterly wind since last two days. <i>Aus</i> is being cut in the Fenny sub-division. Land is being prepared for transplantation of <i>amun</i> . More rain wanted. Public health good.  |
|                                 | Fenny „ „                    | 5.13                                  |  |
|                                 | 24 Tipperah July 14, '87     | 1.31                                  | Weather—cloudy and showery, but on the whole not much rain. State and prospects of crops very good all round. No appreciable damage as yet caused to the crops from the inundation in the north of the district, or from the insufficient rain in the south.   |
|                                 | Brahmunbariah „ „            | 0.85                                  |  |
|                                 | Chandpur „ „                 | 4.50                                  |  |
|                                 | 25 Chittagong Hill „ 12, '87 | 3.28                                  | Weather—cloudy and rainy throughout the week. Seed paddy doing well, but more rain wanted. <i>Jooms</i> progressing favourably.  |
|                                 | Tracts. „ „                  |                                       |  |
|                                 | Hill Tipperah „ 14, „        | 1.55                                  | Weather—hot and rainy. <i>Amun</i> paddy being transplanted. <i>Satya</i> paddy, sugarcane, <i>til</i> and <i>joom</i> crops doing well. Public health good.   |
| <b>BEHAR.</b>                   |                              |                                       |  |
| PATNA DIV.                      | 26 Patna July 16, '87        | 1.59                                  | Weather—hot, often cloudy and rainy. Maize, <i>kaeni</i> and paddy growing well. In some places they are still being sown. Sowing of <i>rahar</i> and <i>jowar</i> going on. Cholera still reported from the interior.   |
|                                 | Barh „ „                     | 2.70                                  |  |
|                                 | 27 Gya „ 16 „                | 2.57                                  | Weather—hot. Indian-corn, <i>marua</i> and sugarcane doing well. Cholera, fever, and small-pox still reported from some stations.  |
|                                 | 28 Shahabad „ 16 „           | 2.48                                  | Weather—seasonable. Prospects of <i>bhadoi</i> crops excellent. Sugarcane doing well. More rain wanted for paddy transplanting. Cholera reported generally. Prices stationary.   |
|                                 | Buxar „ „                    | 1.53                                  |  |
|                                 | Sasaram „ „                  | 3.06                                  |  |
|                                 | Bhabuah „ „                  | 3.47                                  |  |
|                                 | 29 Durbhanga „ 16 „          | 3.08                                  | Weather—occasionally cloudy. Transplanting of <i>marua</i> and paddy begun in some places. Prospects of <i>bhadoi</i> continue favourable. Prices remain unchanged. Cholera abating.   |
|                                 | 30 Mozufferpore „ 16, '87    | 1.84                                  | Weather—cloudy with heavy showers daily. A break in the rains is anxiously looked for, as incessant wet weather has much interfered with weeding and clearing of <i>bhadoi</i> crops. Rice in good order. A good many cases of cholera and fever reported from the Sudder and Sitamarhi sub-divisions.                                     |
|                                 | Hajipur „ „                  | 3.52                                  |  |
|                                 | Sitamarhi „ „                | 1.14                                  |  |
|                                 | 31 Saran „ 16 „              | 2.08                                  | Weather—cloudy with occasional sunshine. Strong easterly breeze for the last two days. <i>Bhadoi</i> sowings completed. Transplanting of paddy has begun. Indigo manufacture going on. Cholera prevalent all over the district.  |
|                                 | Sewan „ „                    | 1.91                                  |  |
|                                 | Gopalgunge „ „               | 2.54                                  |  |
|                                 | 32 Champaran „ 16 „          | 0.88                                  | Weather—hot, cloudy and fair alternately. <i>Bhadoi</i> crops being weeded. More rain is wanted for the transplanting of paddy on high land. Prospects of standing crops good. Deaths from cholera much diminished. Small-pox reported from Bettiah town. Prices stationary.   |
| BHAGULPORE DIV.                 | 33 Monghyr July 16, '87      | 0.57                                  | Weather—hot and generally cloudy. Prospects of crops continue good, but the Ganges is rising fast and causing damage to young <i>bhadoi</i> crops on low lands. Cholera still prevailing in places.  |
|                                 | Begusserai „ „               | 1.57                                  |  |
|                                 | Jamui „ „                    | 2.81                                  | Weather—seasonable. <i>Bhadoi</i> prospects improving, but still not good in the centre of the district. Rice and <i>marua</i> doing well. Transplanting in progress. A little cholera still hangs about.  |
|                                 | 34 Bhagulpore „ 16 „         | 0.48                                  |  |
|                                 | Mudchpura „ „                | 3.23                                  |  |
|                                 | 35 Purneah „ 16 „            | 2.28                                  | Weather—fine with occasional showers. State and prospects of crops favourable. <i>Aghani</i> being transplanted.   |
|                                 | Kishengunge „ „              | 0.98                                  |  |
|                                 | Arrareah „ „                 | 1.01                                  |  |
|                                 | 36 Maldah „ 16 „             | 1.22                                  | Weather—seasonable; stormy in the middle of the week. Prospects of <i>bhadoi</i> crops good, except in thana Khurh, where floods have done considerable damage. Transplanting of winter paddy going on. Common rice selling at 20 to 21 seers per rupee. Public health good.   |
|                                 | Chanchal „ „                 | 1.10                                  |  |
|                                 | Shibgunge „ „                | 2.14                                  |  |
|                                 | 37 Sonthal Perghe „ 16 „     | 1.82                                  | Weather—cloudy and wet with strong east winds. Indian-corn somewhat injured by excessive rain. Transplanting of paddy has begun everywhere. Public health generally good. A few cases of cholera reported in the Godda sub-division.   |
|                                 | Deoghur „ „                  | 3.18                                  |  |
|                                 | Godda „ „                    | 2.11                                  |  |
|                                 | Jamtara „ „                  | 4.80                                  |  |
|                                 | Pakour „ „                   | 2.50                                  |  |
|                                 | Kajmehal „ „                 | 1.41                                  |  |
| <b>ORISSA.</b>                  |                              |                                       |  |
| ORISSA DIV.                     | 38 Cuttack, July 15 '87      | 1.04                                  | Weather—cloudy and seasonable. Rice plants growing well. <i>Beali</i> being weeded, but requires more rain. Common rice 18½ seers per rupee in town, and 23 to 26 seers in the interior. Sporadic cases of cholera reported; public health otherwise good. Rivers rising.  |
|                                 | 39 Pooree „ 14 „             | 1.69                                  | Weather—cloudy and stormy. Transplanting of <i>sarad</i> rice going on, but more rain wanted, and plants in places being damaged by want of water. Common rice 24 seers 5 chittacks per rupee in the Sudder sub-division, and 22 seers 5 chittacks in the Khoorda sub-division. Cases of cholera reported from most parts of the district. |
|                                 | Khoorda „ „                  | 2.16                                  |  |
|                                 | 40 Balasore July 15, „       | 3.30                                  | Weather—cloudy with occasional showers of rain. Prospects of crops good. Transplanting of paddy has begun. Public health fair.   |



| No.                                | District and date of return. | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|------------------------------------|------------------------------|---------------------------------------|--|
| <b>CHOTA NAGPORE.</b>              |                              |                                       |  |
| <i>South-West Frontier Agency.</i> |                              |                                       |  |
| 41                                 | Hazaribagh, July 15, '87     | 4.42                                  | Weather—seasonable. Heavy rain. Transplanting of rice in progress. Agricultural prospects very favourable; all crops doing well. Cholera in places; otherwise general health good. |
| 42                                 | Lohardugga „ 16 „            | 3.22                                  | Weather—seasonable. Rain almost throughout the week. Prospects of crops continue favourable. No change in prices. Cholera still reported. Public health otherwise good.            |
|                                    | • Pakumow „ „                | 9.44                                  |  |
| 43                                 | Singbhoom „ 15 „             | 7.77                                  | Weather—cloudy with heavy rain. Agricultural operations in full swing. Prospects good. Cholera reported from Bahargora, Dhalbhoom; otherwise public health good.                   |
| 44                                 | Manbhoom „ 16 „              | 4.58                                  | Weather—seasonable. Rain throughout the district, and prospects of crops (bhadoi and paddy seedlings) so far excellent. Public health good everywhere.                             |
|                                    | Govindpur „ „                | 1.02                                  |  |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 19th July 1887.P. NOLAN,  
Secy. to the Govt. of Bengal.

# Meteorological Report of the Province of Bengal

| DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                      |                             |                     |                        |                           |                                   |                                 |                                     |                           |
|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------|-----------------------------|---------------------|------------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|---------------------------|
|                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.         |                             |                     |                        |                           |                                   |                                 |                                     |                           |
|                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week. | Date.                       | Lowest during week. | Date.                  | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean 70 A.M. temperature. |
| Pooree                 | Gopalpore               | 29.517                          | 29.567                     | -.035                | SSW                   | 463.0               | 84.2                 | 9th, 10th, 11th July.       | 75.8                | 15th July.             | 82.0                      | 77.9                              | 80.0                            | -1.2                                | 80                        |
|                        | Falso Point             | 29.519                          | 29.537                     | -.088                | WSW                   | 308.0               | 87.4                 | 12th "                      | 75.1                | 13th "                 | 84.9                      | 77.2                              | 81.1                            | -3.4                                | 83                        |
| Cuttack                | Cuttack                 | 29.457                          | 29.538                     | -.076                | SW                    | 127.0               | 96.4                 | 9th "                       | 74.8                | 14th "                 | 80.0                      | 77.0                              | 81.8                            | -2.3                                | 83                        |
| Balasore               | Balasore                | 29.444                          | 29.505                     | -.107                | SW                    | 229.0               | 86.4                 | 11th, 12th July.            | 75.7                | 11th, 13th, 15th July. | 84.9                      | 76.6                              | 80.8                            | -2.0                                | 82                        |
| South-West Midnapore   | Saugor Island           | 29.485                          | 29.508                     | -.105                | SW                    | 460.0               | 87.2                 | 9th "                       | 77.0                | 15th "                 | 84.9                      | 78.9                              | 81.9                            | -2.0                                | 81                        |
| South 24-Pergunnahs    | Midnapore               | 29.356                          | 29.506                     | -.119                | S                     | 130.4               | 89.3                 | 13th "                      | 76.3                | 10th, 15th July.       | 86.4                      | 77.3                              | 81.9                            | -0.5                                | 82                        |
| 24-Pergunnahs          | Calcutta                | 29.408                          | 29.489                     | -.113                | WSW                   | 165.0               | 86.5                 | 13th, 14th July.            | 76.2                | 10th, 15th July.       | 84.0                      | 77.1                              | 80.5                            | -2.9                                | 81                        |
| Howrah                 | Burdwan                 | 29.383                          | 29.483                     | -.123                | Variable              | 96.0                | 90.6                 | 9th "                       | 77.9                | 9th, 15th July.        | 87.9                      | 78.8                              | 83.4                            | -1.4                                | 81                        |
| Hooghly                | Bankoora                | 29.189                          | —                          | —                    | Calm                  | 10.0                | 90.1                 | 9th "                       | 76.1                | 15th "                 | 86.1                      | 77.4                              | 81.7                            | —                                   | 81                        |
| Burdwan                | Raneegunge              | 29.167                          | —                          | -.100                | Easterly              | 126.1               | 90.5                 | 13th "                      | 76.8                | 15th "                 | 87.6                      | 78.3                              | 83.0                            | -1.0                                | 82                        |
| Nest Burdwan           | Berhampore              | 29.445                          | 29.512                     | -.069                | E                     | 144.6               | 88.6                 | 9th, 13th & 14th July.      | 77.3                | 15th "                 | 87.5                      | 78.6                              | 83.0                            | -1.9                                | 83                        |
| Ioorshedabad           | Krishnagpur             | 29.448                          | —                          | —                    | Variable              | 118.4               | 89.3                 | 13th "                      | 75.3                | 15th "                 | 87.2                      | 77.4                              | 82.3                            | —                                   | 81                        |
| Jessore                | Jessore                 | 29.490                          | 29.523                     | -.066                | Variable              | 113.4               | 89.7                 | 9th, 12th July.             | 77.4                | 10th "                 | 88.1                      | 78.7                              | 83.4                            | -0.8                                | 83                        |
| Choolna                | Chittagong              | 29.495                          | 29.584                     | -.069                | SE                    | 182.0               | 89.1                 | 13th "                      | 75.5                | 9th "                  | 85.0                      | 76.2                              | 80.6                            | -0.8                                | 82                        |
| Chittagong             | Chittagong Hill Tracts  | —                               | —                          | —                    | —                     | —                   | —                    | —                           | —                   | —                      | —                         | —                                 | —                               | —                                   | —                         |
| Chittagong Hill Tracts | Demagiri                | —                               | —                          | —                    | —                     | —                   | —                    | —                           | —                   | —                      | —                         | —                                 | —                               | —                                   | —                         |
| Chittagong Hill Tracts | Barisal                 | 29.523                          | 29.535                     | -.064                | S                     | 115.3               | 89.3                 | 11th, 13th & 14th July.     | 76.3                | 11th "                 | 87.4                      | 78.2                              | 82.4                            | +0.7                                | 82                        |
| Chittagong Hill Tracts | Noakholly               | 29.493                          | 29.526                     | —                    | SE                    | 88.5                | 88.3                 | 13th "                      | 76.5                | 12th "                 | 86.3                      | 77.3                              | 81.8                            | —                                   | 83                        |
| Chittagong Hill Tracts | Farrukpore              | 29.513                          | —                          | -.089                | SE                    | 164.0               | 86.5                 | 13th "                      | 71.0                | 13th "                 | 85.0                      | 77.9                              | 81.3                            | -1.0                                | 82                        |
| Dacca                  | Dacca                   | 29.525                          | 29.548                     | -.051                | ESE                   | 168.0               | 90.6                 | 11th "                      | 76.7                | 15th "                 | 88.1                      | 78.2                              | 83.2                            | -0.7                                | 83                        |
| Comilla                | Comilla                 | 29.527                          | 29.562                     | -.064                | SE                    | 129.0               | 91.3                 | 14th "                      | 75.8                | 9th, 15th July.        | 87.8                      | 78.6                              | 82.2                            | +0.4                                | 83                        |
| Mymensingh             | Mymensingh              | 29.520                          | —                          | -.051                | SE                    | 17.0                | 90.3                 | 13th, 14th July.            | 77.0                | 9th, 13th July.        | 88.7                      | 78.1                              | 83.4                            | +0.2                                | 81                        |
| Bogra                  | Bogra                   | 29.460                          | 29.522                     | —                    | ESE                   | 169.2               | 91.3                 | 13th "                      | 76.8                | 15th "                 | 89.2                      | 78.7                              | 84.0                            | —                                   | 81                        |
| Serajunge              | Serajunge               | 29.479                          | 29.525                     | -.106                | E                     | 136.9               | 91.6                 | 14th "                      | 76.2                | 15th "                 | 89.0                      | 78.0                              | 83.5                            | 0                                   | 84                        |
| Rampore                | Rampore                 | 29.462                          | 29.532                     | -.041                | E, NE                 | 126.9               | 89.3                 | 13th, 14th July.            | 72.7                | 12th, 14th, 15th July. | 88.0                      | 78.4                              | 80.7                            | -2.9                                | 84                        |
| Maldah                 | Maldah                  | 29.405                          | —                          | —                    | Calm                  | 62.9                | 91.9                 | 12th "                      | 76.7                | 15th "                 | 89.5                      | 79.0                              | 84.4                            | —                                   | 84                        |
| Dinapore               | Dinapore                | 29.463                          | 29.523                     | -.075                | E                     | 185.0               | 92.6                 | 13th "                      | 77.6                | 15th "                 | 89.6                      | 79.5                              | 84.6                            | —                                   | 84                        |
| Rungpore               | Rungpore                | 29.456                          | 29.589                     | -.121                | E                     | 109.0               | 92.8                 | 15th "                      | 77.7                | 14th, 15th July.       | 90.6                      | 79.2                              | 84.9                            | +0.6                                | 84                        |
| Julpikore              | Julpikore               | 29.294                          | 29.580                     | -.055                | E                     | 140.6               | 89.0                 | 9th, 10th July.             | 75.8                | 14th "                 | 89.0                      | 77.6                              | 83.7                            | +0.5                                | 83                        |
| Darjeeling             | Darjeeling              | 29.855                          | —                          | -.072                | SE                    | 91.0                | 98.1                 | 14th "                      | 59.6                | 10th "                 | 65.0                      | 67.6                              | 61.3                            | -1.2                                | 61                        |
| Purneah                | Purneah                 | 29.421                          | 29.546                     | -.063                | E                     | 52.7                | 91.2                 | 13th "                      | 76.6                | 12th "                 | 89.1                      | 78.5                              | 83.8                            | -1.5                                | 83                        |
| Mozufferpore           | Mozufferpore            | —                               | —                          | —                    | —                     | —                   | —                    | —                           | —                   | —                      | —                         | —                                 | —                               | —                                   | —                         |
| Durbhunga              | Durbhunga               | 29.353                          | 29.518                     | -.075                | ESE                   | 266.0               | 90.9                 | 10th, 14th July.            | 78.0                | 9th "                  | 89.6                      | 80.3                              | 84.9                            | 0                                   | 84                        |
| Motihari               | Motihari                | 29.264                          | 29.509                     | -.072                | SE                    | 273.0               | 91.2                 | 9, 10, 11, 14, & 14th July. | 75.4                | 14th "                 | 90.6                      | 78.5                              | 84.6                            | -0.4                                | 86                        |
| Chupra                 | Chupra                  | 29.304                          | —                          | -.089                | E                     | 31.2                | 92.0                 | 11th "                      | 77.6                | 15th "                 | 91.1                      | 79.0                              | 83.1                            | -0.3                                | 85                        |
| Dehree                 | Dehree                  | 29.134                          | 29.486                     | -.080                | Variable              | 240.4               | 88.9                 | 9th "                       | 73.0                | 15th "                 | 86.2                      | 77.4                              | 81.8                            | -1.1                                | 83                        |
| Buxar                  | Buxar                   | 29.232                          | 29.471                     | -.102                | E                     | 250.8               | 89.2                 | 13th "                      | 76.2                | 12th "                 | 87.5                      | 78.5                              | 83.0                            | -2.6                                | 81                        |
| Arrah                  | Arrah                   | 29.272                          | 29.467                     | -.069                | E                     | 140.0               | 91.4                 | 14th "                      | 77.1                | 12th "                 | 89.9                      | 78.7                              | 84.3                            | -0.3                                | 84                        |
| Gya                    | Gya                     | 29.085                          | 29.460                     | -.133                | N                     | 56.0                | 92.4                 | 14th "                      | 76.8                | 13th "                 | 89.9                      | 78.6                              | 84.3                            | -1.3                                | 85                        |
| Bankipore              | Bankipore               | 29.321                          | 29.503                     | -.060                | E                     | 151.0               | 90.9                 | 14th "                      | 78.2                | 13th "                 | 89.5                      | 79.8                              | 84.7                            | -1.5                                | 84                        |
| Bhagalpore             | Bhagalpore              | 29.322                          | 29.483                     | -.105                | E                     | 97.9                | 90.4                 | 9th, 14th July.             | 77.0                | 15th "                 | 89.3                      | 78.9                              | 84.1                            | -0.7                                | 85                        |
| Doonka                 | Doonka                  | 29.369                          | —                          | —                    | ESE                   | 78.8                | 88.6                 | 10th "                      | 75.3                | 15th "                 | 86.9                      | 77.3                              | 80.2                            | —                                   | 82                        |
| Mazuribagh             | Mazuribagh              | 27.515                          | 29.501                     | -.080                | Southerly             | 286.0               | 85.4                 | 9th "                       | 70.7                | 15th "                 | 82.9                      | 73.1                              | 78.0                            | -1.6                                | 78                        |
| Ranchee                | Ranchee                 | 27.396                          | 29.491                     | -.100                | Variable              | 210.0               | 94.0                 | 14th "                      | 68.4                | 15th "                 | 81.6                      | 71.3                              | 76.5                            | -1.4                                | 76                        |
| Chyebassa              | Chyebassa               | 28.725                          | —                          | —                    | SSW                   | 84.0                | 88.4                 | 9th "                       | 74.4                | 15th "                 | 85.0                      | 75.9                              | 80.5                            | —                                   | 80                        |
| Sibsagar               | Sibsagar                | 29.300                          | 29.630                     | -.040                | NE                    | 51.0                | 97.1                 | 13th "                      | 76.0                | 9th "                  | 92.7                      | 78.8                              | 85.7                            | +0.7                                | 86                        |
| Dhubri                 | Dhubri                  | 29.465                          | 29.532                     | -.084                | ESE                   | 200.0               | 89.2                 | 13th "                      | 78.3                | 13th "                 | 87.4                      | 78.9                              | 83.2                            | -0.8                                | 83                        |
| Silchar                | Silchar                 | 29.455                          | 29.589                     | -.107                | ESE                   | 89.0                | 97.0                 | 15th "                      | 74.8                | 13th "                 | 85.4                      | 78.0                              | 81.7                            | -0.8                                | 81                        |

for the week ending Friday, the 15th of July 1887.

| DISTRICT OBSERVATIONS.      |   |   |                    |              |                     |              |            |                      |              |            |     |                               |                              |                          | Representative station. | DISTRICT. |
|-----------------------------|---|---|--------------------|--------------|---------------------|--------------|------------|----------------------|--------------|------------|-----|-------------------------------|------------------------------|--------------------------|-------------------------|-----------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing stations. | RAINFALL.          |              |                     |              |            |                      |              |            |     | Average number of rainy days. | Normal number of rainy days. |                          |                         |           |
|                             |   |   | Of week.           |              | Since 1st of month. |              |            | Since 15th May 1887. |              |            |     |                               |                              |                          |                         |           |
|                             |   |   | Mean for district. | Normal mean. | Mean for district.  | Normal mean. | Variation. | Mean for district.   | Normal mean. | Variation. |     |                               |                              |                          |                         |           |
| 85                          | 7.6                                       | 0.77                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —   | —                             | —                            | Gopulpore                | Pooree                  |           |
| 77                          | 9.0                                       | 1.10                                    | —                  | 3.35         | —                   | 5.85         | —          | —                    | 16.22        | —          | —   | —                             | —                            | Fake Point               | Cuttack                 |           |
| 60                          | 9.1                                       | 1.00                                    | —                  | 3.17         | —                   | 6.15         | —          | —                    | 17.60        | —          | —   | —                             | —                            | Cuttack                  | Balasore                |           |
| 80                          | 6.6                                       | 2.30                                    | —                  | 3.95         | —                   | 6.53         | —          | —                    | 17.17        | —          | —   | —                             | —                            | Balasore                 | South-West Midnapore    |           |
| 85                          | 9.1                                       | 5.42                                    | 5.04               | 4.13         | 8.48                | 7.13         | +1.35      | 19.11                | 19.25        | -0.11      | 5.3 | 4.5                           | Saugor Island                | South 24-Pergunnahs      |                         |           |
| 80                          | 7.3                                       | 2.78                                    | 5.11               | 2.90         | 10.24               | 5.90         | +4.34      | 22.04                | 17.34        | +4.70      | 4.7 | 4.4                           | Midnapore                    | Midnapore                |                         |           |
| 85                          | 9.6                                       | 10.56                                   | 1.95               | 2.42         | 7.36                | 5.17         | +2.19      | 17.64                | 17.83        | -0.19      | 5.0 | 5.1                           | Calcutta                     | Howrah                   |                         |           |
| 70                          | 8.4                                       | 5.02                                    | 4.70               | 1.86         | 6.68                | 4.12         | +2.56      | 21.68                | 15.73        | +5.95      | 5.7 | 3.9                           | Burdwan                      | Burdwan                  |                         |           |
| 85                          | 7.7                                       | 4.35                                    | 1.84               | 3.18         | 7.00                | 6.04         | +0.96      | 19.68                | 17.74        | +1.94      | 5.0 | 5.1                           | Bankura                      | Bankura                  |                         |           |
| 87                          | 8.6                                       | 4.72                                    | 3.61               | 2.84         | 7.00                | 5.57         | +2.42      | 21.00                | 17.61        | +3.39      | 5.0 | 4.7                           | Raneegunge                   | Berhampur                |                         |           |
| 85                          | 10.0                                      | 2.00                                    | 1.72               | 2.24         | 7.75                | 5.13         | +2.62      | 28.50                | 17.05        | +11.45     | 5.7 | 4.0                           | Berhampur                    | Moorshedabad             |                         |           |
| 85                          | 9.0                                       | 1.71                                    | 1.83               | 1.20         | 4.55                | 5.13         | -0.58      | 17.93                | 18.38        | -0.45      | 5.0 | 3.9                           | Krishnachur                  | Nuddea                   |                         |           |
| 89                          | 9.7                                       | 1.71                                    | 1.97               | 2.20         | 3.40                | 5.50         | -2.10      | 14.88                | 21.16        | -6.28      | 5.1 | 4.3                           | Jessore                      | Jessore                  |                         |           |
| 82                          | 8.7                                       | 2.71                                    | —                  | 6.77         | —                   | 13.52        | —          | —                    | 49.37        | —          | —   | 5.1                           | 5.1                          | Chittagong               | Chittagong              |           |
| 87                          | 8.0                                       | 3.14                                    | 3.50               | 3.37         | 6.35                | 8.31         | -1.96      | 17.55                | 32.15        | -14.60     | 6.3 | 5.3                           | Domagiri                     | Chittagong Hill Tracts   |                         |           |
| 85                          | 3.2                                       | 1.90                                    | —                  | 4.75         | —                   | 11.08        | —          | —                    | 44.35        | —          | —   | 5.2                           | 5.2                          | Barrisal                 | Barisal                 |           |
| 88                          | 5.0                                       | 2.51                                    | 1.97               | 2.18         | 2.70                | 5.29         | -2.59      | 15.23                | 22.43        | -7.20      | 5.7 | 4.6                           | Naokhally                    | Naokhally                |                         |           |
| 85                          | 8.6                                       | 2.87                                    | 3.64               | 2.72         | 4.50                | 6.41         | -1.92      | 15.90                | 23.93        | -8.03      | 6.3 | 4.2                           | Farrukpore                   | Farrukpore               |                         |           |
| 89                          | 6.4                                       | 1.13                                    | —                  | 2.94         | —                   | 6.34         | —          | —                    | 23.10        | —          | —   | 4.7                           | 4.7                          | Dacca                    | Dacca                   |           |
| 80                          | 5.7                                       | 0.37                                    | 0.35               | 2.60         | 3.26                | 0.22         | -2.96      | 30.07                | 27.20        | +2.87      | 8.0 | 4.1                           | Commillah                    | Tipperah                 |                         |           |
| 81                          | 9.1                                       | 0.56                                    | 0.83               | 2.81         | 3.93                | 0.56         | -2.43      | 32.00                | 23.05        | +8.95      | 2.3 | 3.6                           | Mymensingh                   | Mymensingh               |                         |           |
| 82                          | 7.1                                       | 1.82                                    | 2.15               | 1.75         | 6.25                | 5.15         | +1.10      | 22.48                | 26.12        | -3.64      | 5.3 | 3.7                           | Bogra                        | Bogra                    |                         |           |
| 83                          | 5.0                                       | 2.05                                    | 1.41               | 2.57         | 4.27                | 0.51         | -3.76      | 20.77                | 19.65        | +1.12      | 3.0 | 3.6                           | Sonagunge                    | Pubna                    |                         |           |
| 82                          | 5.9                                       | 1.22                                    | 1.13               | 2.91         | 5.29                | 6.93         | -1.64      | 26.95                | 21.14        | +5.81      | 5.5 | 4.4                           | Raipur Beaulah               | Raipur Beaulah           |                         |           |
| 70                          | 4.4                                       | 0.80                                    | 0.68               | 3.01         | 4.13                | 7.24         | -2.81      | 37.31                | 23.52        | +13.79     | 3.6 | 4.0                           | Maldah                       | Maldah                   |                         |           |
| 83                          | 3.7                                       | 1.15                                    | 0.74               | 3.31         | 3.55                | 7.07         | -1.12      | 18.10                | 35.42        | -17.32     | 3.0 | 4.0                           | Dinagpore                    | Dinagpore                |                         |           |
| 79                          | 7.9                                       | 2.07                                    | 2.01               | 3.22         | 8.50                | 10.28        | -1.78      | 63.88                | 40.08        | +23.80     | 3.8 | 3.7                           | Rangpore                     | Rangpore                 |                         |           |
| 97                          | 9.0                                       | 10.56                                   | 7.83               | 6.83         | 15.78               | 16.45        | -0.67      | 56.01                | 50.57        | +5.44      | 5.8 | 5.3                           | Julpigoree                   | Julpigoree               |                         |           |
| 70                          | 5.1                                       | 2.13                                    | 1.67               | 2.33         | 4.78                | 7.58         | -2.80      | 33.78                | 20.82        | +12.96     | 4.4 | 3.8                           | Cooch Behar                  | Cooch Behar              |                         |           |
| 82                          | 6.1                                       | 3.02                                    | 1.97               | 1.84         | 5.09                | 6.33         | -2.03      | 21.82                | 14.39        | +7.43      | 4.3 | 3.0                           | Darjeeling                   | Darjeeling Hill District |                         |           |
| 74                          | 7.7                                       | 0.75                                    | 1.22               | 2.50         | 5.49                | 6.71         | -1.32      | 20.47                | 15.91        | +4.56      | 2.3 | 2.7                           | Purneah                      | Purneah                  |                         |           |
| 79                          | 7.3                                       | 2.67                                    | 2.06               | 2.84         | 5.80                | 6.50         | -0.67      | 16.78                | 13.89        | +2.89      | 4.7 | 3.5                           | North Bhagnpore              | North Bhagnpore          |                         |           |
| 82                          | 6.1                                       | 4.41                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —   | 5.0                           | 5.0                          | Mozufferpore             | Mozufferpore            |           |
| 78                          | 7.9                                       | 1.31                                    | 2.83               | 2.48         | 3.99                | 5.31         | -1.32      | 13.56                | 11.19        | +2.37      | 5.5 | 3.8                           | Durbhunga                    | Durbhunga                |                         |           |
| 83                          | 7.6                                       | 2.55                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —   | 2.7                           | 2.7                          | Motihari                 | Motihari                |           |
| 74                          | 8.0                                       | 3.77                                    | 3.12               | 2.33         | 6.43                | 5.51         | +1.32      | 16.49                | 12.01        | +4.48      | 5.8 | 3.3                           | Chupra                       | Chupra                   |                         |           |
| 80                          | 9.6                                       | 1.55                                    | 2.31               | 2.16         | 4.89                | 5.67         | -0.78      | 17.82                | 13.04        | +4.78      | 5.3 | 3.8                           | Dehree                       | Dehree                   |                         |           |
| 82                          | 4.9                                       | 0.72                                    | 1.41               | 2.00         | 5.85                | 5.11         | +0.74      | 20.20                | 13.35        | +6.85      | 4.8 | 4.2                           | Buxar                        | Buxar                    |                         |           |
| 90                          | 7.0                                       | 2.98                                    | 3.26               | 2.77         | 7.33                | 6.07         | +1.26      | 25.43                | 17.14        | +8.29      | 5.9 | 4.2                           | Arran                        | Arran                    |                         |           |
| 83                          | 10.0                                      | 4.99                                    | 3.02               | 2.85         | 5.33                | 6.27         | -0.74      | 17.26                | 16.11        | +1.15      | 5.0 | 3.8                           | Gya                          | Gya                      |                         |           |
| 87                          | 9.7                                       | 3.22                                    | 4.04               | 2.92         | 8.07                | 5.80         | +2.27      | 20.80                | 14.89        | +5.91      | 5.5 | 3.8                           | Bankipore                    | Bankipore                |                         |           |
| 88                          | 10.0                                      | 7.06                                    | 7.77               | 2.60         | 9.33                | 5.30         | +4.03      | 24.46                | 15.80        | +8.66      | 5.0 | 3.2                           | South Bhagnpore              | South Bhagnpore          |                         |           |
| 81                          | 6.9                                       | 2.45                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —   | 4.2                           | 4.2                          | Monchyr                  | Monchyr                 |           |
| 83                          | 6.7                                       | 0.56                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —   | 4.2                           | 4.2                          | Deanka                   | Deanka                  |           |
| 70                          | 7.9                                       | 5.02                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —   | 4.5                           | 4.5                          | Hazaribagh               | Hazaribagh              |           |
|                             |   |   |                    |              |                     |              |            |                      |              |            |     | 4.8                           | 4.8                          | Rauchee                  | Rauchee                 |           |
|                             |   |   |                    |              |                     |              |            |                      |              |            |     | 5.2                           | 5.2                          | Lohardugga               | Lohardugga              |           |
|                             |   |   |                    |              |                     |              |            |                      |              |            |     | 5.2                           | 5.2                          | Manbhoon                 | Manbhoon                |           |
|                             |   |   |                    |              |                     |              |            |                      |              |            |     | 5.2                           | 5.2                          | Chyebussa                | Chyebussa               |           |
|                             |   |   |                    |              |                     |              |            |                      |              |            |     | 5.2                           | 5.2                          | Sibsagar                 | Sibsagar                |           |
|                             |   |   |                    |              |                     |              |            |                      |              |            |     | 5.2                           | 5.2                          | Uthubi                   | Uthubi                  |           |
|                             |   |   |                    |              |                     |              |            |                      |              |            |     | 5.2                           | 5.2                          | Shihar                   | Shihar                  |           |

**SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 20, 1887.**

**Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 15th of July 1887.**

| a)  | District.               | Station.       | RAINFALL.           |                    |                    |                     |                       |                      |                    | TOTAL.                |                   | Total rain-fall since 1st of month. | Average total rain-fall from 1st of month. | Total rain-fall since 15th May 1887. | Average rain-fall from 15th May to date. |
|-----|-------------------------|----------------|---------------------|--------------------|--------------------|---------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------|-------------------------------------|--|--------------------------------------|--|
|     |                         |                | Saturday, 9th July. | Sunday, 10th July. | Monday, 11th July. | Tuesday, 12th July. | Wednesday, 13th July. | Thursday, 14th July. | Friday, 15th July. | Number of rainy days. | of Rainfall week. |                                     |  |                                      |  |
| ... | Pooree                  | Pooree         | 0.01                | 0.24               | .....              | .....               | 0.44                  | 0.21                 | .....              | 4                     | 1.90              | 2.64                                | 0.46                                       | 6.00                                 | 14.47                                    |
|     |                         | Khurdah        | 0.10                | 0.25               | 0.02               | 0.02                | 0.15                  | 0.29                 | .....              | .....                 | .....             | .....                               | 0.11                                       | 18.05                                | 20.64                                    |
|     |                         | Bampur         | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                               | 0.83                                       | 11.34                                | 18.02                                    |
|     |                         | False Point    | 0.11                | 0.23               | 0.04               | .....               | 0.50                  | 0.01                 | .....              | 5                     | 0.92              | 4.15                                | 0.79                                       | 7.42                                 | 17.98                                    |
|     |                         | Gop            | 0.40                | .....              | .....              | .....               | 1.81                  | .....                | .....              | .....                 | .....             | .....                               | ?  | ?                                    | ?  |
| ... | Cuttack                 | Pipli          | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                               | ?  | ?                                    | ?  |
|     |                         | Jagatsingapore | .....               | 0.35               | .....              | .....               | 0.11                  | .....                | .....              | .....                 | .....             | .....                               | 5.22                                       | 13.92                                | 19.04                                    |
|     |                         | Banki          | .....               | 0.07               | 0.03               | .....               | 0.12                  | 0.12                 | .....              | 4                     | 0.93              | 5.71                                | 0.54                                       | 23.10                                | 16.36                                    |
|     |                         | Cuttack        | 0.02                | 0.07               | 0.06               | .....               | 0.37                  | .....                | .....              | 1                     | 1.00              | 5.12                                | 0.10                                       | 23.02                                | 17.08                                    |
|     |                         | Kendrapara     | 0.04                | 0.26               | 0.13               | .....               | 0.18                  | 0.71                 | .....              | 3                     | 1.75              | 3.53                                | ?  | ?                                    | ?  |
| ... | Balasore                | Jajpore        | .....               | 0.88               | .....              | .....               | 0.22                  | 1.35                 | .....              | .....                 | .....             | .....                               | ?  | ?                                    | ?  |
|     |                         | Dhamsalla      | .....               | 0.18               | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                               | ?  | ?                                    | ?  |
|     |                         | Salipore       | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                               | ?  | ?                                    | ?  |
|     |                         | Chandbali      | 1.81                | .....              | .....              | .....               | 0.70                  | 0.20                 | .....              | 3                     | 2.1               | 0.53                                | 5.97                                       | 20.32                                | 15.70                                    |
|     |                         | Bhuddruck      | 0.50                | 0.00               | .....              | .....               | 2.16                  | 0.50                 | .....              | 4                     | 2.80              | 3.99                                | 5.84                                       | 17.32                                | 17.64                                    |
| ... | Midnapore               | Sorah          | .....               | .....              | .....              | .....               | 3.00                  | .....                | .....              | .....                 | .....             | .....                               | 0.84                                       | 15.25                                | 18.13                                    |
|     |                         | Balasore       | .....               | 0.70               | .....              | .....               | 1.27                  | .....                | .....              | 2                     | 1.77              | 1.30                                | 7.24                                       | 0.97                                 | 17.33                                    |
|     |                         | Jellapore      | 0.87                | 0.12               | .....              | .....               | 0.4                   | 0.15                 | .....              | 4                     | 1.98              | 7.14                                | 0.32                                       | 16.25                                | 18.96                                    |
|     |                         | Baripodah      | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                               | ?  | ?                                    | ?  |
|     |                         | Contai         | 1.84                | 0.58               | 0.0                | .....               | 1.22                  | 0.22                 | .....              | 5                     | 3.95              | 7.36                                | 0.84                                       | 18.01                                | 18.53                                    |
| ... | 24-Pergunnahs           | Sauar Island   | 1.14                | 0.74               | .....              | 0.04                | 1.50                  | 0.75                 | 0.17               | 6                     | 4.29              | 8.35                                | 7.31                                       | 19.77                                | 19.81                                    |
|     |                         | Tumlook        | 0.10                | 4.04               | .....              | .....               | 1.40                  | 1.34                 | .....              | 4                     | 7.10              | 10.50                               | 4.41                                       | 22.90                                | 15.92                                    |
|     |                         | Midnapore      | 0.36                | 5.83               | .....              | .....               | 0.25                  | 1.00                 | .....              | 4                     | 7.44              | 9.08                                | 5.96                                       | 19.17                                | 16.81                                    |
|     |                         | Ghatatal       | 1.07                | 7.15               | 0.06               | 0.11                | 0.15                  | 0.95                 | .....              | 6                     | 9.79              | 11.12                               | 7.29                                       | 25.84                                | 19.28                                    |
|     |                         | Daeog          | 1.8                 | 0.52               | .....              | .....               | 1.75                  | 1.20                 | .....              | 4                     | 4.64              | 7.00                                | ?  | 15.18                                | 19.28                                    |
| ... | Howrah                  | Heria          | 0.50                | 1.15               | .....              | .....               | 2.65                  | 0.18                 | .....              | 4                     | 4.18              | 6.51                                | ?  | 18.24                                | ?  |
|     |                         | Bhagwanpore    | 0.13                | 1.18               | .....              | .....               | 3.19                  | 0.24                 | .....              | 4                     | 5.31              | 10.54                               | ?  | 19.11                                | ?  |
|     |                         | Garbeta        | 0.70                | 2.09               | .....              | .....               | 0.13                  | .....                | .....              | 3                     | 2.92              | 7.82                                | ?  | 15.93                                | ?  |
|     |                         | Diamond Har-   | 0.84                | 1.82               | .....              | .....               | 2.06                  | 1.08                 | 0.18               | 5                     | 6.48              | 9.73                                | 7.19                                       | 19.62                                | 19.43                                    |
|     |                         | bours          | 1.75                | 1.34               | .....              | 0.03                | 0.50                  | 0.50                 | .....              | 5                     | 4.20              | 7.78                                | 7.19                                       | 19.62                                | 19.43                                    |
| ... | Hooghly                 | Canning Town   | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                               | ?  | ?                                    | ?  |
|     |                         | Alipore Jail   | 3.21                | 4.48               | .....              | .....               | 1.30                  | 0.80                 | 0.20               | 5                     | 10.32             | 13.22                               | 5.81                                       | 22.99                                | 18.76                                    |
|     |                         | Barrackpore    | 0.65                | 2.70               | .....              | .....               | 1.45                  | .....                | .....              | 3                     | 4.80              | 7.69                                | 4.12                                       | 16.90                                | 17.47                                    |
|     |                         | Dum-Dum        | 0.39                | 1.75               | .....              | 0.06                | 0.46                  | 0.56                 | 0.16               | 6                     | 3.38              | 5.37                                | 4.72                                       | 16.46                                | 17.40                                    |
|     |                         | Haraset        | 0.87                | 1.28               | .....              | 0.18                | 0.05                  | 0.70                 | 0.10               | 6                     | 3.48              | 5.48                                | 4.31                                       | 12.17                                | 17.01                                    |
| ... | Hooghly                 | Buseerhat      | 1.26                | 1.69               | .....              | .....               | 1.00                  | .....                | .....              | 3                     | 3.95              | 6.04                                | 5.24                                       | 20.23                                | 20.18                                    |
|     |                         | Howrah         | 0.05                | 1.84               | .....              | 0.08                | 0.61                  | 0.75                 | 0.01               | 6                     | 4.24              | 7.74                                | 5.25                                       | 14.59                                | 17.64                                    |
|     |                         | Moheeraka      | 0.15                | 2.76               | 0.13               | .....               | 1.01                  | 0.54                 | 0.21               | 6                     | 5.40              | 6.24                                | 6.27                                       | 15.85                                | 18.22                                    |
|     |                         | (Ootuberiah)   | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                               | ?  | ?                                    | ?  |
|     |                         | Serampore      | 0.80                | 1.67               | .....              | 0.19                | .....                 | 1.46                 | 0.12               | 5                     | 3.61              | 7.71                                | 4.79                                       | 14.44                                | 16.97                                    |
| ... | Burdwan                 | Hooghly        | 3.92                | 2.08               | .....              | 0.02                | 0.21                  | 0.44                 | 0.10               | 6                     | 6.86              | 7.74                                | 4.38                                       | 23.25                                | 15.98                                    |
|     |                         | Jellabad       | 1.05                | 1.00               | .....              | .....               | .....                 | 0.50                 | 0.17               | 4                     | 3.32              | 6.32                                | 6.16                                       | 15.50                                | 18.46                                    |
|     |                         | Culina         | 1.40                | 0.70               | .....              | .....               | 0.36                  | 0.16                 | 0.27               | 5                     | 2.50              | 4.31                                | 4.56                                       | 15.14                                | 15.25                                    |
|     |                         | Burdwan        | 3.15                | 0.87               | 0.03               | .....               | 0.42                  | 0.30                 | 0.09               | 6                     | 4.46              | 7.03                                | 4.46                                       | 17.58                                | 15.93                                    |
|     |                         | Culina         | 4.39                | 0.10               | 0.50               | 0.25                | 0.0                   | 0.64                 | .....              | 6                     | 5.35              | 8.69                                | 4.26                                       | 32.43                                | 15.94                                    |
| ... | Bankoora                | Raneegunge     | 1.22                | 1.04               | 0.70               | .....               | 0.77                  | 0.02                 | .....              | 5                     | 4.65              | 6.12                                | 5.97                                       | 18.06                                | 16.25                                    |
|     |                         | Mankur         | 1.25                | 0.16               | .....              | .....               | 0.24                  | 0.28                 | .....              | 4                     | 2.53              | 0.23                                | ?  | 16.30                                | ?  |
|     |                         | Bankoora       | 1.80                | 0.68               | 0.20               | .....               | 0.39                  | 1.15                 | 0.25               | 6                     | 4.47              | 7.35                                | 6.09                                       | 17.05                                | 17.70                                    |
|     |                         | Bishenpore     | 2.85                | 0.80               | .....              | .....               | 0.17                  | 2.37                 | 0.05               | 5                     | 6.55              | 8.00                                | 5.36                                       | 18.63                                | 17.95                                    |
|     |                         | Mahara         | 3.38                | 0.82               | .....              | .....               | 0.31                  | 0.38                 | .....              | 4                     | 4.80              | 8.06                                | 5.80                                       | 20.24                                | 16.33                                    |
| ... | Beerbhoom               | Khatra         | 1.02                | 0.72               | .....              | .....               | 0.86                  | 0.83                 | 0.22               | 5                     | 3.67              | 7.27                                | 6.80                                       | 22.75                                | 18.94                                    |
|     |                         | Indus          | 1.60                | 1.00               | .....              | .....               | 0.16                  | 0.55                 | .....              | 4                     | 3.37              | 4.52                                | ?  | 12.23                                | ?  |
|     |                         | Kotalpore      | .....               | 1.25               | .....              | .....               | 0.51                  | .....                | .....              | 2                     | 1.76              | 4.58                                | ?  | 13.68                                | ?  |
|     |                         | Anda           | 1.98                | 0.85               | .....              | .....               | 0.16                  | 1.60                 | 0.20               | 5                     | 4.80              | 9.20                                | ?  | 13.65                                | ?  |
|     |                         | Ganajalghati   | 2.05                | 1.78               | .....              | .....               | 0.05                  | 0.86                 | .....              | 4                     | 4.74              | 9.53                                | ?  | 18.70                                | ?  |
| ... | Nuddea                  | Karpore        | 1.05                | 1.40               | .....              | 0.15                | 0.45                  | 0.65                 | 0.17               | 5                     | 3.30              | 6.42                                | ?  | 17.39                                | ?  |
|     |                         | Sonamukhi      | 1.50                | 0.54               | .....              | .....               | .....                 | 0.55                 | .....              | 4                     | 2.76              | 5.69                                | ?  | 15.39                                | ?  |
|     |                         | Bh. Soory      | 1.57                | 0.24               | 0.03               | .....               | .....                 | 0.72                 | 0.08               | 5                     | 2.64              | 7.85                                | 6.02                                       | 23.40                                | 14.61                                    |
|     |                         | Hetampore      | 4.72                | 0.19               | .....              | .....               | 0.11                  | 0.58                 | .....              | 4                     | 5.69              | 11.61                               | 5.63                                       | 22.62                                | 18.90                                    |
|     |                         | Kampore-Haut   | 0.24                | 0.12               | 0.13               | 0.48                | .....                 | 0.48                 | 0.08               | 6                     | 1.53              | 6.37                                | 4.63                                       | 23.46                                | 16.27                                    |
| ... | Nuddea                  | Bulpore        | 5.23                | 0.39               | 0.21               | .....               | 0.04                  | 0.37                 | 0.13               | 6                     | 6.37              | 19.70                               | ?  | 20.23                                | ?  |
|     |                         | Ranaghat       | 0.60                | 0.20               | 0.18               | .....               | 0.12                  | 0.25                 | 0.25               | 6                     | 1.65              | 3.40                                | 5.00                                       | 13.80                                | 17.62                                    |
|     |                         | Kishinagar     | 1.13                | 0.06               | 0.02               | 0.03                | 0.15                  | 0.23                 | 0.08               | 7                     | 1.72              | 3.50                                | 4.80                                       | 19.05                                | 16.32                                    |
|     |                         | Choudanga      | 0.75                | .....              | .....              | 0.38                | .....                 | 0.14                 | 0.24               | 4                     | 1.61              | 0.11                                | 5.34                                       | 16.73                                | 19.28                                    |
|     |                         | Meherpore      | 0.74                | 0.36               | .....              | 0.04                | .....                 | 0.25                 | 0.47               | 5                     | 1.80              | 2.30                                | 4.86                                       | 23.08                                | 17.62                                    |
| ... | Kheolna                 | Kooshtea       | 0.75                | 0.26               | 0.35               | 0.18                | 0.14                  | .....                | 0.30               | 6                     | 2.37              | 4.63                                | 5.51                                       | 17.82                                | 20.98                                    |
|     |                         | Satkhirn       | 2.15                | 1.10               | 0.14               | 0.11                | 0.63                  | 0.13                 | .....              | 6                     | 3.65              | 4.77                                | 6.10                                       | 14.52                                | 21.01                                    |
|     |                         | Bakirhat       | 0.14                | 0.25               | 1.30               | 0.12                | 0.15                  | 0.88                 | 0.70               | 7                     | 3.54              | 5.91                                | 6.39                                       | 17.50                                | 24.22                                    |
|     |                         | Kheolna        | 0.04                | .....              | 0.06               | 0.05                | 0.05                  | 0.24                 | .....              | 5                     | 1.06              | 2.07                                | 5.23                                       | 16.32                                | 21.06                                    |
|     |                         | Narail         | 0.47                | 0.05               | 0.15               | .....               | .....                 | 0.25                 | .....              | 4                     | 0.92              | 1.70                                | 4.47                                       | 8.03                                 | 19.11                                    |
| ... | Jessore                 | Jessore        | 0.25                | 0.16               | 0.07               | .....               | 0.66                  | 0.61                 | 0.16               | 7                     | 1.99              | 3.15                                | 5.00                                       | 15.00                                | 19.16                                    |
|     |                         | Dhenidah       | .....               | 0.15               | .....              | 0.69                | .....                 | 0.20                 | .....              | 3                     | 0.63              | 3.12                                | 5.00                                       | 16.89                                | 21.10                                    |
|     |                         | Mucorah        | 0.39                | 0.50               | 0.06               | .....               | .....                 | 0.19                 | 0.53               | 5                     | 1.64              | 3.02                                | 5.02                                       | 15.24                                | 21.23                                    |
|     |                         | Bongong        | .....               | 0.80               | .....              | 0.50                | .....                 | 0.44                 | .....              | 3                     | 1.74              | 4.11                                | 5.19                                       | 15.24                                | 18.71                                    |
|     |                         | Moorshedabad   | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                               | ?  | ?                                    | ?  |
| ... | Moorshedabad            | Kandi          | 0.50                | .....              | 0.92               | .....               | 0.28                  | 0.82                 | .....              | 4                     | 2.32              | 8.50                                | 5.91                                       | 27.75                                | 17.45                                    |
|     |                         | Bernampore     | 0.25                | .....              | 0.42               | 0.09                | .....                 | 0.45                 | .....              | 4                     | 1.91              | 6.40                                | 5.32                                       | 22.48                                | 17.46                                    |
|     |                         | Lallach        | 2.31                | .....              | 0.20               | 0.07                | .....                 | 0.23                 | 0.17               | 5                     | 3.94              | 8.59                                | 4.67                                       | 20.92                                | 15.76                                    |
|     |                         | Azara-Jorge    | 1.10                | 0.08               | 0.57               | 0.29                | 0.06                  | 0.27                 | 0.17               | 7                     | 2.74              | 8.15                                | 4.75                                       | 27.29                                | 17.11                                    |
|     |                         | Jungpore       | 0.52                | 0.21               | 0.18               | 0.05                | 0.11                  | 0.67                 | 0.12               | 7                     | 1.26              | 6.59                                | 6.05                                       | 30.67                                | 16.46                                    |
| ... | Chittagong              | Lakshmi        | 0.85                | 0.75               | 0.90               | 0.10                | 0.24                  | 0.05                 | 0.10               | 7                     | 2.59              | 7.04                                | 6.39                                       | 36.44                                | 18.07                                    |
|     |                         | Akhraani       | 0.55                | 0.10               | 1.32               | 0.04                | 0.08                  | 0.10                 | .....              | 7                     | 2.22              | 5.80                                | ?  | 27.56                                | ?  |
|     |                         | Patkabari      | 0.10                | .....              | 0.10               | 0.35                | 0.10                  | .....                | .....              | 4                     | 0.65              | 5.25                                | ?  | 13.03                                | ?  |
|     |                         | Cox's Bazar    | 2.45                | 1.19               | 1.54               | 0.27                | 0.27                  | 1.07                 | 0.13               | 7                     | 7.12              | 22.67                               | 18.14                                      | 42.86                                | 50.21                                    |
|     |                         | Chittagong     | 0.40                | .....              | 0.85               | 0.47                | .....                 | 0.65                 | .....              | .....                 | .....             | .....                               | 8.80                                       | 30.43                                | ?  |
| ... | Chittagong Hill Tracts. | Kotagdia       | 1.00                | 1.24               | 1.12               | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                               | ?  | ?                                    | ?  |
|     |                         | Satkanya       | 1.35                | 2                  |                    |                     |                       |                      |                    |                       |                   |                                     |  |                                      |  |

**SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 20, 1887.**

**Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 15th of July 1887—contd.**

| Meteorological division. | District.       | Station.       | RAINFALL.           |                   |                    |                     |                       |                      |                    | TOTAL.                |                   | Total rainfall since 1st of month. | Average total rainfall from 1st of month. | Total rainfall since 15th May 1887. | Average rainfall from 15 May to date. |
|--------------------------|-----------------|----------------|---------------------|-------------------|--------------------|---------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------|------------------------------------|---|-------------------------------------|---------------------------------------|
|                          |                 |                | Saturday, 8th July. | Sunday, 9th July. | Monday, 10th July. | Tuesday, 11th July. | Wednesday, 12th July. | Thursday, 13th July. | Friday, 14th July. | Number of rainy days. | Rainfall of week. |                                    |   |                                     |                                       |
| WEST BENGAL—contd.       | Noakhally       | Gournaddi      | 1.31                | 1.55              | 0.02               | 0.11                | 0.13                  | 1.48                 | .....              | 6                     | 5.23              | 6.54                               | ?   | 17.49                               | 42                                    |
|                          |                 | Baughat        | 0.23                | 0.45              | 0.85               | 0.28                | 0.49                  | 2.05                 | 0.50               | 7                     | 5.44              | 9.27                               | ?   | 25.37                               | 46                                    |
|                          |                 | Noakhally      | 0.28                | 0.60              | 0.62               | .....               | 0.15                  | .....                | .....              | .....                 | .....             | 10.33                              | ?   | .....                               | .....                                 |
|                          |                 | Fenny          | 1.10                | 0.73              | 0.21               | 1.30                | 0.04                  | .....                | .....              | .....                 | .....             | 11.82                              | ?   | .....                               | .....                                 |
|                          | Furzedpore      | Harishpore     | 0.62                | 0.72              | 0.85               | 0.28                | .....                 | .....                | .....              | .....                 | .....             | .....                              | ?   | .....                               | .....                                 |
|                          |                 | Ramganj        | 0.32                | 1.26              | 0.70               | 0.05                | 0.38                  | 0.32                 | .....              | .....                 | .....             | .....                              | ?   | .....                               | .....                                 |
|                          |                 | Madaripore     | 0.17                | .....             | 0.16               | 0.15                | 0.13                  | 0.86                 | 0.05               | 6                     | 1.52              | 2.48                               | 5.33                                      | 17.06                               | 23                                    |
|                          |                 | Furzedpore     | 1.33                | 0.17              | 0.17               | 0.11                | 0.11                  | 0.27                 | 0.25               | 6                     | 2.21              | 8.16                               | 5.49                                      | 14.17                               | 24                                    |
|                          | Dacca           | Goalundo       | 1.29                | 0.17              | .....              | .....               | 0.34                  | 0.25                 | 0.11               | 6                     | 2.16              | 2.75                               | 5.04                                      | 11.49                               | 26                                    |
|                          |                 | Munshigunge    | 0.33                | 1.46              | 0.24               | .....               | 1.60                  | 0.34                 | .....              | .....                 | .....             | .....                              | 7.39                                      | .....                               | .....                                 |
|                          |                 | Dacca          | 0.56                | 1.05              | 0.13               | 0.27                | 0.21                  | 0.32                 | .....              | 6                     | 3.04              | 3.75                               | 5.85                                      | 13.78                               | 27                                    |
|                          |                 | Naraingunge    | 0.66                | 1.28              | 0.18               | 0.29                | 1.31                  | 0.21                 | 0.26               | 7                     | 4.19              | 4.00                               | 7.12                                      | 17.34                               | 28                                    |
|                          | Hill Tipperah   | Mamickunge     | 0.15                | 0.61              | 0.12               | 0.40                | 0.20                  | 0.31                 | 1.11               | 7                     | 2.90              | 3.90                               | 6.29                                      | 3.24                                | 1.7                                   |
|                          |                 | Jogdebpore     | 1.40                | 0.74              | 0.10               | 1.30                | 0.30                  | .....                | 0.27               | 6                     | 4.71              | 7.25                               | ?   | 23.76                               | .....                                 |
|                          |                 | Agartilla      | .....               | 1.05              | 0.35               | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                              | 5.61                                      | .....                               | .....                                 |
|                          |                 | Comilla        | 0.09                | 0.07              | 0.05               | 0.03                | 0.34                  | .....                | 0.12               | 6                     | 0.90              | 3.10                               | 7.34                                      | 19.65                               | 24                                    |
|                          | Tipperah        | Chundipore     | 0.20                | 1.40              | 1.06               | 0.30                | 0.30                  | 1.10                 | 0.70               | 7                     | 5.29              | 6.80                               | 6.94                                      | 17.04                               | 31                                    |
|                          |                 | Brahmanberia   | 0.15                | 0.15              | 0.05               | .....               | 0.21                  | .....                | .....              | .....                 | .....             | .....                              | 5.45                                      | .....                               | .....                                 |
|                          |                 | Ramchandrapore | 0.44                | 0.10              | 0.45               | 0.11                | 0.79                  | .....                | 0.38               | 6                     | 2.27              | 4.61                               | ?   | 18.05                               | 26                                    |
|                          |                 | Nasirungar     | .....               | .....             | 1.40               | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                              | ?   | .....                               | .....                                 |
|                          | Mymensingh      | Daulkandi      | 0.27                | 0.85              | 0.32               | 0.12                | 1.55                  | 0.02                 | 0.13               | 7                     | 4.10              | 6.34                               | ?   | 17.50                               | .....                                 |
|                          |                 | Kash           | .....               | 0.14              | .....              | .....               | .....                 | .....                | .....              | 1                     | 0.14              | 3.21                               | ?   | 18.97                               | .....                                 |
|                          |                 | Laksham        | .....               | .....             | 0.21               | 0.11                | 0.25                  | .....                | 0.15               | 4                     | 0.72              | 1.26                               | ?   | .....                               | .....                                 |
|                          |                 | Kishoreganj    | 0.42                | 0.34              | 0.17               | .....               | 1.62                  | .....                | .....              | 4                     | 2.54              | 4.80                               | 5.73                                      | 33.19                               | 29                                    |
|                          | Pubna           | Atia (Tanpail) | .....               | 0.05              | 0.05               | .....               | .....                 | .....                | .....              | 2                     | 0.12              | 2.83                               | 5.18                                      | 19.02                               | 29                                    |
|                          |                 | Mymensingh     | 0.63                | 0.26              | 0.18               | .....               | 0.05                  | .....                | .....              | 3                     | 0.34              | 3.61                               | 6.80                                      | 25.61                               | 31                                    |
|                          |                 | Jamshilpore    | 0.24                | 0.24              | 0.18               | .....               | .....                 | .....                | .....              | 2                     | 0.41              | 1.21                               | 6.20                                      | 29.11                               | 31                                    |
|                          |                 | Neorokona      | 0.26                | 0.48              | 0.22               | .....               | 0.17                  | .....                | .....              | 4                     | 1.36              | 3.83                               | 7.12                                      | 35.40                               | 24                                    |
|                          | Bogra           | Subarnakhal    | 1.10                | 0.48              | 0.68               | 0.5                 | 0.60                  | .....                | .....              | 5                     | 3.11              | 5.24                               | ?   | 26.83                               | 25                                    |
|                          |                 | Durgapore      | .....               | .....             | 1.10               | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                              | ?   | .....                               | .....                                 |
|                          |                 | Deuaganj       | .....               | .....             | 0.28               | .....               | .....                 | .....                | 0.37               | 2                     | 0.65              | 0.65                               | ?   | 41.85                               | .....                                 |
|                          |                 | Sarajung       | 0.31                | 0.34              | 0.23               | .....               | 0.12                  | 0.31                 | 0.18               | 5                     | 3.17              | 8.06                               | 4.84                                      | 16.28                               | 19                                    |
|                          | Najshahye       | Benuleah       | .....               | .....             | 0.72               | 0.32                | 0.11                  | .....                | 0.04               | 5                     | 2.11              | 4.51                               | 6.70                                      | 22.38                               | 19                                    |
|                          |                 | Natore         | .....               | 0.70              | .....              | .....               | .....                 | .....                | .....              | 1                     | 0.70              | 4.48                               | 6.82                                      | 12.60                               | 20                                    |
|                          |                 | Nagpur         | 1.10                | .....             | 0.56               | 0.27                | .....                 | 0.04                 | .....              | 5                     | 1.98              | 3.63                               | 1.00                                      | 20.10                               | 20                                    |
|                          |                 | Latpore        | 0.18                | 1.11              | .....              | 0.32                | 0.13                  | 0.13                 | 0.03               | 6                     | 2.32              | 4.81                               | 2.85                                      | 15.01                               | 19                                    |
|                          | Maldah          | Manda          | .....               | 0.39              | 1.38               | 0.22                | .....                 | .....                | 0.09               | 4                     | 2.08              | 5.85                               | ?   | 27.41                               | .....                                 |
|                          |                 | Maldah         | 0.03                | 0.13              | 0.07               | 0.09                | .....                 | 0.02                 | 0.07               | 6                     | 1.02              | 5.85                               | 6.32                                      | 28.38                               | 19                                    |
|                          |                 | Chanchal       | .....               | 0.05              | 0.52               | 0.60                | .....                 | 0.20                 | 0.20               | 5                     | 1.03              | 4.72                               | 7.34                                      | 25.31                               | 19                                    |
|                          |                 | Gogai          | .....               | 1.50              | 0.20               | .....               | .....                 | 0.50                 | 0.50               | 3                     | 2.20              | 5.20                               | ?   | 29.61                               | 23                                    |
|                          | Dinapore        | Stojanj        | .....               | 0.60              | 0.75               | 0.71                | .....                 | 0.08                 | 0.10               | 5                     | 2.44              | 4.00                               | ?   | 24.50                               | .....                                 |
|                          |                 | Mohadebpore    | .....               | 0.25              | 0.16               | .....               | .....                 | 0.30                 | .....              | 3                     | 0.71              | 2.96                               | 0.46                                      | 2.84                                | 22                                    |
|                          |                 | Charanm        | 0.07                | 0.03              | 0.14               | .....               | .....                 | .....                | .....              | 3                     | 0.23              | 5.07                               | 7.00                                      | 36.30                               | 24                                    |
|                          |                 | Kamunke        | 0.11                | 0.11              | 0.05               | 0.06                | .....                 | 0.21                 | .....              | 4                     | 0.45              | 4.61                               | 0.61                                      | 37.07                               | 24                                    |
|                          | Kumgure         | Dinapore       | 0.07                | 0.03              | 0.20               | .....               | .....                 | 0.10                 | .....              | 4                     | 1.00              | 1.01                               | 7.02                                      | 47.00                               | 27                                    |
|                          |                 | Halokorhat     | 0.07                | 0.27              | 0.06               | .....               | .....                 | 0.07                 | .....              | 1                     | 1.07              | 5.50                               | 8.80                                      | 39.66                               | 23                                    |
|                          |                 | Bhawanigunge   | .....               | .....             | .....              | .....               | .....                 | 1.61                 | .....              | 1                     | 1.61              | 3.42                               | ?   | 34.74                               | .....                                 |
|                          |                 | (Gyabanda)     | .....               | 0.15              | .....              | 0.27                | .....                 | 0.12                 | .....              | 3                     | 0.54              | 0.88                               | 6.07                                      | 37.56                               | 26                                    |
|                          | Jaligore        | Rungpore       | 0.30                | 0.05              | 0.10               | .....               | .....                 | 0.34                 | 0.01               | 5                     | 0.92              | 3.41                               | 10.34                                     | 41.29                               | 35                                    |
|                          |                 | Kurugara       | .....               | 0.12              | .....              | .....               | .....                 | 0.60                 | .....              | 12                    | 0.72              | 3.67                               | 7.65                                      | 42.20                               | 38                                    |
|                          |                 | Bagtore        | .....               | .....             | 0.19               | .....               | .....                 | 0.27                 | .....              | 12                    | 0.76              | 6.14                               | 7.80                                      | 67.92                               | 40                                    |
|                          |                 | (Asiphamari)   | .....               | .....             | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                              | .....                                     | .....                               | .....                                 |
|                          | Cooch Behar     | Uisore         | .....               | .....             | .....              | .....               | .....                 | 1.61                 | .....              | 1                     | 1.61              | 3.42                               | ?   | 34.74                               | .....                                 |
|                          |                 | Jaligore       | 0.37                | 0.07              | .....              | 0.55                | .....                 | 0.77                 | .....              | 4                     | 6.96              | 11.00                              | 11.89                                     | 69.63                               | 49                                    |
|                          |                 | Alpore Doar    | 1.00                | 0.18              | 0.19               | .....               | .....                 | 2.04                 | .....              | 4                     | 3.41              | 10.77                              | ?   | 76.08                               | 49                                    |
|                          |                 | Fallacotta     | 0.11                | 1.00              | .....              | 0.12                | .....                 | 1.64                 | .....              | 4                     | 3.17              | 12.11                              | ?   | 68.51                               | 49                                    |
|                          | Darjeeling Hill | Debaganj       | 0.10                | .....             | 0.02               | .....               | .....                 | 1.20                 | .....              | 3                     | 0.32              | 3.65                               | ?   | 50.84                               | 49                                    |
|                          |                 | Dihata         | 0.36                | 0.25              | .....              | 0.56                | .....                 | 0.05                 | .....              | 4                     | 1.22              | 4.17                               | 6.76                                      | 56.20                               | 45                                    |
|                          |                 | Cooch Behar    | .....               | 1.00              | .....              | .....               | .....                 | 1.12                 | .....              | 22                    | 2.78              | 6.94                               | 11.5                                      | 74.01                               | 45                                    |
|                          |                 | Mickiganje     | 0.22                | .....             | 0.06               | .....               | .....                 | 0.72                 | .....              | 8                     | 1.00              | 6.11                               | 8.82                                      | 64.27                               | 44                                    |
|                          | Purneah         | Matabanaka     | 0.19                | 1.05              | 0.18               | .....               | 0.03                  | 1.13                 | 0.02               | 6                     | 2.00              | 11.19                              | 8.87                                      | 65.28                               | 40                                    |
|                          |                 | Buxa           | 1.14                | 0.62              | 2.40               | 0.15                | .....                 | 3.70                 | 0.20               | 6                     | 8.11              | 14.95                              | 19.90                                     | 62.00                               | 77                                    |
|                          |                 | Silguri        | 0.23                | 0.03              | 0.43               | 0.14                | .....                 | 0.80                 | .....              | 5                     | 1.53              | 12.50                              | 18.67                                     | 50.47                               | 47                                    |
|                          |                 | Darjeeling     | 1.87                | 1.02              | 3.21               | 0.32                | .....                 | 2.77                 | 1.21               | 6                     | 10.10             | 16.31                              | 15.35                                     | 60.08                               | 43                                    |
|                          | North Bengal    | Kaunpung       | 1.98                | 0.89              | 2.41               | 1.70                | .....                 | 1.71                 | 2.58               | 6                     | 11.27             | 10.30                              | 12.47                                     | 43.41                               | 33                                    |
|                          |                 | Kissengunge    | 0.40                | .....             | 0.38               | .....               | .....                 | .....                | 0.20               | 3                     | 0.98              | 5.09                               | 0.79                                      | 48.97                               | 28                                    |
|                          |                 | Arrareah       | 0.13                | 0.15              | 0.15               | 0.12                | 0.11                  | .....                | 0.05               | 6                     | 0.72              | 4.93                               | 8.42                                      | 51.00                               | 23                                    |
|                          |                 | Purneah        | 0.04                | 0.63              | 1.22               | 0.81                | .....                 | .....                | 0.15               | 5                     | 2.28              | 4.73                               | 6.30                                      | 41.57                               | 18                                    |
|                          | Durbhunga       | Gondwara       | .....               | 0.30              | 0.45               | 0.25                | .....                 | 0.45                 | 0.49               | 5                     | 1.94              | 2.83                               | ?   | .....                               | .....                                 |
|                          |                 | Balarampore    | .....               | .....             | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                              | ?   | .....                               | .....                                 |
|                          |                 | Mariari        | .....               | 0.09              | 0.32               | 0.20                | .....                 | 0.50                 | 0.30               | 4                     | 1.32              | 5.60                               | ?   | 25.81                               | .....                                 |
|                          |                 | Kaliaganj      | 0.03                | .....             | .....              | .....               | .....                 | 0.54                 | .....              | 3                     | 0.68              | 5.36                               | ?   | 38.30                               | .....                                 |
|                          | Moufferpore     | Madadapore     | 0.55                | .....             | 1.05               | .....               | 0.65                  | .....                | .....              | 5                     | 3.15              | 4.89                               | 0.14                                      | 25.14                               | 16                                    |
|                          |                 | Boodol         | 0.08                | 0.21              | 0.03               | 0.25                | 0.65                  | .....                | .....              | 5                     | 1.22              | 1.03                               | 5.03                                      | 24.90                               | 10                                    |
|                          |                 | Protaganj      | .....               | 0.26              | 0.81               | .....               | .....                 | 0.20                 | 0.34               | 4                     | 1.61              | 3.88                               | ?   | 23.14                               | .....                                 |
|                          |                 | Tajpore        | 0.65                | 0.02              | .....              | 0.32                | 0.39                  | 0.08                 | .....              | 5                     | 1.31              | 5.23                               | 6.25                                      | 24.20                               | 14                                    |
|                          | Udhupar         | Durbhunga      | 1.81                | .....             | 0.36               | 0.44                | 0.41                  | 0.03                 | .....              | 5                     | 3.08              | 7.50                               | 6.38                                      | 25.33                               | 15                                    |
|                          |                 | Madhyabani     | .....               | .....             | 0.27               | 0.37                | 0.35                  | .....                | 0.56               | 4                     | 1.40              | 2.55                               | 6.13                                      | 20.37                               | 15                                    |
|                          |                 | Rakera         | 0.59                | 0.13              | 0.70               | 0.45                | 0.40                  | .....                | .....              | 5                     | 2.27              | 7.29                               | ?   | 25.09                               | .....                                 |
|                          |                 | Kohara         | .....               | .....             | .....              | .....               | .....                 | 1.40                 | 0.60               | 3                     | 2.09              | 8.30                               | ?   | 23.23                               | .....                                 |
|                          | Udhupar         | Sitamarhi      | .....               | .....             | 0.09               | 0.75                | 0.30                  | .....                | .....              | 3                     | 1.14              | 4.30                               | 6.22                                      | 23.76                               | 15                                    |
|                          |                 | Moufferpore    | .....               | 0.22              | 0.24               | 0.14                | 1.00                  | 0.13                 | .....              | 5                     | 1.81              | 5.10                               | 6.74                                      | 20.38                               | 15                                    |
|                          |                 | Hajipore       | 0.20                | 0.03              | 0.18               | .....               | 2.01                  | .....                | 0.11               | 5                     | 3.49              | 4.82                               | 0.01                                      | 21.20                               | 13                                    |
|                          |                 | Kara           | .....               | 0.35              | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                              | ?   | .....                               | .....                                 |
|                          | Udhupar         | Nakha          | .....               | .....             | 0.40               | 0.14                | 0.80                  | .....                | .....              | .....                 | .....             | .....                              | ?   | .....                               | .....                                 |
|                          |                 | Sukra          | .....               | .....             | .....              | .....               | .....                 | .....                | .....              | .....                 | .....             | .....                              | ?   | .....                               | .....                                 |
|                          |                 | Papra          | .....               | .....             | .....              | 0.51                | .....                 | .....                | .....              | .....                 | .....             | .....                              | ?   | .....                               | .....                                 |
|                          |                 | Motihari       | .....               | .....             | .....              | 0.00                | 0.28                  | .....                | .....              | 2                     | 0.88              | 4.33                               | 6.31                                      | 23.60                               | 15                                    |
|                          | Udhupar         | Botuh          | .....               | .....             | 0.06               | 0                   |                       |                      |                    |                       |                   |                                    |   |                                     |                                       |

# SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 20, 1887.

## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 15th of July 1887—consolid.

| Geographical Division. | District.           | Station.          | RAINFALL.           |                    |                    |                     |                       |                      |                    | TOTAL.                |                   | Total rainfall since 1st of month. | Average total rainfall from 1st of month. | Total rainfall since 15th May 1887. | Average rainfall from 15th May to date. |
|------------------------|---------------------|-------------------|---------------------|--------------------|--------------------|---------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------|------------------------------------|---|-------------------------------------|---|
|                        |                     |                   | Saturday, 9th July. | Sunday, 10th July. | Monday, 11th July. | Tuesday, 12th July. | Wednesday, 13th July. | Thursday, 14th July. | Friday, 15th July. | Number of rainy days. | of Rainfall week. |                                    |   |                                     |   |
| N. BENGAL.             | Bhawalpur.          | Gopalgunge ...    | .....               | 1.10               | 0.13               | 0.24                | 0.90                  | 0.08                 | .....              | 5                     | 2.54              | 7.52                               | 7.52                                      | 16.70                               | 15.11                                   |
|                        |                     | Swan ...          | 0.50                | 0.38               | 0.03               | 0.33                | 0.30                  | .....                | .....              | 5                     | 1.55              | 4.72                               | 6.05                                      | 14.99                               | 13.6                                    |
|                        |                     | Chuprah ...       | 0.03                | 1.29               | .....              | .....               | 0.48                  | 0.11                 | 0.17               | 4                     | 2.04              | 5.07                               | 6.12                                      | 14.61                               | 12.7                                    |
|                        | Shahabad.           | Buzar ...         | .....               | 0.57               | 0.08               | 0.37                | 0.05                  | 0.02                 | .....              | 5                     | 1.40              | 2.13                               | 5.18                                      | 11.58                               | 10.5                                    |
|                        |                     | Dohree ...        | 0.20                | 2.27               | 0.55               | .....               | 1.07                  | 0.10                 | 0.17               | 6                     | 4.45              | 5.44                               | ?   | 17.28                               | ?                                       |
|                        |                     | Bhubooh ...       | 0.75                | 1.20               | 0.20               | 0.30                | 1.45                  | 0.45                 | .....              | 6                     | 4.35              | 6.07                               | 5.09                                      | 12.22                               | 11.4                                    |
|                        |                     | Nasseram ...      | 0.32                | 1.10               | 0.20               | .....               | 0.29                  | 0.67                 | 0.20               | 6                     | 2.18              | 3.33                               | 4.80                                      | 10.73                               | 10.7                                    |
|                        |                     | Arrah ...         | 0.55                | 1.83               | .....              | 0.30                | 0.25                  | 0.15                 | .....              | 5                     | 3.08              | 4.40                               | 5.39                                      | 10.03                               | 12.0                                    |
|                        |                     | Mohania ...       | .....               | .....              | 0.60               | 0.30                | 1.50                  | .....                | .....              | 3                     | 2.40              | 4.50                               | ?   | ?                                   | ?                                       |
|                        |                     | Gya ...           | .....               | 2.44               | 0.61               | .....               | 0.48                  | 0.31                 | 0.06               | 5                     | 3.93              | 5.20                               | 5.00                                      | 16.12                               | 11.5                                    |
|                        |                     | Gya ...           | 0.45                | 1.02               | 0.43               | 0.31                | 0.20                  | 0.16                 | .....              | 6                     | 2.57              | 4.27                               | 4.95                                      | 15.17                               | 12.3                                    |
|                        |                     | Nowadah ...       | 0.22                | 0.79               | 0.17               | .....               | 1.56                  | 0.11                 | .....              | 5                     | 2.85              | 8.54                               | 5.50                                      | 16.03                               | 12.3                                    |
|                        |                     | Jehanabad ...     | 1.10                | 1.28               | 0.06               | 0.07                | 0.28                  | 0.71                 | 0.11               | 7                     | 3.63              | 8.44                               | 5.61                                      | 14.58                               | 11.6                                    |
| N. BENGAL.             | Patna.              | Arwal ...         | .....               | 0.17               | .....              | 1.18                | .....                 | 0.31                 | .....              | 3                     | 1.66              | 5.23                               | ?   | 16.28                               | ?                                       |
|                        |                     | Daudnagar ...     | 0.80                | 0.20               | .....              | 0.50                | .....                 | .....                | .....              | 3                     | 1.50              | 3.10                               | ?   | 14.12                               | ?                                       |
|                        |                     | Sherghati ...     | 0.27                | 2.30               | 0.50               | .....               | 0.20                  | 0.09                 | .....              | 5                     | 3.36              | 4.43                               | ?   | 13.72                               | ?                                       |
|                        |                     | Rajauli ...       | .....               | 0.80               | .....              | 0.83                | .....                 | 0.41                 | .....              | 3                     | 2.04              | 3.84                               | ?   | 8.90                                | ?                                       |
|                        |                     | Pakri Barawan ... | 0.50                | 0.20               | .....              | 0.25                | 0.27                  | .....                | .....              | 4                     | 1.22              | 2.54                               | ?   | 6.77                                | ?                                       |
|                        |                     | Patna ...         | 0.51                | 0.09               | 0.18               | 0.11                | 0.66                  | .....                | 0.04               | 6                     | 1.59              | 3.81                               | 5.01                                      | 19.57                               | 14.0                                    |
|                        |                     | Dinapore ...      | 1.85                | 0.95               | 0.20               | .....               | 0.04                  | 0.05                 | .....              | 5                     | 2.49              | 5.91                               | 5.55                                      | 21.23                               | 12.8                                    |
|                        | Monkhyr.            | Behar ...         | 0.23                | 0.23               | .....              | 0.02                | 0.63                  | 0.06                 | .....              | 5                     | 1.17              | 5.51                               | 5.09                                      | 15.18                               | 12.3                                    |
|                        |                     | Barra ...         | .....               | 0.30               | .....              | 0.40                | 2.00                  | 0.25                 | 0.61               | 5                     | 3.59              | 5.29                               | 5.51                                      | 16.26                               | 11.7                                    |
|                        |                     | Rickram ...       | 0.30                | 1.40               | .....              | 0.25                | .....                 | 0.10                 | .....              | 4                     | 2.05              | 4.70                               | ?   | 14.30                               | ?                                       |
| N. BENGAL.             | South Bhagalpore.   | Iliss ...         | 0.05                | 0.59               | .....              | .....               | .....                 | 0.57                 | .....              | 3                     | 1.21              | 6.06                               | ?   | 16.93                               | ?                                       |
|                        |                     | Begoesari ...     | 0.53                | 0.36               | 0.10               | .....               | 0.20                  | 0.42                 | 0.41               | 6                     | 2.02              | 7.15                               | 5.02                                      | 21.29                               | 12.3                                    |
|                        |                     | Monkhyr ...       | .....               | 0.13               | 0.31               | .....               | 0.08                  | 0.05                 | .....              | 4                     | 0.67              | 8.16                               | 5.24                                      | 21.16                               | 13.0                                    |
|                        | Sonthal Pergunnahs. | Jamui ...         | 1.06                | 0.53               | 0.14               | 0.34                | .....                 | 0.07                 | .....              | 5                     | 2.14              | 6.45                               | 5.18                                      | 16.57                               | 13.2                                    |
|                        |                     | Gogri ...         | .....               | .....              | .....              | .....               | .....                 | .....                | 3.70               | 1                     | 3.70              | 4.18                               | ?   | 24.33                               | ?                                       |
|                        |                     | Shekhpura ...     | .....               | .....              | .....              | .....               | 1.80                  | 0.90                 | .....              | 2                     | 2.70              | 4.50                               | ?   | 12.80                               | ?                                       |
|                        |                     | Bhagalpore ...    | 0.50                | 0.12               | .....              | 0.13                | 0.02                  | .....                | 0.25               | 5                     | 1.02              | 4.52                               | 4.74                                      | 21.20                               | 13.6                                    |
|                        |                     | Banka ...         | 0.13                | 0.35               | 0.31               | .....               | 0.50                  | .....                | .....              | 4                     | 1.29              | 3.91                               | 5.10                                      | 17.40                               | 14.4                                    |
|                        |                     | Kolging ...       | .....               | .....              | .....              | .....               | 0.41                  | .....                | .....              | 1                     | 0.41              | 3.36                               | ?   | 26.79                               | ?                                       |
|                        |                     | Rajmahal ...      | 0.22                | .....              | 1.09               | .....               | .....                 | .....                | 0.81               | 3                     | 2.25              | 5.30                               | 7.27                                      | 32.08                               | 19.7                                    |
|                        |                     | Godda ...         | 1.09                | 0.34               | 0.09               | 0.18                | .....                 | 0.41                 | 0.39               | 6                     | 2.41              | 0.97                               | 4.42                                      | 30.51                               | 13.2                                    |
| N. BENGAL.             | Hazaribagh.         | Pasour ...        | 0.25                | 0.43               | 0.15               | 0.32                | .....                 | 1.25                 | 0.25               | 6                     | 2.75              | 8.72                               | 6.39                                      | 24.70                               | 19.5                                    |
|                        |                     | Nya Dookha ...    | 1.22                | 0.18               | 0.14               | 0.37                | 0.67                  | 0.53                 | 0.07               | 7                     | 2.94              | 4.45                               | 5.80                                      | 20.75                               | 16.7                                    |
|                        |                     | Deognur ...       | 1.50                | 1.13               | 0.07               | 0.38                | 0.11                  | 0.32                 | 0.17               | 7                     | 3.57              | 8.22                               | 6.02                                      | 22.47                               | 16.1                                    |
|                        |                     | Jamuna ...        | 0.59                | 2.20               | 0.39               | 0.09                | .....                 | 1.54                 | 0.78               | 6                     | 5.58              | 7.19                               | 5.78                                      | 17.01                               | 17.2                                    |
|                        |                     | Nutra ...         | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | ?                     | ?                 | ?                                  | ?   | ?                                   | ?                                       |
|                        |                     | Nasihat ...       | 0.70                | 0.51               | 0.25               | .....               | 0.28                  | 0.11                 | 0.08               | 6                     | 1.96              | 5.88                               | ?   | 12.90                               | ?                                       |
|                        |                     | Pachamba ...      | 1.62                | .....              | 1.15               | .....               | .....                 | 0.64                 | 0.45               | 4                     | 3.90              | 7.38                               | 5.81                                      | 16.86                               | 15.5                                    |
|                        | Lohardugga.         | (Girdi). ...      | 0.83                | 0.91               | 0.22               | .....               | 0.26                  | 1.14                 | 0.32               | 6                     | 3.07              | 6.79                               | 6.17                                      | 16.39                               | 14.8                                    |
|                        |                     | Hazaribagh ...    | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | ?                     | ?                 | ?                                  | ?   | ?                                   | ?                                       |
|                        |                     | Sontaguran ...    | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | ?                     | ?                 | ?                                  | ?   | ?                                   | ?                                       |
|                        |                     | Mahudi Hill ...   | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | ?                     | ?                 | ?                                  | ?   | ?                                   | ?                                       |
|                        |                     | Jhoomrah Hill ... | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | ?                     | ?                 | ?                                  | ?   | ?                                   | ?                                       |
|                        |                     | Barhi ...         | 0.06                | 0.50               | .....              | .....               | 0.20                  | 0.72                 | .....              | 4                     | 2.44              | 4.49                               | ?   | 11.25                               | ?                                       |
|                        |                     | Chatra ...        | 0.14                | 1.89               | 0.49               | .....               | .....                 | 0.32                 | 0.31               | 5                     | 3.14              | 5.40                               | ?   | 16.93                               | ?                                       |
| N. BENGAL.             | Singbhoom.          | Haragdeha ...     | 3.4                 | 5.5                | 0.96               | .....               | 1.6                   | 1.14                 | .....              | 5                     | 6.20              | 14.55                              | ?   | ?                                   | ?                                       |
|                        |                     | Kanghar ...       | 0.40                | 2.10               | .....              | .....               | 0.40                  | 3.10                 | 0.20               | 5                     | 6.20              | 14.55                              | ?   | 25.11                               | ?                                       |
|                        |                     | Lohardugga ...    | 0.40                | 1.47               | 1.29               | 0.03                | 0.97                  | 0.59                 | 0.23               | 7                     | 4.95              | 6.98                               | ?   | 19.77                               | ?                                       |
|                        |                     | Kauchi ...        | 1.08                | 0.59               | 0.10               | .....               | 1.10                  | 1.00                 | 0.30               | 6                     | 4.22              | 7.10                               | 6.08                                      | 31.54                               | 15.9                                    |
|                        |                     | Palamow ...       | 1.24                | 5.43               | 1.07               | .....               | 0.37                  | 0.43                 | .....              | 6                     | 8.84              | 10.93                              | 5.73                                      | 19.42                               | 12.0                                    |
|                        |                     | Silli ...         | 0.02                | 2.09               | 0.04               | .....               | 0.04                  | 0.09                 | 0.01               | 6                     | 4.09              | 7.69                               | ?   | 18.70                               | ?                                       |
|                        |                     | Balumat ...       | .....               | 2.03               | 2.00               | .....               | .....                 | .....                | .....              | ?                     | ?                 | ?                                  | ?   | ?                                   | ?                                       |
|                        |                     | Mussenabad ...    | 1.35                | 4.25               | 1.10               | .....               | 2.48                  | 1.7                  | .....              | ?                     | ?                 | ?                                  | ?   | ?                                   | ?                                       |
|                        | Mussenabad.         | Gurwah ...        | .....               | .....              | .....              | .....               | .....                 | .....                | .....              | ?                     | ?                 | ?                                  | ?   | ?                                   | ?                                       |
|                        |                     | Chynassee ...     | 0.04                | 4.00               | 0.09               | .....               | 1.30                  | 1.47                 | .....              | 5                     | 7.77              | 9.33                               | 5.30                                      | 24.40                               | 15.8                                    |
|                        |                     | Chakradhar ...    | 2.83                | 1.18               | .....              | .....               | 0.77                  | 1.07                 | .....              | 4                     | 5.83              | 7.60                               | ?   | 18.82                               | ?                                       |
| N. BENGAL.             | Mussenabad.         | Chatsilla ...     | 0.65                | 6.25               | 0.33               | .....               | 0.75                  | 0.39                 | 0.20               | 6                     | 8.75              | 10.33                              | ?   | 19.37                               | ?                                       |
|                        |                     | Bunaragura ...    | .....               | 2.87               | 0.05               | .....               | 0.70                  | 0.27                 | .....              | 4                     | 3.89              | 5.04                               | ?   | 16.12                               | ?                                       |
|                        |                     | Parula ...        | 0.70                | 0.72               | 0.17               | .....               | 0.35                  | 2.19                 | 0.45               | 6                     | 4.59              | 5.15                               | 5.87                                      | 15.84                               | 16.8                                    |
|                        | Singbhoom.          | Gobinapore ...    | .....               | 0.72               | 0.21               | .....               | 0.00                  | 0.91                 | 0.25               | 5                     | 2.13              | 3.48                               | 5.50                                      | 11.75                               | 14.2                                    |
|                        |                     | Raghunath ...     | 0.10                | 0.31               | .....              | .....               | .....                 | 0.75                 | 0.10               | 4                     | 1.36              | 2.10                               | ?   | 13.53                               | ?                                       |
|                        |                     | Barabhoom ...     | 0.60                | 2.05               | 0.10               | .....               | 0.75                  | 0.35                 | 0.34               | 6                     | 4.19              | 4.75                               | ?   | 12.00                               | ?                                       |
|                        | Singbhoom.          | Jhalda ...        | .....               | .....              | 0.50               | .....               | .....                 | 1.10                 | .....              | ?                     | ?                 | ?                                  | ?   | ?                                   | ?                                       |
|                        |                     | Chas ...          | 0.95                | 0.30               | 0.50               | .....               | .....                 | 1.15                 | 1.15               | 5                     | 4.05              | ?                                  | ?   | ?                                   | ?                                       |

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns missing, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 19th July 1887.

SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
 TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS  
 TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
 15TH OF JULY 1887.

At the close of the previous week a small barometric depression, the centre of which had passed inland close to Saugor Island on the 7th, had rapidly filled up in South Bengal on the 8th, and had almost ceased to exist. It had, however, brought up moderate to heavy rain in its advance. On the following day, that is on Saturday, the 9th, pressure fell decidedly rapidly at some of the stations in Central Bengal, and a distinct barometric depression was formed over this area. The depression was accompanied by a decided cyclonic circulation of winds, for at Calcutta wind was westerly, at Burrisal south-westerly, at Furrcepore south-easterly, at Berhampore north-easterly, and at Burdwan north-westerly. At Jessore and Krishnagore it was calm. On Sunday, the 10th, the depression had developed very rapidly, and had moved slowly in a westerly direction. On this day pressure fell rapidly at the stations in Central and Western Bengal and in Chutia Nagpur, the fall at some stations almost equalling 0.15", while many stations, such as Calcutta, Burdwan, Bankoora, and Raneeagudge, &c., showed falls considerably exceeding a tenth of an inch. Winds also decidedly increased in force, and there was again on this day a strong cyclonic circulation of winds round the centre of the feeble storm. The centre was near Burdwan, where a pressure of 29.361" was registered, and towards which point baric gradients were decidedly steep. The small storm was fed by a powerful monsoon current, and heavy rain was brought on both the Saturday and the Sunday to the districts affected by the storm. On the following day pressure fell rapidly at Allahabad and Benares, and the depression, which was on the previous day in West Bengal, had apparently been transferred to this district, while on the 12th it had advanced into Bundelkund, and on the 13th into the north-east of Rajputana, where it apparently fuled up. In the rear of the advancing depression a strong monsoon continued to blow over Bengal, bringing up moderate rain.

On Monday, the 11th, also pressure began to fall off the east coast of the Bay, and this continued on the 12th, when pressure became decidedly low over South-East Bengal, and it was evident that a small barometric depression was forming either over the sea area just to the south of the Sunderbans, or over the land area to the south of Jessore. On the 13th a distinct depression was developed, and at 10 A.M. on this day its centre was nearly between Calcutta and Saugor Island. During the same afternoon the centre passed only a short distance to the south of Calcutta in a westerly direction, and on the morning of the 14th the small storm had passed into the Central Provinces and Central India. This storm again advanced in a westerly direction, and on the morning of the 15th it was near Hoshungabad, but it did not finally disappear till the 17th. The subsequent history of this storm of course will belong to the meteorology of the week following. This storm was small, but with a moderately steep gradient, and pressure at Calcutta fell to about 29.3". It was accompanied by a clearly marked cyclonic circulation of winds, but though the wind force at the land station was only moderate, at the head of the Bay, during its formation and advance, very strong winds were blowing, and weather was decidedly squally, if not rather stormy, though at no time was the storm of any particular intensity.

Bengal has therefore been under the influence of two depressions during the week, both of which brought up heavy rain. Both these depressions have passed through parts of South-West Bengal and Chutia Nagpur, though the first only passed through South Behar. The influence of such storms as these in bringing up rain and in determining its distribution is shown in a very marked way by the rainfall of the week, for these three districts have received falls in excess of the normal, while all other districts have been in defect. The heaviness of the falls has been in some instances very great, and thus on the 9th Bolpore and Hetampore in the Beerboom district, and Cutwa in Burdwan, received about 5 inches of rain each, while the following stations received from about 3 to 4 inches:—Alipore, Burdwan, Hooghly, and Bishenpore and Malira in the Bankoora district; on the 10th the heaviness of the rainfall increased, and Ghatal reported 7.15 inches, Minsapur 5.83 inches, Alipore 4.66 inches (making nearly 8 inches in the two days), and Tumlook 4 inches; also in Chutia Nagpur, on the 10th, the following heavy falls were reported:—Ghatsila 6.28 inches, Palamow 5.43 inches, Chyebassa 4.90 inches, Garwah 4.25 inches, and Karagdeha 3.5 inches, while there were numerous other heavy falls in the western part of the province. In connection with the second small storm the rainfalls reported were not so heavy as in the first, though many falls of 2 and 3 inches were recorded near the path of the storm.

*Pressure*—As might be expected, has been decidedly below the normal over the whole province, the defects at those stations which have been considerably influenced by the depressions being larger than a tenth of an inch, and thus at Burdwan the defect of the mean pressure for the week has been 0.123", at Calcutta 0.113", and at Saugor Island 0.105", while at the stations at some distance from the paths of the depression, pressure has been in defect of the normal by much smaller amounts, as at Purneah, where the defect is 0.063", and at Durbhanga where it is 0.078". It will thus be seen that pressure has been largely below the normal over the whole province of Bengal. The defect in pressure in Assam is also considerable: thus at Silchar it is 0.107", at Dhubri 0.084", and at Sibsagar 0.04".

**Temperature.**—The mean temperature for the week has been in defect of the normal in all districts, the defects being largest in Orissa, where they average  $2\cdot4^{\circ}$ ; they are also large in South-West Bengal, Chutia Nagpur, and South Behar, where they vary from  $1^{\circ}$  to  $2^{\circ}$ , while in the remaining districts in Bengal the defects are small. In Assam, on the other hand, the mean temperature for the week has been  $0\cdot7^{\circ}$  in excess of the normal.

**Rainfall.**—From the foregoing description of the meteorology of the week, it will be seen that the heaviest rainfalls have occurred in South-West Bengal, Chutia Nagpur and South Behar, where the average amounts received have been decidedly larger than the normal, while in the other districts, owing to the indraught towards the small storms, the rainfall has been below the normal. In the districts of South Behar, South-West Bengal, Chutia Nagpur and East Bengal, rainfall has averaged about 3 to 4 inches, while over the remainder of the province the falls have averaged from 1 to 2 inches. The actual average falls in the seven meteorological districts, expressed as a percentage of the normal falls for the same period, will be as follows:—South-West Bengal 152 per cent., Chutia Nagpur 150 per cent., South Behar 110 per cent., East Bengal 84 per cent., North Behar 79 per cent., North Bengal 65 per cent., and Orissa only 45 per cent. Taking each of these meteorological divisions as having an equal value in the calculation, the rainfall for the province for the week has equalled 98 per cent. of the normal. The foregoing numbers do not, however, fully show how exceptionally heavy the fall has been in some districts. Thus in South-West Bengal the districts which have received falls considerably larger even than indicated by the above percentages have been Midnapur, Bankoora, 24-Pergunnahs, Howrah and Hooghly, while in Chutia Nagpur the Lohardugga and Singhbhum districts have received the heaviest falls. On the other hand the following districts have received extremely defective falls:—In Orissa, the Pooree and Cuttack districts; in East Bengal, Mymensingh; and in North Bengal, Dinagepore and Rungpore.

In Assam the following are the amounts of rainfall recorded during the week:—Silchar 5·02 inches, Sibsagar 2·25 inches, and Dhubri 0·56 inch.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the Province for the week ending Friday, the 15th of July 1887:—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          | RAINFALL.       |            |                         |                                |            |                     |                 |                      |       |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 15th May 1887. |       |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. |                      |       |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |       |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |       |
| Orissa                       | 96·4                          | 74·8                         | 84·6                    | 77·2                   | 80·9                  | -2·4   | 1·60     | 3·53            | -1·93      | 3·6                     | 4·3                            | -0·7       | 4·14                | 6·14            | 16·58                | 17·00 |
| South-West Bengal            | 90·6                          | 75·3                         | 80·6                    | 78·1                   | 82·3                  | -1·5   | 3·82     | 2·52            | +1·30      | 5·2                     | 4·5                            | +0·7       | 6·73                | 5·46            | 10·78                | 18·61 |
| East Bengal                  | 91·3                          | 71·0                         | 87·0                    | 77·4                   | 82·2                  | -0·3   | 2·80     | 3·23            | -0·43      | 5·5                     | 4·9                            | +0·7       | 6·00                | 7·51            | 21·50                | 30·48 |
| North Bengal                 | 92·8                          | 72·7                         | 80·4                    | 77·9                   | 83·7                  | -0·4   | 1·10     | 2·92            | -1·82      | 3·5                     | 3·7                            | -0·2       | 5·25                | 7·02            | 40·30                | 20·91 |
| North Behar                  | 92·0                          | 75·1                         | 80·1                    | 79·1                   | 84·6                  | -0·6   | 1·80     | 2·28            | -0·48      | 4·3                     | 3·8                            | +1·0       | 5·02                | 6·73            | 24·73                | 16·06 |
| South Behar                  | 92·4                          | 73·0                         | 82·5                    | 78·5                   | 83·5                  | -1·1   | 2·61     | 2·37            | +0·24      | 5·4                     | 3·9                            | +1·5       | 5·84                | 5·53            | 18·50                | 13·65 |
| Chutia Nagpur                | 85·4*                         | 68·4*                        | 82·3*                   | 72·2*                  | 77·3*                 | -1·3*  | 4·30     | 2·86            | +1·44      | 5·4                     | 4·7                            | +0·7       | 6·35                | 5·98            | 18·36                | 15·52 |
| Assam                        | 97·6                          | 74·3                         | 91·5                    | 78·3                   | 84·9                  | +0·7   |          |                 |            |                         |                                |            |                     |                 |                      |       |

\* Chyebassa not included.

METEOROLOGICAL OFFICE, BENGAL;  
The 19th July 1887.

A. PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal



**Results of the Meteorological Observations taken at the Alipore Observatory from  
10th to 16th July 1887.**

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 55° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain.   | WEATHER.  |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|---|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |         |   |
| 1887.  |       | °               |                                     | inches.                              | °            | °        | °      | °        | °              | inches          | °          | %         |                       |                 | inches. |   |
| July   | 10th  | 146.0           | 0.1                                 | 29.358                               | 80.5         | 84.0     | 7.6    | 76.4     | 78.3           | 0.939           | 77.8       | 90        | SSW and SW            | 220             | 1.44    | Cloudy, o,  |
| "      | 11th  | 146.5           | 1.6                                 | 29.0                                 | 81.1         | 85.8     | 8.6    | 77.2     | 77.9           | 0.916           | 76.6       | 87        | SSW and WSW           | 140             | 0.02    | Cloudy, o,  |
| "      | 12th  | 141.8           | 1.0                                 | 29.0                                 | 81.7         | 86.5     | 8.8    | 77.7     | 78.4           | 0.929           | 77.0       | 86        | SW and W              | 90              | 0.03    | Chiefly cl<br>o, g, d, t.                           |
| "      | 13th  | 140.0           | 1.6                                 | 29.341                               | 81.7         | 86.5     | 8.8    | 77.7     | 79.2           | 0.967           | 78.2       | 89        | E and ESE             | 157             | 2.07    | Cloudy, o, g, d,<br>p.                              |
| "      | 14th  | 125.5           | 0.2                                 | 29.499                               | 79.7         | 81.3     | 4.6    | 75.7     | 77.7           | 0.927           | 76.9       | 91        | SE by S and SE        | 171             | 0.64    | Cloudy, o, g, d,<br>p, t.                           |
| "      | 15th  | 151.3           | 3.4                                 | 29.55                                | 81.8         | 86.7     | 10.3   | 75.4     | 78.9           | 0.943           | 77.6       | 87        | S and SE by S         | 79              | 0.26    | Day chiefly<br>cloudy, and<br>clear night,<br>d, p. |
| "      | 16th  | 152.7           | 10.2                                | 29.612                               | 84.4         | 90.7     | 13.1   | 77.6     | 78.9           | 0.915           | 76.6       | 77        | SSE and WSW           | 54              | Nil     | Chiefly cloudy,<br>d                                |

The mean pressure of the seven days ...

The average pressure of the corresponding period for 24 years, S. G.'s Office ...

The total number of hours of bright sunshine ...

The maximum possible number of hours of sunshine ...

The mean temperature of the seven days ...

The average temperature of the corresponding period for 24 years, S. G.'s Office ...

The extreme variation of temperature ...

The maximum temperature ...

The highest velocity of the wind in one hour ...

The highest pressure of wind on one square foot ...

The mean relative humidity ...

The average relative humidity of the corresponding period for 24 years, S. G.'s Office ...

The total fall of rain from 10th to 16th July 1887 ...

The average fall of the corresponding period for 24 years, S. G.'s Office ...

The total fall from 1st January to 16th July 1887 ...

The average fall of the corresponding period for 24 years, S. G.'s Office ...

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h., 10h., 16h. and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, t thunder, Δ dew.

A. PEDLER,

For Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA :

12th July 1887

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 10th to 16th July 1887.

| MONTHS. | Date.        | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.  |
|---------|--------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|--------|
|         |              | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |        |
| 1887.   |              | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches |
| July    | ... 10th ... | 79.0         | 86.4     | 10.4   | 76.0     | 78.1           | .951            | 77.7       | 96        | 5.93   |
| "       | ... 11th ... | 80.6         | 86.4     | 9.4    | 77.0     | 78.4           | .944            | 77.5       | 90        | ...    |
| "       | ... 12th ... | 82.4         | 88.2     | 10.2   | 78.0     | 79.2           | .956            | 77.9       | 88        | 0.05   |
| "       | ... 13th ... | 81.4         | 88.5     | 10.5   | 78.0     | 79.3           | .975            | 78.5       | 91        | 1.24   |
| "       | ... 14th ... | 77.8         | 84.1     | 11.5   | 76.6     | 77.3           | .932            | 77.1       | 98        | 0.47   |
| "       | ... 15th ... | 82.0         | 88.2     | 11.4   | 76.8     | 78.8           | .943            | 77.5       | 86        | 0.18   |
| "       | ... 16th ... | 84.7         | 92.0     | 14.6   | 77.4     | 79.6           | .944            | 77.6       | 79        | 0.06   |

The mean temperature of the seven days ... 81.1  
The extreme variation of temperature ... 16.0  
The maximum temperature ... 92.0  
The mean relative humidity ... 89  
The total fall of rain from 10th to 16th July 1887 ... 8.43

The mean temperature and humidity are obtained by applying to the mean of the 10th, 16th, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ;  
The 18th July 1887.

A. PEDLER,  
For Offg. Meteorological Reporter to the Govt. of India.

MEMORANDUM.

THE birth and death returns of the principal Municipalities in Bengal, for the week ending 2nd July 1887, disclose the following results:—

1. That the ratio of births during the period above mentioned stood at 20, and that of deaths at 24·8 per 1,000 of population, the records of the preceding week presenting 13·3 and 20·2 per 1,000, respectively, indicating a large advance in the registration of both the events.

2. That births and deaths were recorded at the highest rates from the following Municipalities:—

| Births.       |     |     | Ratio per mille. | Deaths.        |     |     | Ratio per mille. |
|---------------|-----|-----|------------------|----------------|-----|-----|------------------|
| Airah ...     | ..  | ... | 131·6            | Puri ...       | ... | ... | 199·3            |
| Durbhanga ... | ... | ... | 36·2             | Gya ...        | ... | ... | 52·7             |
| Gya ...       | ... | ... | 34·8             | Bhagulpore ... | ... | ... | 40·8             |
|               |     |     |                  | Darjiling ...  | ... | ... | 39·0             |
|               |     |     |                  | Beauleah ...   | ... | ... | 36·8             |
|               |     |     |                  | Durbhanga ...  | ... | ... | 33·9             |
|               |     |     |                  | Arrah ...      | ... | ... | 33·5             |
|               |     |     |                  | Serampore ...  | ... | ... | 29·5             |

3. That the mortality from the death-causes specified in the appended statement stood as follows:—

|                      |     | Ratio per mille during the weeks ending— |                 |
|----------------------|-----|--|-----------------|
|                      |     | 2nd July 1887.                           | 25th June 1887. |
| Cholera ...          | ... | 5·5                                      | 3·5             |
| Small-pox ...        | ... | ·2                                       | ·1              |
| Fever ...            | ... | 8·6                                      | 7·5             |
| Bowel-complaints ... | ... | 2·9                                      | 2·3             |
| Injury ...           | ... | ·5                                       | ·4              |
| Other causes ...     | ... | 7·1                                      | 6·4             |

indicating chiefly that, in comparison with the preceding week, there occurred considerably enhanced mortality from cholera and fever, particularly from the former.

4. That the following Municipalities returned conspicuously high death-rates from cholera, fever and the maladies coming under the head of "Other causes," the rest of the diseases mentioned in the above table not exhibiting any noticeable local severity:—

| Cholera.                |     | Ratio per mille. | Fever.       |     | Ratio per mille. | Other causes.  |     | Ratio per mille. |
|-------------------------|-----|------------------|--------------|-----|------------------|----------------|-----|------------------|
| Puri ...                | ... | 167·8            | Beauleah ... | ... | 31·1             | Gya ...        | ... | 36·9             |
| Bhagulpore ...          | ... | 11·8             | Arrah ...    | ... | 21·5             | Bhagulpore ... | ... | 14·5             |
| Durbhanga ...           | ... | 5·5              |              |     |                  | Puri ...       | ... | 10·5             |
| Patna ...               | ... | 3·9              |              |     |                  |                |     |                  |
| Suburbs of Calcutta ... | ... | 2·7              |              |     |                  |                |     |                  |

It will be observed that the mortality from cholera in the Puri town was considerably greater in comparison with its incidence during the preceding week.

5. That the casualties in relation to *Sex*, *Class* and *Age*, were returned at the rates indicated below:—

| According to Sex.                               |     | Ratio per mille. | According to Class. |     | Ratio per mille. | According to Age.    |     | Ratio per mille. |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
| Males ...                                       | ... | 25·7             | Christians ...      | ... | 34·8             | Under 1 year         | ... | 207·5            |
| Females ...                                     | ... | 23·7             | Hindus ...          | ... | 27·3             | 1 and under 5 years  | ... | 38·9             |
| Ratio of male deaths to every 100 female deaths | 122 |                  | Mahomedans ...      | ... | 18·7             | 5 10                 | ... | 10·3             |
|   |     |                  | Budhists ...        | ... | 48·4             | 10 15                | ... | 15·4             |
|   |     |                  |                     |     |                  | 15 20                | ... | 9·9              |
|   |     |                  |                     |     |                  | 20 30                | ... | 11·1             |
|   |     |                  |                     |     |                  | 30 40                | ... | 15·3             |
|   |     |                  |                     |     |                  | 40 50                | ... | 25·3             |
|   |     |                  |                     |     |                  | 50 60                | ... | 42·6             |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 43·9             |

R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

The 18th July 1887.

| 18. | NAMES OF MUNICIPALITIES. | POPULATION. |          |           | BIRTHS.    |          |        | MORTALITY ACCORDING TO—                          |             |          |              |          |            |        |                   |         |                 | Sex.        |   | Ratio of male deaths to every 100 female deaths. |          |  |  |  |  |  |  |  |  |  |  |
|-----|--------------------------|-------------|----------|-----------|------------|----------|--------|--|-------------|----------|--------------|----------|------------|--------|-------------------|---------|-----------------|-------------|---|--|----------|--|--|--|--|--|--|--|--|--|--|
|     |                          | Males.      | Females. | Total.    | NUMBER OF— |          |        | RATIO PER 1,000 OF POPULATION PER ANNUM.         |             |          | DEATHS FROM— |          |            |        |                   |         |                 |             |   |  |          |  |  |  |  |  |  |  |  |  |  |
|     |                          |             |          |           | Males.     | Females. | Total. | Ratio of male births to every 100 female births. | All causes. |          |              | Cholera. | Small-pox. | Fever. | Bowel-complaints. | Injury. | Other diseases. | All causes. | Ratio of deaths per 1,000 of population per annum in the previous week. | Males.   | Females. |  |  |  |  |  |  |  |  |  |  |
|     |                          |             |          |           |            |          |        |  | Males.      | Females. | Total.       |          |            |        |                   |         |                 |             |   |  |          |  |  |  |  |  |  |  |  |  |  |
|     |                          |             |          |           |            |          |        |  |             |          |              |          |            |        |                   |         |                 |             |   |  |          |  |  |  |  |  |  |  |  |  |  |
|     | Burdwan                  | 18,063      | 16,017   | 34,080    | 5          | 8        | 13     | 12.2   | 7.0         | 4.8      | 11.8         | ...      | ...        | ...    | ...               | ...     | ...             | ...         | 13.7  | 3  | 4        |  |  |  |  |  |  |  |  |  |  |
|     | Midnapore                | 16,937      | 16,438   | 33,375    | 1          | 8        | 9      | 12.4   | 1.5         | 12.4     | 13.9         | ...      | ...        | ...    | ...               | ...     | ...             | ...         | 12.4  | 7  | 5        |  |  |  |  |  |  |  |  |  |  |
|     | Hughli and Chinsurah     | 19,179      | 19,530   | 38,714    | 5          | 9        | 14     | 6.7  | 4.9         | 6.7      | 10.7         | ...      | ...        | ...    | ...               | ...     | ...             | ...         | 10.7  | 8  | 11       |  |  |  |  |  |  |  |  |  |  |
|     | Serampore                | 13,559      | 12,937   | 26,496    | 5          | 5        | 10     | 9.8  | ...         | ...      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | 18.7  | 11   | 4        |  |  |  |  |  |  |  |  |  |  |
|     | Utterpara                | 3,046       | 2,461    | 5,507     | 1          | 1        | 2      | 9.4  | ...         | ...      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | 18.9  | ...  | 1        |  |  |  |  |  |  |  |  |  |  |
|     | Howrah                   | 53,183      | 37,840   | 91,023    | 14         | 19       | 33     | 10.8   | 9.2         | 10.8     | 20.0         | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Bell                     | 7,836       | 6,979    | 14,815    | 1          | 1        | 2      | 3.5  | 3.5         | 7.0      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Suburbs of Calcutta      | 147,205     | 101,234  | 248,439   | 40         | 23       | 63     | 6.6  | 8.3         | 6.6      | 14.3         | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Kishoreganj              | 13,298      | 14,214   | 27,512    | 4          | 5        | 9      | 9.4  | 7.5         | 9.4      | 17.0         | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Banarhat                 | 4,628       | 4,635    | 9,263     | ...        | ...      | ...    | ...  | ...         | ...      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Santipur                 | 13,708      | 15,579   | 29,287    | 4          | 1        | 5      | 7.0  | 1.7         | 8.7      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Jessore                  | 4,530       | 3,685    | 8,215     | ...        | ...      | ...    | ...  | ...         | ...      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Rampur Beaulah           | 10,790      | 8,025    | 18,815    | 6          | 1        | 7      | 13.4   | 2.0         | 15.4     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Darjiling                | 5,020       | 2,947    | 7,967     | 1          | 1        | 2      | 6.5  | 6.5         | 13.0     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Dacca                    | 42,783      | 37,379   | 80,162    | 5          | 1        | 6      | 5.8  | 3.2         | 5.8      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Narainganj               | 7,675       | 4,086    | 11,761    | 2          | ...      | ...    | ...  | ...         | ...      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Chittagong               | 13,210      | 8,740    | 21,950    | 2          | 4        | 6      | 4.8  | 4.8         | 9.6      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Comillah                 | 8,133       | 5,323    | 13,456    | 4          | 5        | 9      | 11.3   | 11.3        | 22.6     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Fatma City               | 78,762      | 81,175   | 160,237   | 19         | 22       | 41     | 6.2  | 7.1         | 6.6      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Gya                      | 33,390      | 37,831   | 71,221    | 31         | 20       | 51     | 21.2   | 13.6        | 24.8     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Arrah                    | 29,082      | 22,535   | 51,617    | 63         | 42       | 105    | 11.0   | 8.4         | 9.7      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Monsiehpore              | 23,044      | 19,058   | 42,102    | 6          | 2        | 8      | 7.3  | 7.3         | 14.6     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Burhanpore               | 23,774      | 22,322   | 46,096    | 21         | 21       | 42     | 19.7   | 16.3        | 36.0     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Chupra                   | 26,044      | 27,205   | 53,249    | 6          | 1        | 7      | 5.9  | 1.6         | 6.9      | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Blagnapore               | 29,040      | 27,813   | 56,853    | 15         | 11       | 26     | 13.6   | 10.4        | 24.0     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Monghyr                  | 28,154      | 29,308   | 57,462    | 16         | 12       | 28     | 14.5   | 14.5        | 29.0     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Purneah                  | 8,403       | 6,553    | 14,956    | 3          | 1        | 4      | 10.4   | 3.4         | 13.8     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | Puri                     | 13,247      | 11,537   | 24,784    | 3          | 2        | 5      | 6.3  | 6.3         | 12.6     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |
|     | TOTAL                    | 702,890     | 619,031  | 1,321,921 | 290        | 219      | 509    | 11.4   | 8.0         | 20.0     | ...          | ...      | ...        | ...    | ...               | ...     | ...             | ...         | ...   | ...  | ...      |  |  |  |  |  |  |  |  |  |  |

and census of the Europeans in the Darjiling Municipality was recently taken, as the census of this section of the community, taken in February 1881, was not reliable owing to the Europeans being at a minimum in that month. The number of the natives was not necessary to re-census them. The ratios have consequently been calculated on the revised population under all heads in the above table except "Age," the ratios under which have been omitted, inasmuch as the census of the Europeans is cannot be employed as a basis of calculation owing to the results of the census under this head not having been recorded under the authorized form of age classification.

[illegible]

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,  
The 18th July 1887.

PUBLIC WORKS DEPARTMENT, BENGAL.  
IRRIGATION BRANCH.  
IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1887-88.  
Areas leased for Irrigation up to end of May 1887.

| CIRCLE.            | DISTRICT. | CANAL.   | Esti-<br>mated<br>full dis-<br>charge. | Average<br>discharge<br>in month. | Discharge<br>utilised. | Approxi-<br>mate area<br>of land<br>irrigated<br>during<br>the year<br>up to the<br>end of the<br>month. |       | Five<br>years,<br>all crops. | ANNUAL LEASES. |         |       |       |       | RAINFALL,<br>1887-88. |       | REMARKS.   |   |                 |                           |                           |
|--------------------|-----------|--|--|-----------------------------------|------------------------|--|-------|------------------------------|----------------|---------|-------|-------|-------|-----------------------|-------|--|---|-----------------|---------------------------|---------------------------|
|                    |           |  |  |                                   |                        | C. ft.   | Acre. |                              | Acre.          | Acre.   | Acre. | Acre. | Acre. | Acre.                 | Acre. |  | Acre.   | Grand<br>total. | Up to<br>end of<br>month. | Up to<br>end of<br>month. |
|                    |           |  |  |                                   |                        |  |       |                              |                |         |       |       |       |                       |       |  |   |                 |                           |                           |
| DELTA              | Cuttack   | Taldanda, 1st<br>Reach.                                    | 1,545                                  | 0.72                              | 51                     | 25   | ...   | ...                          | 3,876          | ...     | ...   | ...   | ...   | ...                   | ...   | ...  | Cannals closed for annual repairs from<br>1st May 1887. |                 |                           |                           |
|                    |           | Taldanda, 2nd<br>Reach.                                    | 566                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   | ...  |   |                 |                           |                           |
|                    |           | Nachrong   | 776                                    | 1.32                              | 10                     | ...  | ...   | ...                          | ...            | 18,010  | ...   | ...   | ...   | ...                   | ...   | ...  |   |                 |                           |                           |
|                    |           | Kendrapara   | 1,289                                  | ...                               | 7                      | 53   | ...   | ...                          | ...            | 37,310  | ...   | ...   | ...   | ...                   | ...   | ...  |   |                 |                           |                           |
|                    |           | Gobri  | 372.82                                 | ...                               | ...                    | 9  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   | ...  |   |                 |                           |                           |
|                    |           | Pattamondoe  | 1,042                                  | ...                               | ...                    | ...  | ...   | ...                          | ...            | 8,139   | ...   | ...   | ...   | ...                   | ...   | ...  |   |                 |                           |                           |
|                    |           | High Range I. Level.                                       | 675                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | 13,844  | ...   | ...   | ...   | ...                   | ...   | ...  |   |                 |                           |                           |
|                    |           | High Range II. Level.                                      | 727.16                                 | ...                               | ...                    | ...  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   | ...  |   |                 |                           |                           |
|                    |           | High Range III. Level.                                     | 727.16                                 | ...                               | ...                    | 65   | 68    | ...                          | ...            | 6,225   | ...   | ...   | ...   | ...                   | ...   | ...  |   |                 |                           |                           |
|                    |           | Total  | ...                                    | ...                               | 133                    | ...  | ...   | ...                          | ...            | 57,409  | ...   | ...   | ...   | ...                   | ...   | ...  |   |                 |                           |                           |
| SOUTH-<br>WESTERN. | Midnapore | Total of the corresponding<br>period of last year.         | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | 70,153         | ...     | ...   | ...   | ...   | ...                   | ...   | Whole month discharging.<br>Ten days discharging.<br>The rainfall at Janchhkorah during<br>April 1887 was 1.46 inches. |   |                 |                           |                           |
|                    |           | Midnapore  | 1,411                                  | 134                               | ...                    | ...  | ...   | ...                          | ...            | 41,927  | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Janchhkorah  | 622                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | 4,205   | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Tidal Reaches  | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | 550     | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Ranges, and "I."   | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Total  | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | 40,742  | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Total of the corresponding<br>period of last year.         | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | 67,839  | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Shalabad   | 4,342                                  | 894                               | 1,062                  | 517  | ...   | ...                          | ...            | 11,413  | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Buxar  | 1,226                                  | 72                                | 1,207                  | 3,973  | ...   | ...                          | ...            | 40,063  | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Patna and Eastern Main                                     | 1,600                                  | 870                               | 22,283                 | 25,496   | ...   | ...                          | ...            | 8,139   | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
| SOUTH-<br>EASTERN. | Patna     | Grand total of the correspond-<br>ing period of last year. | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | 137,631        | ...     | ...   | ...   | ...   | ...                   | ...   |  |   |                 |                           |                           |
|                    |           | Patna  | 1,466                                  | 282                               | 53                     | 836  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Gya  | ...                                    | ...                               | 730                    | ...  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Total  | ...                                    | ...                               | 25,313                 | 30,575   | ...   | ...                          | ...            | 160,520 | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Total of the corresponding<br>period of last year.         | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | 159,583 | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Shalabad   | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Buxar  | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Patna  | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Gya  | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |
|                    |           | Total  | ...                                    | ...                               | ...                    | ...  | ...   | ...                          | ...            | ...     | ...   | ...   | ...   | ...                   | ...   |  | ...   |                 |                           |                           |

The 19th July 1887.

C. W. I. HARRISON, Lieut.-Col., R.E.,  
Offg. Joint-Secretary to the Govt. of Bengal.

# PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statements showing quantities of Goods carried during the month of May 1887.

## ORISSA CIRCLE.

### TALDUNDIAH CANAL SYSTEM.

LENGTH OF CANAL OPEN { TALDUNDIAH CANAL 27 MILES.  
MACHIGONG " 4 "

| Number of boats or rafts.                     | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |               |               |  | PRIVATE.      |         | REMARKS.                         |
|---|-----------------------------------|-------------------------------|---------------|---------------|--|---------------|---------|----------------------------------|
|   |                                   | Quantity—Tons.                |               |               | Value.   | Quantity.     | Value.  |                                  |
|   |                                   | Up.                           | Down.         | Total.        |  | Tons.         | Rupees. |                                  |
| .....   | 1. Grain                          | .....                         | .....         | .....         | .....  | .....         | .....   | Canal closed for annual repairs. |
| .....   | 2. Cotton                         | .....                         | .....         | .....         | .....  | .....         | .....   |                                  |
| .....   | 3. Oilseeds                       | .....                         | .....         | .....         | .....  | .....         | .....   |                                  |
| .....   | 4. Salt                           | .....                         | .....         | .....         | .....  | .....         | .....   |                                  |
| .....   | 5. Piece-goods                    | .....                         | .....         | .....         | .....  | .....         | .....   |                                  |
| 8   | 6. Metal                          | .....                         | 98            | 98            | 104  | 98            | 104     |                                  |
| .....   | 7. Building materials             | .....                         | .....         | .....         | .....  | .....         | .....   |                                  |
| 2   | 8. Miscellaneous                  | .....                         | 13            | 13            | 115  | 13            | 115     |                                  |
| .....   | 9. Fuel                           | .....                         | .....         | .....         | .....  | .....         | .....   |                                  |
| 1 raft  | 10. Timber                        | .....                         | 16 No.        | 16 No.        | 21   | 16 No.        | 21      |                                  |
| 1 "   | 11. Bamboos                       | .....                         | 200 "         | 200 "         | 5  | 200 "         | 5       |                                  |
| 10 & 2 rafts                                  | 12. Total                         | .....                         | 111 & 216 No. | 111 & 216 No. | 245  | 111 & 216 No. | 245     |                                  |
| .....   | 13. Total of same month last year | .....                         | .....         | .....         | .....  | .....         | .....   |                                  |
|   |                                   | Up.                           | Down.         | Total.        |  |               |         | Rs. A. P.                        |
| 14. Total number of boats plying cargo        | No.                               | .....                         | 10            | 10            | Total tollage of month—24 + 25 + 26              |               | .....   | 45 8 9                           |
| 15. Total number of boats plying passenger    | No.                               | 1                             | 1             | 2             | Total tollage of same month last year            |               | .....   | .....                            |
| 15½. Total number of empty boats              | No.                               | 17                            | 1             | 18            | Memorandum of Tollage.                           |               |         |                                  |
| 16. Total registered tonnage, cargo           | .....                             | 175                           | 217           | 392           |  |               |         |                                  |
| 17. Total registered tonnage, passenger       | .....                             | 4                             | 1½            | 2             | Rs. A. P.  |               |         |                                  |
| 18. Ton-mileage                               | .....                             | 2,290                         | 3,270         | 5,560         |  |               |         |                                  |
| 19. Estimated value of cargo                  | Rs.                               | .....                         | 219           | 219           | 1. Balance not recovered on the 1st of the month |               | .....   | 138 13 9                         |
| 20. Number of passengers                      | No.                               | .....                         | 1             | 1             | 2. Tollage per month                             |               | .....   | 45 8 9                           |
| 21. Rafts, bamboos                            | "                                 | .....                         | 200           | 200           | 3. Total   |               | .....   | 184 6 6                          |
| 22. Do., bullahs                              | "                                 | .....                         | 16            | 16            | 4. Amount credited in the accounts of the month  |               | .....   | 184 6 6                          |
| 23. Estimated value of rafts                  | Rs.                               | .....                         | 26            | 26            | 5. Balance due at the end of the month           |               | .....   | .....                            |
| 24. Tollage on boats                          | "                                 | 12-14-9                       | 30-0-0        | 42-14-9       |  |               |         |                                  |
| 25. Compounded tollage on boats               | Rs.                               | .....                         | .....         | .....         |  |               |         |                                  |
| 26. Tollage on rafts                          | "                                 | .....                         | 2-10-0        | 2-10-0        |  |               |         |                                  |
| 27. Total tollage on boats per ton-mile       | .....                             | .....                         | .....         | 1·48 pie      |  |               |         |                                  |
| 28. Total tollage on rafts per 100 cubic feet | .....                             | .....                         | .....         | .....         |  |               |         |                                  |

KENDRAPARA CANAL SYSTEM.  
LENGTH OF CANAL OPEN, 75 MILES.

| Number of boats or rafts. | Description.                      | TOTAL GOVERNMENT AND PRIVATE. |         |             | PRIVATE. |           | REMARKS.                         |
|---------------------------|-----------------------------------|-------------------------------|---------|-------------|----------|-----------|----------------------------------|
|                           |                                   | Quantity—Tons.                |         |             | Value.   | Quantity. |                                  |
|                           |                                   | Up.                           | Down.   | Total.      | Rupees.  | Tons.     |                                  |
| .....                     | 1. Grain ...                      | .....                         | .....   | .....       | .....    | .....     | Canal closed for annual repairs. |
| .....                     | 2. Cotton ...                     | .....                         | .....   | .....       | .....    | .....     |                                  |
| .....                     | 3. Oilseeds ..                    | .....                         | .....   | .....       | .....    | .....     |                                  |
| .....                     | 4. Salt ...                       | .....                         | .....   | .....       | .....    | .....     |                                  |
| .....                     | 5. Piece-goods ..                 | .....                         | .....   | .....       | .....    | .....     |                                  |
| .. .                      | 6. Metal ...                      | .....                         | .....   | .....       | .....    | .....     |                                  |
| .....                     | 7. Building materials ..          | .....                         | .....   | .....       | .....    | .....     |                                  |
| 1                         | 8. Miscellaneous ...              | 4                             | .....   | 4           | 360      | 4         |                                  |
| .....                     | 9. Fuel ...                       | .....                         | .....   | .....       | .....    | .....     |                                  |
| .....                     | 10. Timber No.                    | .....                         | .....   | .....       | .....    | .....     |                                  |
| rafts                     | 11. Bamboos "                     | .....                         | 150     | 150         | 5        | .....     |                                  |
| 1 & raft.                 | 12. Total ...                     | 4                             | 150 No. | 4 & 150 No. | 365      | 4         | 360                              |
| 21                        | 13. Total of same month last year | 15                            | 50      | 65          | 110      | 65        | 110                              |

|   | Up.    | Down.  | Total.  |  | Rs. A. P.  |
|---|--------|--------|---------|--|------------|
| Total number of boats plying cargo No.    | 1      | .....  | 1       | Total tollage of month—<br>24 + 25 + 26          | 8 6 9      |
| Total number of boats plying passenger No | .....  | .....  | .....   | Total tollage of same month last year            | 11 11 0    |
| Total number of empty boats               | .....  | 23     | 23      | Memorandum of Tollage.                           |            |
| Total registered tonnage, cargo           | 6      | .....  | 6       |  | Rs. A. P.  |
| Total registered tonnage, passenger       | .....  | .....  | .....   | 1. Balance not recovered on the 1st of the month | 7,507 15 5 |
| Total registered tonnage, empty boats     | .....  | 53     | 53      | 2. Tollage per month                             | 8 6 9      |
| on-mileage                                | .....  | 652    | 652     | Total  | 7,516 6 2  |
| Estimated value of cargo Rs.              | 360    | .....  | 360     | 3. Amount credited in the accounts of the month  | 2,463 7 2  |
| Number of passengers No.                  | .....  | .....  | .....   | 4. Balance due at the end of the month           | 5,112 15 0 |
| fts, bamboos c. ft.                       | .....  | 150    | 150     |  |            |
| o., timbers                               | .....  | .....  | .....   |  |            |
| Estimated value of rafts, Rs.             | .....  | 5      | 5       |  |            |
| Tollage on boats                          | 0-10-0 | 7-10-6 | 8-4-6   |  |            |
| Unpounded tollage on boats                | .....  | .....  | .....   |  |            |
| Tollage on rafts Rs.                      | .....  | 0-2-3  | 0-2-3   |  |            |
| Total tollage on boats per on-mile        | .....  | .....  | 0-0-2 4 |  |            |
| Total tollage on rafts per 100 cubic feet | .....  | .....  | 0-1-4   |  |            |



## HIGH LEVEL CANAL, RANGE I.

LENGTH OF CANAL OPEN, 34 MILES.

| Number of<br>boats<br>or rafts. | Description.                                  | TOTAL GOVERNMENT AND PRIVATE. |       |        | PRIVATE.  |           | REMARKS.                         |
|---------------------------------|---|-------------------------------|-------|--------|---|-----------|----------------------------------|
|                                 |   | Quantity—Tons.                |       |        | Value.  | Quantity. |                                  |
|                                 |   | Up.                           | Down. | Total. | Rupess.   | Tons.     |                                  |
|                                 | 1. Grain ...                                  |                               |       |        |   |           | Canal closed for annual repairs. |
|                                 | 2. Cotton ...                                 |                               |       |        |   |           |                                  |
|                                 | 3. Oilseeds ...                               |                               |       |        |   |           |                                  |
|                                 | 4. Salt ...                                   |                               |       |        |   |           |                                  |
|                                 | 5. Piece-goods ...                            |                               |       |        |   |           |                                  |
|                                 | 6. Metal ...                                  |                               |       |        |   |           |                                  |
|                                 | 7. Building materials ...                     |                               |       |        |   |           |                                  |
|                                 | 8. Miscellaneous ...                          |                               |       |        |   |           |                                  |
|                                 | 9. Fuel ...                                   |                               |       |        |   |           |                                  |
|                                 | 10. Timber ...                                |                               |       |        |   |           |                                  |
|                                 | 11. Bamboos ...                               |                               |       |        |   |           |                                  |
|                                 | 12. Total ...                                 | .....                         | ..... | .....  | .....   | .....     |                                  |
|                                 | 13. Total of same month last year ...         | .....                         | ..... | .....  | .....   | .....     |                                  |
|                                 |   | Up.                           | Down. | Total. |   |           |                                  |
|                                 | Total number of boats plying cargo ...        |                               |       |        | Total tollage of month—<br>24 + 25 + 26 ...       |           | Rs. A. P.<br>.....               |
|                                 | Total number of boats plying passenger ...    |                               |       |        | Total tollage of same month last year ...         |           | .....                            |
|                                 | Total registered tonnage, cargo ...           |                               |       |        | Memorandum of Tollage.                            |           |                                  |
|                                 | Total registered tonnage, passenger ...       |                               |       |        |   |           |                                  |
|                                 | Ton-mileage ...                               |                               |       |        |   |           |                                  |
|                                 | Estimated value of cargo ...                  |                               |       |        | Balance not recovered on the 1st of the month ... |           | Rs. A. P.<br>612 7 9             |
|                                 | Number of passengers ...                      |                               |       |        | Tollage per month ...                             |           | .....                            |
|                                 | Rafts, bamboos ...                            |                               |       |        |   |           |                                  |
|                                 | Do., timbers ...                              |                               |       |        |   |           |                                  |
|                                 | Estimated value of rafts ...                  |                               |       |        | Total ...   |           | 612 7 9                          |
|                                 | Tollage on boats ...                          |                               |       |        | Amount credited in the accounts of the month ...  |           | 606 11 9                         |
|                                 | Compounded tollage on boats ...               |                               |       |        |   |           |                                  |
|                                 | Tollage on rafts ...                          |                               |       |        |   |           |                                  |
|                                 | Total tollage on boats per ton-mile ...       |                               |       |        |   |           |                                  |
|                                 | Total tollage on rafts per 100 cubic feet ... |                               |       |        | Balance due at the end of the month ...           |           | 5 12 0                           |

HIGH LEVEL CANAL, RANGE II.

LENGTH OF CANAL OPEN, 12½ MILES.

| Number of boats or rafts. | Description.                      | TOTAL GOVERNMENT AND PRIVATE. |       |        | PRIVATE. |           | REMARKS.                         |
|---------------------------|-----------------------------------|-------------------------------|-------|--------|----------|-----------|----------------------------------|
|                           |                                   | Quantity—Tons.                |       |        | Value.   | Quantity. |                                  |
|                           |                                   | Up.                           | Down. | Total. | Rupees.  | Tons.     |                                  |
|                           | 1. Grain ...                      |                               |       |        |          |           | Canal closed for annual repairs. |
|                           | 2. Cotton ...                     |                               |       |        |          |           |                                  |
|                           | 3. Oilseeds ...                   |                               |       |        |          |           |                                  |
|                           | 4. Salt ...                       |                               |       |        |          |           |                                  |
|                           | 5. Piece-goods ...                |                               |       |        |          |           |                                  |
|                           | 6. Metal ...                      |                               |       |        |          |           |                                  |
|                           | 7. Building materials ...         |                               |       |        |          |           |                                  |
|                           | 8. Miscellaneous ...              |                               |       |        |          |           |                                  |
|                           | 9. Fuel ...                       |                               |       |        |          |           |                                  |
|                           | 10. Timber, ...                   |                               |       |        |          |           |                                  |
|                           | 11. Bamboos, ...                  |                               |       |        |          |           |                                  |
|                           | 12. Total ...                     |                               |       |        |          |           |                                  |
| 4                         | 13. Total of same month last year | 61                            | ..... | 61     | 3,565    | 61        | 3,565                            |

|   | Up. | Down. | Total. |  | Rs. A. P. |
|---|-----|-------|--------|--|-----------|
| Total number of boats plying cargo No.        |     |       |        | Total tollage of month—<br>24 + 25 + 26 ...          | .....     |
| Total number of boats plying passenger No.    |     |       |        | Total tollage of same month last year ...            | 10 12 0   |
| Total registered tonnage, cargo ...           |     |       |        | Memorandum of Tollage.                               |           |
| Total registered tonnage, passenger ...       |     |       |        |  |           |
| on-mileage ...                                |     |       |        |  |           |
| Estimated value of cargo Rs.                  |     |       |        |  | Rs. A. P. |
| Number of passengers No.                      |     |       |        | 1. Balance not recovered on the 1st of the month ... | 140 10 0  |
| Rafts, bamboos c. ft. }                       |     | Nil.  |        | 2. Tollage per month ...                             | .....     |
| No. , bullocks ..                             |     |       |        | 3. Total ...   | 140 10 0  |
| Estimated value of rafts Rs.                  |     |       |        | 4. Amount credited in the accounts of the month ...  | 140 10 0  |
| Tollage on boats ..                           |     |       |        | 5. Balance due at the end of the month ...           | .....     |
| Unpounded tollage on boats ... Rs.            |     |       |        |  |           |
| Tollage on rafts ..                           |     |       |        |  |           |
| Total tollage on boats per on-mile ...        |     |       |        |  |           |
| Total tollage on rafts per 100 cubic feet ... |     |       |        |  |           |

HIGH LEVEL CANAL, RANGE III.  
LENGTH OF CANAL OPEN, 19 MILES.

| Number of<br>boats<br>or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |       |        | PRIVATE. |           | REMARKS.                         |
|---------------------------------|-----------------------------------|-------------------------------|-------|--------|----------|-----------|----------------------------------|
|                                 |                                   | Quantity—Tons.                |       |        | Value.   | Quantity. |                                  |
|                                 |                                   | Up.                           | Down. | Total. | Rupees.  | Tons.     |                                  |
|                                 | 1. Grain ...                      |                               |       |        |          |           | Canal closed for annual repairs. |
|                                 | 2. Cotton ...                     |                               |       |        |          |           |                                  |
|                                 | 3. Oilseeds ...                   |                               |       |        |          |           |                                  |
|                                 | 4. Salt ...                       |                               |       |        |          |           |                                  |
|                                 | 5. Piece-goods ...                |                               |       |        |          |           |                                  |
|                                 | 6. Metal ...                      |                               |       |        |          |           |                                  |
|                                 | 7. Building materials ...         |                               |       |        |          |           |                                  |
|                                 | 8. Miscellaneous ...              |                               |       |        |          |           |                                  |
|                                 | 9. Fuel ...                       |                               |       |        |          |           |                                  |
|                                 | 10. Timber ...                    |                               |       |        |          |           |                                  |
|                                 | 11. Bamboos ...                   |                               |       |        |          |           |                                  |
|                                 | 12. Total ...                     |                               |       |        |          |           |                                  |
|                                 | 13. Total of same month last year |                               |       |        |          |           |                                  |

| Up. | Down. | Total. |  | Rs. A. P.  |
|-----|-------|--------|--|--|
|     |       |        | 4. Total number of boats plying—<br>No.          | Total tollage of month—<br>24 + 25 + 26 ...          |
|     |       |        | 5. Total number of boats plying passenger<br>No. | Nil  |
|     |       |        | 6. Total registered tonnage, cargo ...           | Total tollage of same month last year ...            |
|     |       |        | 7. Total registered tonnage, passenger ...       |  |
|     |       |        | 8. Ton-mileage ...                               | Memorandum of Tollage.                               |
|     |       |        | 9. Estimated value of cargo Rs.                  | Rs. A. P.  |
|     |       |        | 9. Number of passengers No.                      | 1. Balance not recovered on the 1st of the month ... |
|     |       |        | 1. Rafts, bamboos c. ft.                         | Nil  |
|     |       |        | 2. Do., bullahs "                                | 2. Tollage per month ...                             |
|     |       |        | 3. Estimated value of rafts Rs.                  |  |
|     |       |        | 4. Tollage on boats                              | 3. Total   |
|     |       |        | 5. Compounded tollage on boats Rs.               |  |
|     |       |        | 6. Tollage on rafts "                            | 4. Amount credited in the accounts of the month ...  |
|     |       |        | 7. Total tollage on boats per ton-mile ...       | Nil  |
|     |       |        | 8. Total tollage on rafts per 100 cubic feet     | 5. Balance due at the end of the month ...           |
|     |       |        |  | Nil  |

## SOUTH-WESTERN CIRCLE.

## MIDNAPORE CANAL.

LENGTH OF CANAL OPEN, 53 MILES.

| Number of boats or rafts.                         | DESCRIPTION.                       | TOTAL-GOVERNMENT AND PRIVATE. |                        |                           |  | PRIVATE.                  |           | REMARKS. |
|---|------------------------------------|-------------------------------|------------------------|---------------------------|--|---------------------------|-----------|----------|
|   |                                    | Quantity—Tons.                |                        |                           | Value.   | Quantity.                 | Value.    |          |
|   |                                    | Up.                           | Down.                  | Total.                    | Rupces.  | Tons.                     | Rupces.   |          |
| 642   | 1. Grain ...                       | 4,321                         | 743                    | 5,064                     | 2,36,003   | 5,064                     | 2,36,003  |          |
| 2   | 2. Cotton ...                      | .....                         | 9                      | 9                         | 4,500  | 9                         | 4,500     |          |
| 42  | 3. Oilseeds ...                    | 387                           | 176                    | 563                       | 54,777   | 563                       | 54,777    |          |
| 149   | 4. Salt ...                        | .....                         | 2,012                  | 2,012                     | 1,49,061   | 2,012                     | 1,49,061  |          |
| 4   | 5. Piece-goods ...                 | .....                         | 1                      | 1                         | 450  | 1                         | 450       |          |
| 23  | 6. Metal ...                       | 87                            | 123                    | 210                       | 1,70,070   | 210                       | 1,70,070  |          |
| 48  | 7. Building materials ...          | 236                           | 27                     | 263                       | 738  | 263                       | 738       |          |
| 618   | 8. Miscellaneous ...               | 1,566                         | 1,113                  | 2,679                     | 5,65,917   | 2,679                     | 5,65,917  |          |
| 28  | 9. Fuel ...                        | 105                           | 212                    | 317                       | 3,009  | 317                       | 3,009     |          |
| 11 rafts  | 10. Timber ...                     | 1,319 c. ft.                  | 142 c. ft.             | 1,461 c. ft.              | 709  | 1,461 c. ft.              | 709       |          |
| 2 "   | 11. Bamboos ...                    | 375 "                         | .....                  | 375 "                     | 130  | 375 "                     | 130       |          |
| 1,556 and 13 rafts                                | 12. Total ...                      | 6,702 and 1,694 c. ft.        | 4,416 and 142 c. ft.   | 11,118 and 1,836 c. ft.   | 11,85,364  | 11,118 and 1,836 c. ft.   | 11,85,364 |          |
| 1,784 and 43 rafts                                | 13. Total of same month last year. | 4,034½ and 336 c. ft.         | 6,956 and 9,681 c. ft. | 10,990½ and 10,017 c. ft. | 11,18,244  | 10,990½ and 10,017 c. ft. | 11,18,244 |          |
|   |                                    | Up.                           | Down.                  | Total.                    |  |                           |           |          |
| 14. Total number of boats plying cargo No.        |                                    | 1,068                         | 488                    | 1,556                     | Total tollage of month—<br>24 + 25 + 26 ...      |                           |           |          |
| 15. Total number of boats plying passenger No.    |                                    | 449                           | 618                    | 1,067                     | Total tollage of same month last year ...        |                           |           |          |
| 15½. Total number of empty boats No.              |                                    | 456                           | 854                    | 1,310                     |  |                           |           |          |
| 16. Total registered tonnage, cargo ...           |                                    | 15,126                        | 5,685                  | 20,811                    | Memorandum of Tollage.                           |                           |           |          |
| 17. Total registered tonnage, passenger ...       |                                    | 2,038                         | 5,893                  | 7,931                     |  |                           |           |          |
| 17½. Total registered tonnage, empty ...          |                                    | 2,098                         | 3,760                  | 5,858                     |  |                           |           |          |
| 18. Ton-mileage ...                               |                                    | 3,72,842                      | 2,92,470               | 6,65,312                  | 1. Balance not recovered on the 1st of the month |                           |           |          |
| 19. Estimated value of cargo Rs.                  |                                    | 5,56,817                      | 5,97,708               | 11,84,525                 | 982 6 11   |                           |           |          |
| 20. Number of passengers No.                      |                                    | 4,713                         | 8,772                  | 13,485                    |  |                           |           |          |
| 21. Rafts, bamboos c. ft.                         |                                    | 375                           | .....                  | 375                       | 2. Tollage per month ...                         |                           |           |          |
| 22. Do., bullahs "                                |                                    | 1,319                         | 142                    | 1,461                     | 9,988 0 3  |                           |           |          |
| 23. Estimated value of rafts, Rs.                 |                                    | 590                           | 249                    | 839                       | 3. Total ...                                     |                           |           |          |
| 24. Tollage on boats "                            |                                    | 5,434-14-0                    | 4,535-5-3              | 9,970-3-3                 | 10,970 7 2                                       |                           |           |          |
| 25. Compounded tollage on boats ... Rs.           |                                    | .....                         | .....                  | .....                     |  |                           |           |          |
| 26. Tollage on rafts "                            |                                    | 17-5-0                        | 0-8-0                  | 17-13-0                   | 4. Amount paid into treasury during the month    |                           |           |          |
| 27. Total tollage on boats per ton-mile Pie       |                                    | .....                         | .....                  | 2-9                       | 7,722 8 6  |                           |           |          |
| 28. Total tollage on rafts per 100 cubic feet ... |                                    | .....                         | .....                  | 0-15-6                    | 5. Balance due at the end of the month           |                           |           |          |
|   |                                    |                               |                        |                           | 8,247 14 8                                       |                           |           |          |

## HIDGELLER TIDAL CANAL.

LENGTH OF CANAL OPEN, 29 MILES.

| Number of<br>boats<br>or rafts. | DESCRIPTION.                            | TOTAL GOVERNMENT AND PRIVATE. |                       |                       |          | PRIVATE.              |          | REMARKS. |
|---------------------------------|---|-------------------------------|-----------------------|-----------------------|----------|-----------------------|----------|----------|
|                                 |   | Quantity—Tons.                |                       |                       | Value.   | Quantity.             | Value.   |          |
|                                 |   | Up.                           | Down.                 | Total.                | Rupers.  | Tons.                 | Rupers.  |          |
| 423                             | 1. Grain ...                            | 3,472                         | 4                     | 3,476                 | 1,07,460 | 3,476                 | 1,07,460 |          |
| .....                           | 2. Cotton ...                           | .....                         | .....                 | .....                 | .....    | .....                 | .....    |          |
| .....                           | 3. Oilseeds ...                         | .....                         | .....                 | .....                 | .....    | .....                 | .....    |          |
| 62                              | 4. Salt ...                             | .....                         | 516                   | 516                   | 36,125   | 516                   | 36,125   |          |
| 8                               | 5. Piece-goods ...                      | .....                         | 26                    | 26                    | 18,125   | 26                    | 18,125   |          |
| 9                               | 6. Metal ...                            | .....                         | 25                    | 25                    | 4,475    | 21                    | 3,675    |          |
| 10                              | 7. Building materials ...               | 4                             | 74                    | 78                    | 4,395    | 57                    | 1,395    |          |
| 780                             | 8. Miscellaneous ...                    | 862                           | 581                   | 1,443                 | 1,28,073 | 1,436                 | 1,27,673 |          |
| 20                              | 9. Fuel ...                             | 11                            | 149                   | 160                   | 1,819    | 160                   | 1,819    |          |
| 3 rafts                         | 10. Timber ...                          | 411 c. ft.                    | 36 c. ft.             | 447 c. ft.            | 1,700    | 447 c. ft.            | 1,700    |          |
| 1 raft                          | 11. Bamboos ...                         | 25 "                          | .....                 | 25 "                  | 4        | 25 "                  | 4        |          |
| 1,312 &<br>4 rafts              | 12. Total ...                           | 4,349 &<br>436 c. ft.         | 1,375 &<br>36 c. ft.  | 5,724 &<br>472 c. ft. | 3,02,176 | 5,692 &<br>472 c. ft. | 2,97,976 |          |
| 1,678 &<br>.6 rafts             | 13. Total of same<br>month last year... | 5,237 &<br>268 c. ft.         | 1,479 &<br>106 c. ft. | 6,716 &<br>374 c. ft. | 3,75,495 | 6,694 &<br>374 c. ft. | 3,75,375 |          |

|  | Up.       | Down.     | Total.     |  | Rs.   | A. | P. |
|--|-----------|-----------|------------|--|-------|----|----|
| 14. Total number of boats plying cargo No.           | 595       | 717       | 1,312      | Total tollage of month—<br>24 + 25 + 26 ...                | 5,504 | 1  | 9  |
| 15. Total number of boats plying passenger No.       | 38        | 30        | 68         | Total tollage of same<br>month last year                   | 6,975 | 0  | 3  |
| 16. Total registered tonnage, cargo ...              | 9,061     | 5,483     | 14,544     | <i>Memorandum of Tollage.</i>                              |       |    |    |
| 17. Total registered tonnage, passenger ...          | 139       | 136       | 275        |  |       |    |    |
| 18. Ton-mileage ...                                  | 191,686   | 122,936   | 314,622    |  |       |    |    |
| 19. Estimated value of cargo Rs.                     | 1,27,730  | 1,72,742  | 3,00,472   | 1. Balance not recovered<br>on the 1st of the<br>month ... | 864   | 3  | 0  |
| 20. Number of passengers No.                         | 159       | 189       | 348        | 2. Tollage per month ...                                   | 5,504 | 1  | 9  |
| 21. Rafts, bamboos c. ft.                            | 25        | .....     | 25         | 3. Total ...   | 6,368 | 4  | 9  |
| 22. Do., bullals "                                   | 411       | 36        | 447        | 4. Amount paid into<br>treasury during the<br>month ...    | 5,514 | 9  | 3  |
| 23. Estimated value of rafts Rs.                     | 1,604     | 100       | 1,704      | 5. Balance due at the<br>end of the month ...              | 853   | 11 | 0  |
| 24. Tollage on boats "                               | 3,336-1-9 | 2,124-9-9 | 5,460-11-6 |  |       |    |    |
| 25. Compounded tollage on<br>boats ... Rs.           | 14-15-3   | 19-15-0   | 34-14-3    |  |       |    |    |
| 26. Tollage on rafts "                               | 6-1-0     | 2-7-0     | 8-8-0      |  |       |    |    |
| 27. Total tollage on boats per<br>ton-mile ...       | .....     | .....     | 0-0-3      |  |       |    |    |
| 28. Total tollage on rafts per<br>100 cubic feet ... | .....     | .....     | 1-12-0     |  |       |    |    |

# THE CALCUTTA GAZETTE, JULY 20, 1887.

## SONE CIRCLE.

### PATNA CANAL SYSTEM.

LENGTH OF CANAL OPEN, 86½ MILES.

| Number of boats or rafts.                      | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |            |            |  | PRIVATE.  |            | REMARKS.                          |
|--|---------------------------------------|-------------------------------|------------|------------|--|-----------|------------|-----------------------------------|
|  |                                       | Quantity—Tons.                |            |            | Value.   | Quantity. | Value.     |                                   |
|  |                                       | Up.                           | Down.      | Total.     | Rupees.  | Tons.     | Rupees.    |                                   |
| 11   | 1. Grain ...                          | 1                             | 135        | 136        | 7,893  | 136       | 7,893      | Canal closed up to 17th May 1887. |
| .....  | 2. Cotton ...                         | .....                         | .....      | .....      | .....  | .....     | .....      |                                   |
| 12   | 3. Oilseeds ...                       | .....                         | 158        | 158        | 15,030   | 158       | 15,030     |                                   |
| 6  | 4. Salt ...                           | 72                            | 7          | 79         | 4,365  | 79        | 4,365      |                                   |
| 7  | 5. Piece-goods ...                    | 39                            | .....      | 39         | 2,260  | 32        | 1,885      |                                   |
| .....  | 6. Metal ...                          | .....                         | .....      | .....      | .....  | .....     | .....      |                                   |
| 1  | 7. Building materials ...             | 7                             | 8          | 15         | 12,025   | 7         | 12,000     |                                   |
| 28   | 8. Miscellaneous ...                  | 134                           | 153        | 287        | 20,111   | 274       | 19,805     |                                   |
| 9  | 9. Fuel { boats                       | 108                           | .....      | 108        | 1,647  | 46        | 790        |                                   |
|  | { rafts                               | .....                         | 14         | 14         | 30   | 14        | 30         |                                   |
| 1  | 10. Timber { boats                    | .....                         | 5          | 5          | 100  | 5         | 100        |                                   |
|  | { rafts                               | .....                         | 171        | 171        | 1,793  | 171       | 1,793      |                                   |
| 3  | 11. Bamboos { boats                   | 36                            | .....      | 36         | 525  | 36        | 525        |                                   |
|  | { rafts                               | .....                         | 649        | 649        | 7,916  | 649       | 7,916      |                                   |
| 78   | 12. Total ...                         | 397                           | 1,300      | 1,697      | 73,695   | 1,607     | 72,132     |                                   |
| 6  | 13. Total of same month last year ... | 99                            | 107        | 206        | 99,968   | 206       | 99,968     |                                   |
|  |                                       | Up.                           | Down.      | Total.     |  |           | Rs. A. P.  |                                   |
| 14. Total number of boats plying cargo No.     |                                       | 41                            | 37         | 78         | Total tollage of month—24 + 25 + 26 ...              |           | 1,295 6 10 |                                   |
| 15. Total number of boats plying passenger No. |                                       | 1                             | 2          | 3          |  |           |            |                                   |
| 15½. Total number of empty boats No.           |                                       | 64                            | 6          | 70         | Total tollage of same month last year ...            |           | 8 7 6      |                                   |
| 16. Total registered tonnage, cargo            |                                       | 590                           | 736        | 1,326      |  |           |            |                                   |
| 17. Total registered tonnage, passenger        |                                       | 27                            | 54         | 81         |  |           |            |                                   |
| 17½. Total registered tonnage of empty boats   |                                       | 361                           | 20         | 381        | Memorandum of Tollage.                               |           |            |                                   |
| 8. Ton-mileage                                 |                                       | 56,058                        | 65,672     | 1,21,730   |  |           | Rs. A. P.  |                                   |
| 9. Estimated value of cargo Rs.                |                                       | 27,716                        | 36,240     | 63,956     | 1. Balance not recovered on the 1st of the month ... |           | 450 1 3    |                                   |
| 0. Number of passengers No.                    |                                       | 80                            | 188½       | 268½       | 2. Tollage per month ...                             |           | 1,295 6 10 |                                   |
| 1. Rafts, bamboos c. ft.                       |                                       | .....                         | 97,308     | 97,308     |  |           |            |                                   |
| 2. Do., bullahs "                              |                                       | .....                         | 13,875     | 13,875     |  |           |            |                                   |
| 3. Estimated value of rafts Rs.                |                                       | .....                         | 9,739      | 9,739      |  |           |            |                                   |
| 4. Tollage on boats "                          |                                       | 400-11-6                      | 578-13-3   | 979-8-9    | 3. Total ...   |           | 1,745 8 1  |                                   |
| 5. Compounded tollage on boats Rs.             |                                       | (—) 10-9-5                    | (—) 10-0-0 | (—) 20-9-5 |  |           |            |                                   |
| Tollage on rafts "                             |                                       | .....                         | 336 7-6    | 336-7-6    | 4. Amount credited in the accounts of the month ...  |           | 1,211 10 7 |                                   |
| Total tollage on boats per ton-mile            |                                       | .....                         | .....      | 1½ pies.   |  |           |            |                                   |
| Total tollage on rafts per 100 cubic feet      |                                       | .....                         | .....      | 0-4-10     | 5. Balance due at the end of the month ...           |           | 533 13 6   |                                   |

## ARRAH CANAL SYSTEM.

LENGTH OF CANAL OPEN, 65 MILES.

| Number of<br>boats<br>or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |          |               |  | PRIVATE.  |           | REMARKS. |
|---------------------------------|---|-------------------------------|----------|---------------|--|-----------|-----------|----------|
|                                 |   | Quantity—Tons.                |          |               | Value.   | Quantity. | Value.    |          |
|                                 |   | Up.                           | Down.    | Total.        | Rupies.  | Tons.     | Rupies.   |          |
| .....                           | 1. Grain ...                                  | .....                         | ...      | .....         | .....  | .....     | .....     |          |
| .....                           | 2. Cotton ...                                 | .....                         | .....    | .....         | .....  | .....     | .....     |          |
| .....                           | 3. Oilseeds ...                               | 3                             | .....    | 3             | 172  | 3         | 172       |          |
| 26                              | 4. Salt ...                                   | 182                           | 7        | 189           | 18,669   | 189       | 18,669    |          |
| .....                           | 5. Piece-goods ...                            | .....                         | 35       | 35            | 48,385   | 35        | 48,385    |          |
| .....                           | 6. Metal ...                                  | 1                             | 2        | 3             | 742  | 3         | 742       |          |
| ...                             | 7. Building materials ...                     | 1                             | .....    | 1             | 60   | 1         | 60        |          |
| 40                              | 8. Miscellaneous ...                          | 42                            | 211      | 253           | 53,038   | 246       | 52,538    |          |
| 3                               | 9. Fuel ...                                   | 8                             | 1        | 9             | 264  | 9         | 264       |          |
| Rafts                           | 10. Timber ...                                | .....                         | 650      | 650           | 3,185  | 650       | 3,185     |          |
|                                 | 11. Bamboos ...                               | .....                         | 349      | 349           | 8,526  | 349       | 8,526     |          |
| 69                              | 12. Total ...                                 | 237                           | 1,255    | 1,492         | 1,33,041   | 1,485     | 1,32,541  |          |
| 462                             | 13. Total of same month last year...          | 873                           | 3,758    | 4,631         | 3,73,813   | 4,601     | 3,62,492  |          |
|                                 |   | Up.                           | Down.    | Total.        |  |           | Rs. A. P. |          |
| 14.                             | Total number of boats plying cargo No.        | 33                            | 36       | 69            | Total tollage of month—<br>24 + 25 + 26 ...          |           | 814 1 5   |          |
| 15.                             | Total number of boats plying passenger No.    | 9                             | 7        | 16            |  |           |           |          |
| 15½.                            | Total number of empty boats No.               | 59                            | 4        | 63            | Total tollage of same month last year ...            |           | 2,054 9 6 |          |
| 16.                             | Total registered tonnage, cargo ...           | 293                           | 387      | 680           | <i>Memorandum of Tollage.</i>                        |           |           |          |
| 17.                             | Total registered tonnage, passenger ...       | 75                            | 80       | 155           |  |           |           |          |
| 17½.                            | Total registered tonnage, empty ...           | 164                           | 17       | 181           |  |           |           |          |
| 18.                             | Ton-mileage ...                               | 23,017                        | 21,802   | 44,819        | 1. Balance not recovered on the 1st of the month ... |           | 178 15 0  |          |
| 19.                             | Estimated value of cargo Rs.                  | 29,907                        | 91,423   | 1,21,330      | 2. Tollage per month ...                             |           | 814 1 5   |          |
| 20.                             | Number of passengers No.                      | 643                           | 703½     | 1,346½        |  |           |           |          |
| 21.                             | Rafts, bamboos c. ft.                         | .....                         | 52,380   | 52,380        |  |           |           |          |
| 22.                             | Do., bullahs "                                | .....                         | 48,852   | 48,852        |  |           |           |          |
| 23.                             | Estimated value of rafts Rs.                  | .....                         | 11,711   | 11,711        | 3. Total ...   |           | 993 0 5   |          |
| 24.                             | Tollage on boats "                            | 112-12-3                      | 184-4-6  | 297-0-9       |  |           |           |          |
| 25.                             | Compounded tollage on boats Rs.               | 188 9-11                      | 188-9-0  | 377-2-11      | 4. Amount credited in the accounts of the month ...  |           | 892 7 11  |          |
| 26.                             | Tollage on rafts "                            | .....                         | 139-13-9 | 139-13-9      |  |           |           |          |
| 27.                             | Total tollage on boats per ton-mile ...       | .....                         | .....    | 2-8 pies      |  |           |           |          |
| 28.                             | Total tollage on rafts per 100 cubic feet ... | .....                         | .....    | 2 As. 2 pies. | 5. Balance due at the end of the month ...           |           | 100 8 6   |          |

## BUXAR CANAL SYSTEM

LENGTH OF CANAL OPEN, 67 MILES.

| Number of boats or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |         |           |  | PRIVATE.  |          | REMARKS.   |
|---------------------------|---|-------------------------------|---------|-----------|--|-----------|----------|------------|
|                           |   | Quantity—Tons.                |         |           | Value.   | Quantity. | Value.   |            |
|                           |   | Up.                           | Down.   | Total.    | Rupces.  | Tons.     | Rupces.  |            |
| 52                        | 1. Grain ...                                  | .....                         | 776     | 776       | 72,342   | 776       | 72,342   |            |
| .....                     | 2. Cotton ...                                 | .....                         | .....   | .....     | .....  | .....     | .....    |            |
| 1                         | 3. Oilseeds ...                               | .....                         | 10      | 10        | 1,200  | 10        | 1,200    |            |
| .....                     | 4. Salt ...                                   | .....                         | .....   | .....     | .....  | .....     | .....    |            |
| .....                     | 5. Piece-goods ...                            | 6                             | .....   | 6         | 10,900   | 6         | 10,900   |            |
| .....                     | 6. Metal ...                                  | .....                         | .....   | .....     | .....  | .....     | .....    |            |
| 10                        | 7. Building materials ...                     | 34                            | 63      | 97        | 3,154  | 16        | 129      |            |
| 6                         | 8. Miscellaneous ...                          | 36                            | 47      | 83        | 27,525   | 83        | 27,525   |            |
| .....                     | 9. Fuel ...                                   | .....                         | .....   | .....     | .....  | .....     | .....    |            |
| Rafts {                   | 10. Timber ...                                | .....                         | 122     | 122       | 3,108  | 122       | 3,108    |            |
|                           | 11. Bamboos ...                               | .....                         | 135     | 135       | 2,535  | 135       | 2,535    |            |
| 69                        | 12. Total ...                                 | 76                            | 1,153   | 1,229     | 1,20,764   | 1,148     | 1,17,739 |            |
| 127                       | 13. Total of same month last year ...         | 338                           | 1,901   | 2,239     | 1,71,589   | 2,232     | 1,71,339 |            |
|                           |   | Up.                           | Down.   | Total.    |  |           |          | Rs. A. P.  |
| 14.                       | Total number of boats plying cargo No.        | 5                             | 64      | 69        |  |           |          |            |
| 15.                       | Total number of boats plying passenger No.    | 4                             | 5       | 9         | Total tollage of month—<br>24 + 25 + 26 ...          |           |          | 561 14 4   |
| 15½.                      | Total number of empty boats No.               | 25                            | 23      | 48        |  |           |          |            |
| 16.                       | Total registered tonnage, cargo ...           | 98                            | 1,447   | 1,545     | Total tollage of same month last year ...            |           |          | 1 034 12 6 |
| 17.                       | Total registered tonnage, passenger ...       | 108                           | 86      | 194       |  |           |          |            |
| 17½.                      | Total registered tonnage, empty ...           | 90                            | 91      | 181       |  |           |          |            |
| 18.                       | Ton-mileage ...                               | 7,592                         | 30,184  | 37,776    | Memorandum of Tollage.                               |           |          |            |
| 19.                       | Estimated value of cargo Rs.                  | 32,625                        | 82,496  | 1,15,121  |  |           |          |            |
| 20.                       | Number of passengers No.                      | 287½                          | 222½    | 510       |  |           |          |            |
| 21.                       | Rafts, bamboos c. ft.                         | .....                         | 20,280  | 20,280    | 1. Balance not recovered on the 1st of the month ... |           |          | 28 5 3     |
| 22.                       | Do., bullahs "                                | .....                         | 9,195   | 9,195     |  |           |          |            |
| 23.                       | Estimated value of rafts Rs.                  | .....                         | 5,643   | 5,643     | 2. Tollage per month ...                             |           |          | 561 14 4   |
| 24.                       | Tollage on boats "                            | 53-0-6                        | 322-1-6 | 375-2-0   |  |           |          |            |
| 25.                       | Compounded tollage on boats Rs.               | 33 5-4                        | 81-5-6  | 114-10-10 | 3. Total ...   |           |          | 590 3 7    |
| 26.                       | Tollage on rafts "                            | .....                         | 72-1-6  | 72-1-6    |  |           |          |            |
| 27.                       | Total tollage on boats per ton-mile ...       | .....                         | .....   | 0-0-2-5   | 4. Amount credited in the accounts of the month ...  |           |          | 517 10 4   |
| 28.                       | Total tollage on rafts per 100 cubic feet ... | .....                         | .....   | 0-3-10    | 5. Balance due at the end of the month ...           |           |          | 72 9 3     |



**ABSTRACT FOR THE MONTH OF MAY 1887. AS COMPARED WITH THE CORRESPONDING MONTH OF THE PREVIOUS YEAR.**

| CANAL.                       | TRAFFIC, 1887-88. |    |    |                      |    |    | TRAFFIC, 1886-87. |    |    |                      |    |    | REMARKS. |
|------------------------------|-------------------|----|----|----------------------|----|----|-------------------|----|----|----------------------|----|----|----------|
|                              | During the month. |    |    | To end of the month. |    |    | During the month. |    |    | To end of the month. |    |    |          |
| <i>Orissa Circle.</i>        | Rs.               | A. | P. | Rs.                  | A. | P. | Rs.               | A. | P. | Rs.                  | A. | P. |          |
| Taldunda Canal System ...    | 45                | 8  | 9  | 555                  | 11 | 3  | .....             |    |    | 881                  | 7  | 7  |          |
| Kendrapara Canal System      | 8                 | 6  | 9  | 6,122                | 1  | 9  | 11                | 11 | 0  | 6,327                | 13 | 6  |          |
| High Level, Range I ...      | .....             |    |    | 892                  | 12 | 0  | .....             |    |    | 980                  | 1  | 9  |          |
| Ditto, " II ...              | .....             |    |    | 462                  | 6  | 0  | 10                | 12 | 0  | 657                  | 13 | 0  |          |
| Ditto, " III ...             | .....             |    |    | 128                  | 6  | 3  | .....             |    |    | 341                  | 11 | 9  |          |
| Total Orissa Circle ...      | 53                | 15 | 6  | 8,161                | 5  | 3  | 22                | 7  | 0  | 9,188                | 15 | 7  |          |
| <i>South-Western Circles</i> |                   |    |    |                      |    |    |                   |    |    |                      |    |    |          |
| Midnapore Canal ...          | 9,988             | 0  | 3  | 15,383               | 4  | 3  | 10,702            | 6  | 9  | 19,743               | 9  | 9  |          |
| Hidgellee Tidal Canal ...    | 5,504             | 1  | 9  | 10,949               | 5  | 3  | 6,975             | 0  | 3  | 14,476               | 9  | 0  |          |
| Total South-Western Circle   | 15,492            | 2  | 0  | 26,332               | 9  | 6  | 17,677            | 7  | 0  | 34,220               | 2  | 9  |          |
| <i>Sone Circle.</i>          |                   |    |    |                      |    |    |                   |    |    |                      |    |    |          |
| Patha Canal System ...       | 1,295             | 6  | 10 | 4,321                | 4  | 4  | 8                 | 7  | 6  | 3,543                | 3  | 9  |          |
| Arrah ditto ...              | 814               | 1  | 5  | 2,233                | 11 | 5  | 2,054             | 9  | 6  | 2,993                | 6  | 3  |          |
| Buxar ditto ...              | 561               | 14 | 4  | 1,465                | 13 | 3  | 1,034             | 12 | 6  | 1,476                | 0  | 9  |          |
| Total Sone Circle ...        | 2,671             | 6  | 7  | 8,011                | 0  | 0  | 3,097             | 13 | 6  | 8,013                | 4  | 9  |          |
| GRAND TOTAL ...              | 18,217            | 8  | 1  | 42,504               | 14 | 9  | 20,797            | 11 | 6  | 51,422               | 7  | 1  |          |

**GOVERNMENT TRANSPORT SERVICE.**

| CANAL.                  | TRAFFIC, 1887-88. |        |                 |                      |        |                 | TRAFFIC, 1886-87. |        |                 |                      |        |                 |
|-------------------------|-------------------|--------|-----------------|----------------------|--------|-----------------|-------------------|--------|-----------------|----------------------|--------|-----------------|
|                         | During the month. |        |                 | To end of the month. |        |                 | During the month. |        |                 | To end of the month. |        |                 |
|                         | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. |
| <i>Orissa Circle.</i>   | No.               | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A. P.       | No.               | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A.          |
| High Level ...          | 10                | 16     | 26 10 9         | 665                  | 1,574  | 1,053 14 8      | 371               | 1,449  | 527 4 6         | 1,647                | 6,550  | 2,272 0         |
| Total Orissa Circle ... | 10                | 16     | 26 10 9         | 665                  | 1,574  | 1,053 14 8      | 371               | 1,449  | 527 4 6         | 1,647                | 6,550  | 2,272 0         |

**TOTAL NAVIGATION RECEIPTS.**

| CANAL.                | TRAFFIC, 1887-88. |                      |    | TRAFFIC, 1886-87. |                      |    | REMARKS. |    |    |        |    |   |
|-----------------------|-------------------|----------------------|----|-------------------|----------------------|----|----------|----|----|--------|----|---|
|                       | During the month. | To end of the month. |    | During the month. | To end of the month. |    |          |    |    |        |    |   |
|                       | Rs.               | A.                   | P. | Rs.               | A.                   | P. | Rs.      | A. | P. |        |    |   |
| Orissa Canals ...     | 80                | 10                   | 3  | 9,215             | 3                    | 11 | 549      | 11 | 6  | 11,460 | 15 | 8 |
| Midnapore Canal       | 9,988             | 0                    | 3  | 15,383            | 4                    | 3  | 10,702   | 6  | 9  | 19,743 | 9  | 9 |
| Hidgellee Tidal Canal | 5,504             | 1                    | 9  | 10,949            | 5                    | 3  | 6,975    | 0  | 3  | 14,476 | 9  | 0 |
| Sone Canals ...       | 2,671             | 6                    | 7  | 8,011             | 0                    | 0  | 3,097    | 13 | 6  | 8,013  | 4  | 9 |
| Total                 | 18,244            | 2                    | 10 | 43,558            | 13                   | 5  | 21,325   | 0  | 0  | 53,694 | 7  | 2 |

C. W. I. HARRISON, *Lieut.-Col., R.E.,*  
Offg Joint-Secy. to the Govt. of Bengal.

CALCUTTA,  
The 19th July 1887.

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

## ORISSA COAST CANAL.

LENGTH OF CANAL OPEN, 91 MILES.

Statement showing Quantities of Goods carried during the month of May 1887.

| Number of<br>boats or<br>rafts. | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |                    |                         |          | PRIVATE.                |          |
|---------------------------------|--------------------------------------|-------------------------------|--------------------|-------------------------|----------|-------------------------|----------|
|                                 |                                      | Quantity—Tons.                |                    |                         | Value.   | Quantity.               | Value.   |
|                                 |                                      | Up.                           | Down.              | Total.                  | Rupees.  | Tons.                   | Rupees.  |
| 199                             | 1. Grain ...                         | 2,168                         | 4                  | 2,172                   | 53,582   | 2,172                   | 53,582   |
| 1                               | 2. Cotton ...                        | .....                         | 2                  | 2                       | 900      | 2                       | 900      |
| 1                               | 3. Oilseeds ...                      | 1                             | .....              | 1                       | 120      | 1                       | 120      |
| 34                              | 4. Salt ...                          | .....                         | 305                | 305                     | 21,440   | 305                     | 21,440   |
| 5                               | 5. Piece-goods ...                   | .....                         | 10                 | 10                      | 5,800    | 10                      | 5,800    |
| 3                               | 6. Metal ...                         | .....                         | 5                  | 5                       | 900      | 1                       | 200      |
| 12                              | 7. Building materials ...            | 61                            | 36                 | 97                      | 1,378    | 14                      | 40       |
| 447                             | 8. Miscellaneous ...                 | 76                            | 253                | 329                     | 36,654   | 319                     | 35,884   |
| 13                              | 9. Fuel ...                          | 86                            | 117                | 153                     | 1,681    | 121                     | 1,609    |
| 4 rafts                         | 10. Timber ...                       | 83 c. ft                      | 6 c. ft.           | 39 c. ft.               | 106      | 39 c. ft.               | 106      |
| 3 „                             | 11. Bamboos ...                      | 350 „                         | .....              | 350 „                   | 22       | 350 „                   | 22       |
| 715 &<br>7 rafts                | 12. Total ...                        | 2,342 &<br>383 c. ft          | 732 &<br>6 c. ft.  | 3,074 &<br>389 c. ft.   | 1,22,563 | 2,945 &<br>389 c. ft.   | 1,19,703 |
| 641 &<br>13 rafts               | 13. Total of same<br>month last year | 1,831 &<br>1,775 c. ft.       | 409 &<br>31 c. ft. | 2,240 &<br>1,806 c. ft. | 1,03,011 | 2,204 &<br>1,806 c. ft. | 1,02,506 |

|  | Up.        | Down.     | Total.    |  | Rs. A    |
|--|------------|-----------|-----------|--|----------|
| 14. Total number of boats plying cargo ... No.     | 314        | 401       | 715       | Total tollage of month—<br>24+25+26 ...              | 3,056 11 |
| 15. Total number of boats plying passenger ... No. | 21         | 21        | 42        | Total tollage of same month last year ...            | 2,449 0  |
| 16. Total registered tonnage, cargo ...            | 4,460      | 2,896     | 7,356     | Memorandum of Tollage.                               |          |
| 17. Total registered tonnage, passenger ...        | 49         | 73        | 122       |  |          |
| 17. Ton mileage ...                                | 113,167    | 61,378    | 174,545   |  | Rs. A.   |
| 18. Estimated value of cargo Rs.                   | 57,468     | 64,967    | 122,435   | 1. Balance not recovered on the 1st of the month ... | 664 5    |
| 19. Number of passengers ...                       | 118        | 120       | 238       | 2. Tollage per month ...                             | 3,056 11 |
| 20. Rafts, bamboos... c. ft.                       | 350        | .....     | 350       | 3. Total ...   | 3,721 1  |
| 21. Do., bullahs ... „                             | 33         | 6         | 39        | 4. Amount paid into treasury during the month ...    | 3,426 1  |
| 22. Estimated value of rafts Rs.                   | 111        | 17        | 128       | 5. Balance due at the end of the month ...           | 294 8    |
| 23. Tollage on boats „                             | 1,942-10-3 | 1,051-6-3 | 2,994-0-6 |  |          |
| 24. Compounded tollage on boats Rs.                | 34-7-0     | 25-8-0    | 59-15-0   |  |          |
| 25. Tollage on rafts „                             | 2-8-3      | 0-4-0     | 2-12-3    |  |          |
| 26. Total tollage on boats per ton-mile ... Rs.    | .....      | .....     | 0-0-3     |  |          |
| 27. Total tollage on rafts per 100 cubic feet Rs.  | .....      | .....     | 0-11-4    |  |          |

CALCUTTA,

The 19th July 1887.

C. W. I. HARRISON, Lieut.-Col., R.E.,

Offg. Joint-Secretary to the Government of Bengal.

## CIRCULAR AND EASTERN CANALS.

*Approximate return of traffic for the week ending Saturday, the 16th July 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>16TH JULY 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>17TH JULY 1886. |                     |          |
|--------------------|--|---------------------|----------|--|---------------------|----------|
|                    | Number of<br>boats.                          | Weight of<br>cargo. | Tollage. | Number of<br>boats.                          | Weight of<br>cargo. | Tollage. |
|                    | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... | 398  | 55,400              | 840      | 289  | 61,406              | 1,077    |
| Jute ...           | 7  | 1,575               | 26       | 15   | 6,335               | 130      |
| Firewood ...       | 100  | 37,225              | 562      | 156  | 73,025              | 1,091    |
| Other articles ... | 620  | 1,61,115            | 2,606    | 677  | 2,32,598            | 2,449    |
| Total ...          | 1,125  | 2,55,315            | 4,034    | 1,137  | 3,73,364            | 4,747    |

|   | COACHING TRAFFIC.     |                         | MERCHANDISE AND MINERAL TRAFFIC. |                        | Other earnings (estimated). | Total earnings.          | TRAFFIC TRAIN-MILES RUN |              |         |
|---|-----------------------|-------------------------|----------------------------------|------------------------|-----------------------------|--------------------------|-------------------------|--------------|---------|
|   | Number of passengers. | Receipts.               | Weight carried.                  | Receipts.              |                             |                          | Coaching.               | Merchandise. | Total.  |
| Total traffic for the period                            | 342,524               | Rs. A. P. 3,21,915 10 0 | Mds. S. 30,52,640 0              | Rs. A. P. 6,72,103 9 6 | Rs. A. P. 25,409 11 9       | Rs. A. P. 10,19,488 15 3 | 63,410                  | 119,294      | 202,704 |
| Or per mile of railway                                  | .....                 | 211 14 10               | .....                            | 442 7 5                | 10 12 3                     | 671 2 6                  | .....                   | .....        | .....   |
| For previous weeks of half-year                         | .....                 | .....                   | .....                            | .....                  | .....                       | .....                    | .....                   | .....        | .....   |
| Total for the first 9 days                              | 342,524               | 3,21,915 10 0           | 30,52,640 0                      | 6,72,103 9 6           | 25,409 11 9                 | 10,19,488 15 3           | 63,410                  | 119,294      | 202,704 |
| COMPARISON.   |                       |                         |                                  |                        |                             |                          |                         |              |         |
| Total for corresponding first 10 days of previous year  | 358,072               | 3,22,735 3 3            | 32,88,956 10                     | 7,37,871 11 0          | 23,010 14 4                 | 10,83,617 12 7           | 95,212                  | 141,793      | 236,905 |
| Per mile of railway corresponding week of previous year | .....                 | 213 0 5                 | .....                            | 487 0 9                | 15 3 0                      | 715 4 2                  | .....                   | .....        | .....   |
| Total to corresponding date of previous year            | 358,072               | 3,22,735 3 3            | 32,88,956 10                     | 7,37,871 11 0          | 23,010 14 4                 | 10,83,617 12 7           | 95,212                  | 141,793      | 236,905 |

*Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR THE FIRST 10 DAYS OF JULY 1886. |               |                  | RECEIPTS FOR THE FIRST 9 DAYS OF JULY 1887. |               |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|---------------|------------------|---|---------------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts.     | Per mile worked. | Mean mileage worked.                        | Receipts.     | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                 | Total receipts. | Per mile worked. | Rs.                     |                         |
| 1,515  | Rs. 10,83,618 | Rs. 715          | 1,519                                       | Rs. 10,19,489 | Rs. 671          | 1,515   | Rs. 1,38,67,200 | Rs. 1,953        | 1,519  | Rs. 1,31,77,961 | Rs. 8,673        | .....                   | 3,89,23                 |

#### PATNA-GYA STATE RAILWAY.

*Approximate Return of Traffic for the first 9 days of July 1887, on 57½ miles open*

|   | COACHING TRAFFIC.     |                     | MERCHANDISE AND MINERAL TRAFFIC. |                     | Other earnings (estimated). | Total earnings.      | TRAFFIC TRAIN-MILES RUN |              |        |
|---|-----------------------|---------------------|----------------------------------|---------------------|-----------------------------|----------------------|-------------------------|--------------|--------|
|   | Number of passengers. | Receipts.           | Weight carried.                  | Receipts.           |                             |                      | Coaching.               | Merchandise. | Total. |
| Total traffic for the period                              | 14,732                | Rs. A. P. 6,927 6 0 | Mds. S. 59,411 20                | Rs. A. P. 3,704 8 0 | Rs. A. P. 34 6 0            | Rs. A. P. 10,736 1 1 | 2,065                   | 1,012        | 3,077  |
| Or per mile of railway                                    | 258                   | 121 4 6             | 1,038 30                         | 65 13 0             | 0 9 7                       | 186 11 1             | .....                   | .....        | .....  |
| For previous weeks of half-year                           | .....                 | .....               | .....                            | .....               | .....                       | .....                | .....                   | .....        | .....  |
| Total for the first 9 days                                | 14,732                | 6,927 6 0           | 59,411 20                        | 3,704 8 0           | 34 6 0                      | 10,736 1 1           | 2,065                   | 1,012        | 3,077  |
| COMPARISON.   |                       |                     |                                  |                     |                             |                      |                         |              |        |
| Total for corresponding first 10 days of previous year    | 14,405                | 6,978 15 0          | 56,883 10                        | 3,407 8 0           | 52 11 6                     | 10,170 1 1           | 2,308                   | 1,112        | 3,420  |
| Per mile of railway corresponding period of previous year | 253                   | 122 0 2             | 994 20                           | 59 9 2              | 0 14 9                      | 182 8 1              | .....                   | .....        | .....  |
| Total to corresponding date of previous year              | 14,405                | 6,978 15 0          | 56,883 10                        | 3,407 8 0           | 52 11 6                     | 10,170 1 1           | 2,308                   | 1,112        | 3,420  |

*Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883*

| RECEIPTS FOR THE FIRST 10 DAYS OF JULY 1886. |            |                  | RECEIPTS FOR THE FIRST 9 DAYS OF JULY 1887. |            |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|------------|------------------|---|------------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts.  | Per mile worked. | Mean mileage worked.                        | Receipts.  | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                 | Total receipts. | Per mile worked. | Rs.                     |                         |
| 57½  | Rs. 10,479 | Rs. 183          | 57½   | Rs. 10,736 | Rs. 188          | 57½   | Rs. 1,37,130    | Rs. 2,307        | 57½  | Rs. 1,31,77,961 | Rs. 2,294        | .....                   | 6,328                   |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

*Approximate Return of Traffic for the first 9 days of July 1887, on 12 miles open.*

|   | COACHING TRAFFIC.     |           | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-----------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P. | MDS. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the period ...                              | 4,723                 | 730 8 0   | 11,512 30                        | 206 2 0   | 11 12 0                     | 1,009 6 0       | 398½                     | 246          | 634½   |
| Or per mile of railway ...                                    | .....                 | 60 14 0   | .....                            | 22 2 10   | 0 15 8                      | 84 0 6          | .....                    | .....        | .....  |
| For previous weeks of half-year ...                           | .....                 | .....     | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Total for the first 9 days ...                                | 4,723                 | 730 8 0   | 11,512 30                        | 206 2 0   | 11 12 0                     | 1,009 6 0       | 398½                     | 246          | 634½   |
| COMPARISON.   |                       |           |                                  |           |                             |                 |                          |              |        |
| Total for corresponding first 10 days of previous year ...    | 3,813                 | 631 9 9   | 26,397 30                        | 343 14 0  | 25 3 0                      | 1,040 10 0      | 516                      | 320          | 836    |
| Per mile of railway corresponding period of previous year ... | .....                 | 52 10 2   | .....                            | 31 15 10  | 2 1 7                       | 86 11 7         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 3,813                 | 631 9 0   | 26,397 30                        | 343 14 0  | 23 3 0                      | 1,040 10 0      | 516                      | 339          | 855    |

*Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR THE FIRST 10 DAYS OF JULY 1886. |           |                  | RECEIPTS FOR THE FIRST 9 DAYS OF JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                 | Total receipts. | Per mile worked. |                         |                         |
| 12   | Rs. 1,041 | Rs. 87           | 12  | Rs. 1,008 | Rs. 84           | 12  | Rs. 18,313      | Rs. 1,526        | 12   | Rs. 15,337      | Rs. 1,279        | .....                   | Rs. 2,976               |

## SINDIA STATE RAILWAY.

*Approximate Return of Traffic for the first 9 days of July 1887, on 74½ miles open.*

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | MDS. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the period ...                              | 7,081                 | 5,564 0 0  | 1,11,326 10                      | 3,372 9 0  | 85 9 0                      | 9,022 2 0       | 886                      | 1,809        | 2,695  |
| Or per mile of railway ...                                    | .....                 | 74 6 2     | .....                            | 45 1 5     | 1 2 3                       | 120 9 10        | .....                    | .....        | .....  |
| For previous weeks of half-year ...                           | .....                 | .....      | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total for the first 9 days ...                                | 7,081                 | 5,564 0 0  | 1,11,326 10                      | 3,372 9 0  | 85 9 0                      | 9,022 2 0       | 886                      | 1,809        | 2,695  |
| COMPARISON.   |                       |            |                                  |            |                             |                 |                          |              |        |
| Total for corresponding first 10 days of previous year ...    | 7,101                 | 5,141 10 6 | 81,280 0                         | 3,166 12 0 | 191 1 0                     | 8,499 8 3       | 1,010                    | 1,109        | 2,119  |
| Per mile of railway corresponding period of previous year ... | .....                 | 68 11 10   | .....                            | 42 5 5     | 2 8 10                      | 113 10 1        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 7,101                 | 5,141 10 6 | 81,280 0                         | 3,166 12 0 | 191 1 9                     | 8,499 8 3       | 1,010                    | 1,109        | 2,119  |

*Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR THE FIRST 10 DAYS OF JULY 1886. |           |                  | RECEIPTS FOR THE FIRST 9 DAYS OF JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                 | Total receipts. | Per mile worked. |                         |                         |
| 74½  | Rs. 8,500 | Rs. 114          | 74½   | Rs. 9,022 | Rs. 121          | 74½   | Rs. 1,04,875    | Rs. 1,402        | 74½  | Rs. 1,27,812    | Rs. 1,655        | Rs. 18,937              | .....                   |

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for the first 9 days of July 1887, on 22½ miles open.*

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES |              |
|---|-----------------------|------------|----------------------------------|-----------|-----------------------------|-----------------|---------------------|--------------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts. |                             |                 | Coaching.           | Merchandise. |
|   |                       | Rs. A. P.  | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                     |              |
| Total traffic for the period ...                              | 26,003                | 7,284 14 0 | 4,378 0                          | 161 15 0  | 0 8 0                       | 7,456 5 0       | 1,237½              | 94½          |
| Or per mile of railway ...                                    | .....                 | 327 6 7    | .....                            | 7 4 5     | 0 6 10                      | 333 1 10        | .....               | .....        |
| For previous weeks of half-year ...                           | .....                 | .....      | .....                            | .....     | .....                       | .....           | .....               | .....        |
| Total for the first 9 days ...                                | 26,003                | 7,284 14 0 | 4,378 0                          | 161 15 0  | 0 8 0                       | 7,456 5 0       | 1,237½              | 94½          |
| COMPARISON.   |                       |            |                                  |           |                             |                 |                     |              |
| Total for corresponding first 10 days of previous year ...    | 27,793                | 6,788 13 0 | 4,640 10                         | 178 1 0   | 4 12 9                      | 6,971 10 9      | 1,350               | 36           |
| Per mile of railway corresponding period of previous year ... | .....                 | 303 1 10   | .....                            | 8 0 1     | 0 3 5                       | 313 5 4         | .....               | .....        |
| Total to corresponding date of previous year ...              | 27,795                | 6,788 13 0 | 4,640 10                         | 178 1 0   | 4 12 9                      | 6,971 10 9      | 1,350               | 36           |

*Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR THE FIRST 10 DAYS OF JULY 1886. |           |                  | RECEIPTS FOR THE FIRST 9 DAYS OF JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                 | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½  | 6,072     | 313              | 22½   | 7,456     | 335              | 22½   | 79,764          | 3,582            | 22½  | 82,189          | 3,604            | 2,485                   | .....                   |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for the first 9 days of July 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the period ...                              | 2,791                 | 1,361 5 3   | 12,932 30                        | 2,087 14 0 | 32 4 0                      | 3,421 7 3       | 250                      | 497          | 750    |
| Or per mile of railway ...                                    | .....                 | 32 15 9     | .....                            | 49 11 5    | 0 12 3                      | 81 7 5          | .....                    | .....        | .....  |
| For previous weeks of half-year ...                           | .....                 | .....       | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total for the first 9 days ...                                | 2,791                 | 1,361 5 3   | 12,932 30                        | 2,087 14 0 | 32 4 0                      | 3,421 7 3       | 250                      | 497          | 750    |
| COMPARISON.   |                       |             |                                  |            |                             |                 |                          |              |        |
| Total for corresponding first 10 days of previous year ...    | 4,194                 | 1,766 12 10 | 3,884 30                         | 472 7 0    | 35 6 0                      | 2,274 9 10      | 614                      | 226          | 840    |
| Per mile of railway corresponding period of previous year ... | .....                 | 42 1 1      | .....                            | 11 3 11    | 0 13 6                      | 54 2 6          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 4,194                 | 1,766 12 10 | 3,884 30                         | 472 7 0    | 35 6 0                      | 2,274 9 10      | 614                      | 226          | 840    |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR THE FIRST 10 DAYS OF JULY 1886. |           |                  | RECEIPTS FOR THE FIRST 9 DAYS OF JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                 | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 42   | 2,275     | 54               | 42  | 3,421     | 81               | 42  | 28,897          | 676              | 42   | 50,030          | 1,334            | 27,043                  | .....                   |

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B, DACCA, K. AND D. AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for the last 12 days of June 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated), including steam boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|---|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |   |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.     | Rs. A. P.   | Rs. A. P.       |                          |              |         |
| Total traffic for the last 12 days of June 1887           | 241,017               | 1,02,500 0 0       | 9,13,070 0                       | 1,11,600 0 0  | 38,600 0 0  | 2,53,150 0 0    | 34,678                   | 34,548       | 69,226  |
| Or per mile of railway                                    | 374                   | 159 0 0            | 1,416 0                          | 173 0 0       | 34 0 0  | 398 0 0         | .....                    | .....        | .....   |
| For previous 24 weeks of half-year                        | 3,231,787             | 15,09,827 0 0      | 1,25,33,053 0                    | 17,80,026 0 0 | 3,07,053 0 0                                      | 30,03,581 0 0   | 474,555                  | 452,554      | 927,109 |
| Total for 20 weeks  | 3,175,804             | 15,12,687 0 0      | 1,34,40,125 0                    | 18,97,700 0 0 | 3,40,258 0 0                                      | 32,50,731 0 0   | 509,233                  | 487,002      | 996,335 |
| COMPARISON.*  |                       |                    |                                  |               |   |                 |                          |              |         |
| Total for corresponding 11 days of previous year          | 213,544               | 98,877 0 0         | 10,58,511 0                      | 1,00,673 0 0  | 76,874 0 0  | 2,82,424 0 0    | 33,106                   | 30,479       | 63,674  |
| Per mile of railway corresponding period of previous year | 352                   | 163 0 0            | 1,747 0                          | 176 0 0       | .....   | 339 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year              | (a) 3,347,756         | 15,10,715 0 0      | 1,48,80,421 0                    | 19,00,689 0 0 | 3,04,484 0 0                                      | 33,12,389 0 0   | 450,712                  | 528,553      | 979,265 |

\* Corrected with half-yearly Revenue Accounts of all sections.

\* Audited up to 31st March 1887.

\* Includes Rs. 29,000 amount received from B. C. Railway under the old working agreement for provision of rolling-stock, &amp;c.

\* Steam-boat earnings, Rs. 17,000, have been excluded from the calculation.

\* Note—Dacca and Assam-Bihar Sections are also published separately.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR LAST 11 DAYS OF JUNE 1886. |           |                  | RECEIPTS FOR LAST 12 DAYS OF JUNE 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH JUNE 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JUNE 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 496                                     | 2,82,424  | 460              | 645                                     | 2,53,150  | 392              | 606   | 18,43,441       | 234              | 645   | 17,76,038       | 212              | .....                   | 67,403                  |

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for first 9 days of July 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the first 9 days of July 1887           | 32,000                | 10,600 0 0         | 43,000 0                         | 3,400 0 0 | 60 0 0                      | 14,060 0 0      | 4,539                    | 2,211        | 6,750  |
| Or per mile of railway                                    | 256                   | 85 0 0             | 344 0                            | 27 0 0    | .....                       | 112 0 0         | .....                    | .....        | .....  |
| For previous 9 weeks of half-year                         | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Total for 1 week  | 32,000                | 10,600 0 0         | 43,000 0                         | 3,400 0 0 | 60 0 0                      | 14,060 0 0      | 4,539                    | 2,211        | 6,750  |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding 10 days of previous year          | 31,317                | 10,585 0 0         | 20,610 0                         | 1,487 0 0 | 56 0 0                      | 12,128 0 0      | 5,534                    | 1,086        | 7,520  |
| Per mile of railway corresponding period of previous year | 251                   | 85 0 0             | 163 0                            | 12 0 0    | .....                       | 97 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year              | 31,317                | 10,585 0 0         | 20,610 0                         | 1,487 0 0 | 56 0 0                      | 12,128 0 0      | 5,534                    | 1,086        | 7,520  |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR FIRST 10 DAYS OF JULY 1886. |           |                  | RECEIPTS FOR FIRST 9 DAYS OF JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |  | Rs.             | Rs.              |                         | Rs.                     |
| 125                                      | 12,128    | 97               | 125                                     | 14,060    | 112              | 125   | 1,87,080        | 107              | 125  | 1,78,255        | 102              | .....                   | 9,431                   |

## DACCA STATE RAILWAY.

Approximate Return of Traffic for the last 12 days of June 1887, on 86 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES. |              |
|---|-----------------------|--------------------|----------------------------------|----------------|-----------------------------|-----------------|----------------------|--------------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.      |                             |                 | Coaching.            | Merchandise. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.      | Rs. A. P.                   | Rs. A. P.       |                      |              |
| Total traffic for the last 12 days of June 1887           | 16,000                | 6,800 0 0          | (b) 56,300 0                     | (b) 1,000 0 0  | 2,500 0 0                   | 10,900 0 0      | 3,788                | 3,673        |
| Or per mile of railway                                    | 186                   | 79 0 0             | 657 0                            | 10 0 0         | 29 0 0                      | 127 0 0         | .....                | .....        |
| For previous 24 weeks of half-year                        | 306,645               | 1,02,081 0 0       | 3,30,081 0                       | 23,724 0 0     | 3,316 0 0                   | 1,34,721 0 0*   | 32,037               | 25,689       |
| Total for 26 weeks  | 322,645               | 1,09,481 0 0       | 3,86,381 0                       | 30,324 0 0     | 5,316 0 0                   | 1,43,621 0 0    | 36,305               | 29,362       |
| COMPARISON.   |                       |                    |                                  |                |                             |                 |                      |              |
| Total for corresponding 11 days of previous year          | 15,968                | 6,717 0 0          | (b) 3,20,902 0                   | (b) 10,344 0 0 | 2,027 0 0                   | 10,108 0 0      | 3,621                | 6,678        |
| Per mile of railway corresponding period of previous year | 186                   | 78 0 0             | 3,731 0                          | 121 0 0        | .....                       | 189 0 0         | .....                | .....        |
| Total to corresponding date of previous year              | (a) 246,347           | 74,404 0 0         | 6,33,171 0                       | 40,128 0 0     | 7,170 0 0                   | 1,21,702 0 0    | 26,124               | 41,308       |

\* Audited up to 31st March 1887.

(a) Corrected with half-yearly Revenue Accounts.

(b) Includes ballast-trains.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

| RECEIPTS FOR LAST 11 DAYS OF JUNE 1886. |           |                  | RECEIPTS FOR LAST 12 DAYS OF JUNE 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH JUNE 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JUNE 1887. |                 |                  | Total increase in 1887. | Total decrease 1887. |
|---|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|----------------------|
| Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                      |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                  |
| 86                                      | 19,108    | 222              | 86                                      | 10,000    | 127              | 86  | 68,400          | 59               | 86  | 82,045          | 56               | .....                   | 4,315                |

## ASSAM-BEHAR STATE RAILWAY.

## PURNAH SECTION.

Approximate Return of Traffic for the last 12 days of June 1887, on 39 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the last 12 days of June 1887           | 4,500                 | 1,700 0 0          | 23,000 0                         | 3,500 0 0  | 50 0 0                      | 5,250 0 0       | 805                      | 1,043        | 1,848  |
| Or per mile of railway                                    | 115                   | 44 0 0             | 591 0                            | 90 0 0     | 1 0 0                       | 135 0 0         | .....                    | .....        | .....  |
| For previous 11 weeks of half-year                        | 28,496                | 9,871 0 0          | 2,54,791 0                       | 25,225 0 0 | 170 0 0                     | 35,261 0 0*     | 5,304                    | 6,902        | 12,196 |
| Total for 13 weeks  | 32,996                | 11,571 0 0         | 2,79,791 0                       | 28,725 0 0 | 220 0 0                     | 40,516 0 0      | 6,109                    | 7,905        | 14,014 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

\* Audited up to week ending

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## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Assam-Bihar State Railway.

| RECEIPTS FOR LAST 11 DAYS OF JUNE 1886. |           |                  | RECEIPTS FOR LAST 12 DAYS OF JUNE 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH JUNE 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JUNE 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| .....                                   | .....     | .....            | 39                                      | 5,250     | 135              | .....   | .....           | .....            | 39  | 40,516          | 80               | 40,516                  | .....                   |



## NALHATI STATE RAILWAY.

*Approximate Return of Traffic for the first 9 days of July 1887, on 27½ miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 3,629                 | 1,361 0 0          | 12,241 0                         | 637 0 0   | 37 0 0                      | 2,235 0 0       | 654½                     | 3.6½         | 98     |
| Or per mile of railway ...                                  | 133                   | 49 15 0            | 449 0                            | 30 12 0   | 1 6 0                       | 82 1 0          | .....                    | .....        | .....  |
| For previous weeks of half-year ...                         | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Total for 9 days ...  | 3,629                 | 1,361 0 0          | 12,211 0                         | 637 0 0   | 37 0 0                      | 2,235 0 0       | 654½                     | 3.6½         | 98     |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding period of previous year ...         | 3,037                 | 1,176 5 9          | 7,148 30                         | 628 3 0   | 17 10 0                     | 1,822 2 9       | 727                      | 417½         | 1,144½ |
| Per mile of railway corresponding week of previous year ... | 111                   | 43 3 0             | 273 0                            | 23 1 0    | 0 10 0                      | 66 14 0         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 3,037                 | 1,176 5 9          | 7,448 30                         | 628 3 0   | 17 10 0                     | 1,822 2 9       | 727                      | 417½         | 1,144½ |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Nalhati State Railway.*

| RECEIPTS FOR FIRST 10 DAYS OF JULY 1886. |           |                  | RECEIPTS FOR FIRST 9 DAYS OF JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                 | Total receipts. | Per mile worked. | Rs.                     |                         |
|  | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 27½                                      | 1,822     | 67               | 27½                                     | 2,235     | 82               | 27½   | 26,158          | 969              | 27½  | 27,104          | 925              | 946                     | .....                   |

## TIRHOOT STATE RAILWAY.

*Approximate Return of Traffic for the first 9 days of July 1887, on 219 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week on 219 miles open ...                      | 46,200                | 15,203 0 0         | 2,07,918 0                       | 17,586 0 0 | 3,653 0 0                   | 36,442 0 0      | 8,345                    | 7,705        | 16,050 |
| Or per mile of railway ...  | 186                   | 69 11 0            | 855 0                            | 79 10 0    | 3 7 0                       | 135 2 0*        | .....                    | .....        | .....  |
| For previous weeks of half-year ...                                   | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total for 9 days ...  | 46,200                | 15,203 0 0         | 2,07,918 0                       | 17,586 0 0 | 3,653 0 0                   | 36,442 0 0      | 8,345                    | 7,705        | 16,050 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding period of previous year on 216 miles open ... | 49,733                | 17,189 10 1        | 1,87,408 0                       | 17,818 9 0 | 4,869 4 0                   | 39,977 7 1      | 6,785                    | 6,244        | 13,029 |
| Per mile of railway corresponding week of previous year ...           | 202                   | 69 14 0            | 762 0                            | 72 7 0     | 1 10 0                      | 143 15 0*       | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...                      | 49,733                | 17,189 10 1        | 1,87,408 0                       | 17,818 9 0 | 4,869 4 0                   | 39,977 7 1      | 6,785                    | 6,244        | 13,029 |

\* Steam-hoat earnings excluded in calculating "Total earnings per mile of railway."

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tirhoot State Railway.*

| RECEIPTS FOR FIRST 10 DAYS OF JULY 1886. |           |                  | RECEIPTS FOR FIRST 9 DAYS OF JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                 | Total receipts. | Per mile worked. | Rs.                     |                         |
|  | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JULY 27, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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### ERRATUM.

*The 21st July 1887.*—In the heading of column 2 of the marginal statement in paragraph 1 of the Government Resolution, dated the 16th July 1887, published at page 1258 of the Supplement to the *Calcutta Gazette* of the 20th idem, for “schools which have ceased to be Government schools” read “schools which do not receive net grants.”

P. NOLAN,

*Secretary to the Govt. of Bengal.*

### ADOPTION OF A SON BY THE MAHARANI OF BURDWAN.

#### REVENUE DEPARTMENT—LAND REVENUE.

*Calcutta, the 26th July 1887.*

#### RESOLUTION.

#### READ—

- Letter from the Board of Revenue, No. 356A, dated the 16th April 1885, with enclosure.
- Letter from the Board of Revenue, No. 96A, dated the 8th February 1886, with enclosure.
- Letter from the Board of Revenue, No. 99A, dated the 8th February 1887, with enclosure. ••
- Letter from the Board of Revenue, No. 227A, dated the 24th March 1887, with enclosure.
- Letter from the Board of Revenue, No. 428A, dated the 17th June 1887, with enclosure.
- Letter from the Solicitor to the Government of India, No. 745, dated the 9th July 1887, and enclosure.
- Petition from the Dowager Maharani of Burdwan, dated the 13th July 1887, and enclosure.

The late Maharajádhiraj Aftab Chand Bahadur, of Burdwan, who died in March 1885, left a will by which his widow, the Maharani Benodeyi Devi, is

bound, under a heavy penalty, to adopt an heir, the only limit placed on her choice being a prohibition against the selection of one of the testator's brothers. She was at first disposed to adopt the younger son of the Hon'ble Lalla Bun Behari Kapur, but before any definite proposal could be made, the child unfortunately died. Her selection fell next on her half-brother, and the Court of Wards recommended that the consent of the Lieutenant-Governor, necessary under the provisions of Bengal Act IX of 1879 to any adoption made by a Ward, should be accorded, provided the legal validity of the act could be clearly established. The question whether the adoption of a half-brother would be valid according to the law binding on the Burdwan family was accordingly referred by this Government for the consideration of the Advocate-General, who, having associated with himself Mr. Pitt-Kennedy, Barrister-at-law, returned the opinion that such an adoption would be invalid. The Lieutenant-Governor thought himself bound to act in conformity with this advice, and accordingly declined to accept the Maharani's proposal. She questioned the correctness of the view taken by the legal advisers of Government, producing several opinions on the other side, obtained from counsel learned in the law, and the matter was still under discussion when, in January last, this child also died.

In the following month the Maharani intimated a desire, which she has since very strongly pressed upon the Court of Wards and upon Government, to adopt the only surviving son of Lalla Bun Behari. To this arrangement the Dowager Maharani Narain Kumari Devi, an influential member of the Burdwan family, objected, on the ground that the boy being an only son, and the son of the adopter's sister, the act would be invalid according to the Benares School of Hindu law, to which the Burdwan family, as she alleged, is subject. On behalf of the younger Maharani, it was stated in reply that the family, having come originally from the Punjab, and never having abandoned its ancient customs, is in fact bound in this matter by the Hindu law prevalent in that Province, which permits adoptions such as that which it is now proposed to make. The records throwing light on the question as to the school of law by which the family has been guided since its settlement in Bengal have been examined with great care by the Court of Wards, and discussed in an elaborate report. The conclusion at which the Court arrived after considering all ascertained facts, and hearing able counsel on both sides of the question, was that the adoption would not be illegal, and may properly be sanctioned by Government. All the papers of the case, including copies of the documents filed by the parties, were then forwarded by this Government for the consideration of the Standing Counsel, as the Advocate-General had been engaged in the case. Mr. Bonnerjee, acting with Mr. Hill, Barrister-at-law, gave the following opinion:—

We have carefully considered this case by the light of the materials placed before us, and are of opinion that if, as is asserted on behalf of the younger Maharani, and as would seem to have been practically allowed by the Dowager Maharani, the founder of the Burdwan Raj family came from the Punjab and settled at Burdwan, there can be no doubt whatever but that the family must be presumed, unless and until the contrary is proved, to be governed in all matters of marriage, adoption, inheritance, and others in which the Hindu law is still applicable to the Hindus by the laws, manners, usages, and customs which were in force in the Punjab at the time he left. In this case we have in addition to the presumption of law to which we have referred, the fact that, *ex concessu*, the adoption of the Maharajah Aftab Chand Bahadur himself, if valid at all, was valid by virtue of the Punjab customs; and we think that the burden of the Dowager Maharani to show that the family ever abandoned the Punjab customs, so far as these were inconsistent with the law of the Benares School of the Hindu law, and adopted the law of this school in its entirety, will be an exceedingly difficult one.

We are also of opinion that, according to the Punjab customs applicable to Khettries as interpreted and enforced by the Chief Court of that Province, it is competent to a person to adopt the only son of his sister, and we see no reason in law why His Honour the Lieutenant-Governor should withhold his sanction under section 61 of the Court of Wards Act, 1879, to the proposed adoption.

Upon the difficult point of law involved, the Lieutenant-Governor considers that he is bound to accept this opinion of his professional advisers, given after the facts had been ascertained as fully as was possible without a trial before a Court of law, and after the whole subject in all its bearing had been exhaustively discussed. Without attempting to repeat the arguments upon which the finding of the legal advisers of Government is founded, it may be noticed that there seems to be no evidence to support the assertion that

members of the Burdwan family are bound by the Benares School of law, which prevails neither in the Punjab, the place of their origin, nor in Bengal, the place of their domicile, but in a region with which they seem to have never had any connexion. It moreover appears that the late head of the family, the Maharajah Aftab Chand, was, when adopted, an only son, and, by blood, the nephew of the lady who became his mother by adoption: an instance from which it may be inferred, on the usual assumption of the validity of uncontested adoptions, on the strength of which a great family has been maintained, that the Burdwan Maharajahs have not been, and therefore are not now, governed by the stricter school of Hindu law prevailing in Benares.

Sir Stuart Bayley would gladly have seen the selection so made as to command the approval of all the members of the family, and, at a personal interview with the Maharani of Burdwan, having first ascertained that her choice was really spontaneous, he pointed out to her that perseverance in it would lead to friction, probably to litigation and expense. He urged upon her the advantage of adopting some child to whom no objection would be made by any of her relatives, if such a boy could be found. As notwithstanding this consideration, which was made quite plain to her, she declared very clearly and forcibly that, having satisfied herself that no legal obstacle existed to the adoption of the son of Lalla Bun Behari, she desired to take him and no other, and that he was her definite and only choice, the Lieutenant-Governor does not think it right to refuse his sanction to the selection, the right of making which, according to her own discretion, belongs to the widow, not only by Hindu custom, but also by the direct provision of the will left by the late Maharajah. Sir Stuart Bayley has seen the boy, and has not found that, apart from the question of law, there are any considerations, personal to the child, which could possibly furnish ground for refusing sanction to the adoption. The opposition offered by the Dowager Maharani is certainly an objection of a very serious character, but Sir Stuart Bayley has ascertained that it is based only on a view of the law, which he is advised is mistaken. His Honour has, at a personal interview, expressed to the Dowager Maharani his hope that she will be able to restore peace to the Burdwan family by accepting the decision which the able barristers consulted have arrived at upon this abstruse question of Hindu law.

Under these circumstances, the Lieutenant-Governor gives his consent under section 61, Bengal Act IX of 1879, to the adoption of the only son of Lalla Bun Behari by Maharani Benodeyi Devi, widow of the late Maharajah Aftab Chand Bahadur of Burdwan.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

*Secretary to the Government of Bengal.*

# REPORT ON THE WORKING OF THE LICENSED WAREHOUSE AND FIRE-BRIGADE ACT FOR THE SUBURBS OF CALCUTTA FOR THE YEAR 1886-87.

*The 20th July 1887.*—The following report is published for general information.

COLMAN MACAULAY,  
*Secy. to the Govt. of Bengal.*

No. 38MM, dated Calcutta, the 27th June 1887.

From—A. SMITH, Esq., Commissioner of the Presidency Division,

To—The Secretary to the Government of Bengal, Municipal Department.

WITH reference to the provisions of section 30 of the Licensed Warehouses and Fire-Brigade Act, IV (B.C.) of 1883, I have the honour to submit herewith the annual report on the working of the above Act in the suburbs of Calcutta during the year 1886-87, together with the usual statements, viz.—A, showing the different warehouses in the suburbs for which licenses were granted, and the amount of license fees realized from them during the year; B showing the receipts and disbursements under the Act, as prescribed by Government letter No. 723, dated the 20th August 1881; and C, the details of fires which occurred in the suburbs during the year of report.

2. The number of jute mills, cotton mills and hand-screws in the list was the same as in the last year. viz., 6, 2 and 2 respectively, and that of hydraulic presses and warehouses for the storage of jute increased from 11 and 96 to 12 and 103, showing an increase of 1 and 7 war houses respectively. The Asiatic Jute Mill, as in the previous year, was not worked, and one of the two hand-screws did no work during the year. Of the 103 jute warehouses in the list, 28 remained unoccupied during the year against 26 in the year preceding, as will appear from the notes in the column of remarks of statement A, in which the other necessary particulars connected with the working of the ware-houses are also furnished.

3. The total amount of license fees realized from all classes of warehouses during the year amounted to Rs. 57,225-10, viz., Rs. 21,644-13 from hydraulic presses, Rs. 968 from jute mills, Rs. 240 from cotton mills, Rs. 480 from hand-screws, and Rs. 33,912-13 from jute warehouses; against a total amount of Rs. 27,792-9, viz., Rs. 10,112-6-6 from hydraulic presses, Rs. 484 from jute mills, Rs. 120 from cotton mills, Rs. 322-8 from hand-screws,

|                       | Rs.    | A. | P. |
|-----------------------|--------|----|----|
| Hydraulic presses ... | 11,512 | 6  | 6  |
| Jute mills ...        | 484    | 0  | 0  |
| Cotton mills ...      | 120    | 0  | 0  |
| Hand-screws ...       | 157    | 8  | 0  |
| Jute warehouses ...   | 17,159 | 2  | 6  |
| Total ...             | 29,433 | 1  | 0  |

and Rs. 16,753-10-6 from jute warehouses realized during the year 1885-86. It will thus be seen that there has been a total increase of Rs. 29,433-1 in the license fees during the year of report, as compared with the preceding year, as per details shown in the margin. This large increase is chiefly due to the enhancement of the rate from 5 per cent. to 10 per cent. during the year (*vide* paragraph 3 of report for 1884-85).

4. Statement C contains the number of fires which occurred in the suburbs during the year under review, the localities where they broke out, their causes, the extent of damage, &c., done, and other necessary particulars connected therewith. It is satisfactory to notice that during the year only six fires occurred, causing a loss to the extent of Rs. 7,440, against 16 and Rs. 11,000 in the preceding year.

A.

List of Jute and Cotton Warehouses licensed in the Suburbs of Calcutta during the year 1886-87.

| No.                                    | Names of the owners or occupiers of the warehouses.                                 | Locality of the warehouses.                   | Amount of license fee realized. | Total.      | REMARKS.  |
|--|---|---|---------------------------------|-------------|---|
| <i>Hydraulic Presses.</i>              |   |   | Rs. A. P.                       | Rs. A. P.   |   |
| 1                                      | Camperdown Pressing Company, Limited.   | 4 & 5, Rustomjee's Lane, Cossipore.           | 2,000 0 0                       |             | Due to increase of valuation.   |
| 2                                      | Messrs. S. C. Chandra & Co. (Proprietors, Bengal Hydraulic Press).                  | 4, Sugar Work's Lane, Cossipore.              | 1,020 0 0                       |             | Ditto ditto.  |
| 3                                      | Messrs. G. S. Doolichand (Agents, Humscookdoe, Doolichand & Co.)                    | 2, Chitpore Ghat Lane, Nawabputte.            | 1,200 0 0                       |             | There is no agent now.  |
| 4                                      | Ashcroft Pressing Company, Limited (Owner, Kirty Chandra Mitter).                   | 10, Nawabputte Street, Chitpore.              | 1,500 0 0                       |             | Now Mr. P. N. Mitter.   |
| 5                                      | Messrs. Ernsthausen, Oesterley & Co., (Owner, Rajkristo Doss).                      | 5, Cally Prasanna Singha's Street, Chitpore.  | 2,280 0 0                       |             | Strand Bank Press Company, Limited.   |
| 6                                      | Messrs. Balli Brothers  | 3, Sugar Work's Lane                          | 4,500 0 0                       |             |   |
| 7                                      | Kettlowell, Bullen & Co. (Owner, Hussick Lall Seal).                                | 42A, Cossipore Road                           | 1,200 0 0                       |             | Called Jheel Press: due to increase of valuation; number changed to 34.           |
| 8                                      | R. Quillette, Esq. (Agent, Calcutta Hydraulic Press Company, Limited).              | 6, Cally Prasanna Singha's Street, Chitpore.  | 1,084 13 0                      |             |   |
| 9                                      | Messrs. George Henderson & Co. (Agents, Watson Patent Press Company, Limited).      | 1, Gailliff Street, Bagbazar                  | 900 0 0                         |             | Due to increase of valuation.   |
| 10                                     | Messrs. N. J. Valetta & Co. (Agents, Chitpore Hydraulic Press Company, Limited).    | 2, Cally Prasanna Singha's Street, Chitpore.  | 2,040 0 0                       |             | Due to decrease of valuation.   |
| 11                                     | Messrs. Reinhold & Co. (Managing Agents, Canal Press Company, Limited).             | 2, Nawabputte Street, Chitpore.               | 1,140 0 0                       |             | Macdowell, Methven & Co. are now agents.  |
| 12                                     | Raja Purna Chandra Sing Bahadoor, (Proprietor, Victoria Press).                     | Nos. 7 & 106, Cossipore Road                  | 1,200 0 0                       | 21,024 13 0 | New; opened during the year.  |
| <i>Jute Mills.</i>                     |   |   |                                 |             |   |
| 1                                      | Messrs. Gladstone, Wyllie & Co. (Agents, Clive Jute Mills).                         | 48, Garden Reach Road                         | 240 0 0                         |             |   |
| 2                                      | Messrs. Bird & Co. (Agents, Union Jute Company, Limited).                           | 6, Gooripara Road, Seal-dah.                  | 200 0 0                         |             |   |
| 3                                      | Messrs. Robinson, Morrison & Co. (Managing Agents, Asiatic Jute Company, Limited).  | 73, Narcaidanga Main Road.                    | .....                           |             | Unoccupied.   |
| 4                                      | Deputy Superintendent, Alipore Jail   | 5, Jail Lane                                  | 120 0 0                         |             |   |
| 5                                      | Messrs. George Henderson & Co. (Agents, Barrabangore Branch Mills).                 | 135, Ballaghata Road                          | 120 0 0                         |             |   |
| 6                                      | Messrs. Gillanders, Arbuthnot & Co.   | 9, Garden Reach Road                          | 288 0 0                         | 968 0 0     |   |
| <i>Cotton Mills.</i>                   |   |   |                                 |             |   |
| 1                                      | Messrs. Mackinnon, Mackenzie & Co. (Agents, Garden Reach Cotton Mills Association). | 22, Ditto ditto                               | 120 0 0                         |             |   |
| 2                                      | Messrs. Andrew, Yule & Co. (Agents, Bengal Mills and Company).                      | 47, Ditto ditto                               | 120 0 0                         | 240 0 0     |   |
| <i>Hand-screws.</i>                    |   |   |                                 |             |   |
| 1                                      | Chandra Nath Shaha  | 1, Ram Gopal Ghose's Lane, Chitpore.          | 480 0 0                         |             |   |
| 2                                      | Hurriah Chandra Bose  | 14, Cally Prasanna Singha's Street, Chitpore. | .....                           | 480 0 0     | Ditto.  |
| <i>Warehouses for storage of Jute.</i> |   |   |                                 |             |   |
| 1                                      | Bidhu Bhuen Mitter (owner, Khehat Chandra Ghosh).                                   | 4 & 6, Khehat Chandra Ghose's Lane.           | 50 0 0                          |             |   |
| 2                                      | Hurriah Chandra Dutt (owner, Nilmony Mitter).                                       | 13, Belgatcha Road                            | .....                           |             | Ditto.  |
| 3                                      | Agent, Eastern Bengal State Railway   | 1, Upper Circular Road                        | 600 0 0                         |             |   |
| 4                                      | Ditto ditto   | 8, Chitpore Cross Road                        | 1,660 0 0                       |             |   |
| 5                                      | Nilmadhab Shikdar   | 13, Ooltadigra Road                           | 132 0 0                         |             |   |
| 6                                      | Kashbihary Julladar Roy (owner, P. K. Mukerjee).                                    | 6 & 6A, Pran Kissen Mukerjee's Lane.          | .....                           |             | Ditto.  |
| 7                                      | Gyan Chandra Sen  | 15, ditto ditto                               | 50 0 0                          |             |   |
| 8                                      | Hurriah Chandra Dutt  | 19 & 20, Gourebari Lane                       | 50 0 0                          |             |   |
| 9                                      | Ditto ditto   | 37-4, Canal West Road                         | 96 0 0                          |             |   |
| 10                                     | Ditto ditto   | 39-3, ditto ditto                             | 72 0 0                          |             |   |
| 11                                     | Gopal Chandra Shikdar and Mahesh Chandra Kundu (owner, P. K. Mukerjee).             | 13 & 12A, Tulla Road                          | 54 0 0                          |             | 37-6 and not 37-4. Now Soorjee Coomar and Gurn Ch. Shuh. Now Frankissen Mukerjee. |
| 12                                     | Shama Charan Ballav (owner, Shama Charan Lahiri).                                   | 5, Belgatcha Road                             | 60 0 0                          |             |   |
| 13                                     | Mahesh Chandra Kundu  | 8, Cally Coomar Banerjee's Lane.              | .....                           |             | Unoccupied.   |
| 14                                     | Messrs. W. B. Macavish & Co.  | Compartment 3 of No. 3A, Ballaghata Road.     | .....                           |             | Ditto.  |
| 15                                     | Behary Lall Pyne (owner, Moguljan Ostagar).   | 25, Mooraripukur Road                         | 50 0 0                          |             | Now Jessamudde: Sir-dar.  |
| 16                                     | Prallad Chunder and Narottam Shikdar  | 83, Barrackpore Trunk Road.                   | .....                           |             | Unoccupied.   |
| 17                                     | Narottam Shikdar  | 18, Gourebari Lane                            | 78 0 0                          |             |   |
| 18                                     | Banimadhab Shikdar  | 26-1, Canal West Road                         | 50 0 0                          |             |   |
| 19                                     | Gopee Mohan Roy   | 1-1, Badredoss Temple Street.                 | 96 0 0                          |             |   |
| 20                                     | Ditto   | 29, Canal West Road                           | 131 0 0                         |             |   |
| 21                                     | Mohan Bangsi Roy  | 30-1, ditto ditto                             | 120 0 0                         |             |   |
| 22                                     | Nalit Mohan, Brindaban Shaw   | 24-2, ditto ditto                             | 72 0 0                          |             | New Mathoora Mohun Roy.   |
| 23                                     | Ditto ditto   | 24-3, ditto ditto                             | .....                           |             | Nos. 24-2 and 24-3 amalgamated.   |
| 24                                     | Jaganath Bajpie   | 18, Cossipore Road                            | .....                           |             | Unoccupied.   |

| No.                                       | Names of the owners or occupiers of the warehouses.               | Locality of the warehouses.                       | Amount of license-fee realized. | Total.    | REMARKS.   |
|---|---|---|---------------------------------|-----------|--|
|   |   |   | Rs. A. P.                       | Rs. A. P. |  |
| Warehouses for storage of Jute—continued. |   |   |                                 |           |  |
| 25  | Kirty Chandra Mitter ... ..                                       | 4, Frankissen Mukerjee's Lane.                    | 69 9 0                          |           | Now Sarup Chandra Sengal.                                |
| 26  | Ditto ditto ... ..  | 3, Chitpore Street ...                            | 300 0 0                         |           | Now Durga Charan and Kunja Lal Kumbhar.                  |
| 27  | Taracharan Guho ... ..  | 7 & 8, Chitpore Ghat Lane                         | 103 0 0                         |           |  |
| 28  | Ditto ... ..  | 3, Frankissen Mukerjee's Lane.                    | 50 0 0                          |           | Now Dwarka Nath Roy.                                     |
| 29  | Dipchand and Harrochand Kundu ...                                 | 33-5, Canal West Road ...                         | 120 0 0                         |           |  |
| 30  | Bejoy Chandra Dutt ... ..   | 41-1, ditto ditto ...                             | 90 0 0                          |           |  |
| 31  | Taraprasanna Roy ... ..   | 33-4, ditto ditto ...                             | 98 0 0                          |           |  |
| 32  | Nanatan Dey ... ..  | 6, Gourabare Lane ...                             | 50 0 0                          |           |  |
| 33  | Kristo Mongul Shaw ... ..   | 39-3-1, Canal West Road ...                       | ...                             |           | Unoccupied.  |
| 34  | Soorjee Coomar Garucharan Shaw ...                                | 45, ditto ditto ...                               | ...                             |           | Ditto.   |
| 35  | Mahima Chandra Kundu and Koylash Chandra Kundu ...                | 32, ditto ditto ...                               | 73 0 0                          |           |  |
| 36  | Mahima Chandra Kundu ... ..                                       | 31, ditto ditto ...                               | 84 0 0                          |           |  |
| 37  | Goburdhan Shaw ... ..   | 44, ditto ditto ...                               | 120 0 0                         |           |  |
| 38  | Kally Charan Poddar (owner, H. C. Dutt)                           | 20, Badri Doss Temple Street ...                  | 50 0 0                          |           | Now Hurrish Chandra Dutt.                                |
| 39  | Radha Kristo Guho ... ..  | 1, Chitpore Street ...                            | 72 0 0                          |           |  |
| 40  | Ditto ditto ... ..  | 7, Frankissen Mookerjee's Lane                    | ...                             |           | Unoccupied.  |
| 41  | Tara Charan Guho ... ..   | 7, Pran Kissen Mookerjee's Lane ...               | 233 0 0                         |           |  |
| 42  | Banamali Kundu ... ..   | 2, Banamali Chatterjee's Street ...               | 50 0 0                          |           |  |
| 43  | Dwarka Nath and Banamali Kundu ...                                | 20, Chitpore Ghat Lane ...                        | 210 0 0                         |           | No. 25 and no. 20.                                       |
| 44  | Prollad Chandra and Degumbar Shaw ...                             | 21, ditto ditto ...                               | 150 0 0                         |           | Unoccupied.  |
| 45  | Ditto ditto ... ..  | 4, ditto ditto ...                                | ...                             |           | Ditto.   |
| 46  | Cally Sankar and Tarruck Nath Kundu ...                           | 4, Talla Road ...                                 | 66 9 0                          |           |  |
| 47  | Ditto ditto ... ..  | 22, ditto ...                                     | ...                             |           |  |
| 48  | Rajendra Lal Shaw and 4 others ...                                | 3 and 4, Chitpore Ghat Road ...                   | 208 0 0                         |           | Now Harn Lal Biswas and others.                          |
| 49  | Nafar Chandra Ta ... ..   | 3 and 4, Chitpore Ghat Road ...                   | ...                             |           | Unoccupied.  |
| 50  | Madhub Chandra Dutt ... ..  | 7, Nawabputtee Street ...                         | 50 0 0                          |           |  |
| 51  | Dwarka Nath Bhanja ... ..   | 8, Oluchanditola Road ...                         | 50 0 0                          |           |  |
| 52  | Chandra Nath Dalal ... ..   | 51, Belgatcha Road ...                            | 50 0 0                          |           |  |
| 53  | Ditto ditto ... ..  | 9, ditto ...                                      | ...                             |           | Ditto.   |
| 54  | Utsab Narayan Chowdhury ... ..                                    | 10, Settpukur Road ...                            | 100 0 0                         |           | Now Shibendra Narayan Chowdhury.                         |
| 55  | Dwarka Nath Roy ... ..  | 6, Talla Road ...                                 | 66 9 0                          |           |  |
| 56  | Ditto ... ..  | 14, Frankissen Mookerjee's Lane ...               | 63 9 0                          |           |  |
| 57  | Messrs. W. B. Macavish and Co. ...                                | 10, Belgatcha Road ...                            | ...                             |           | Unoccupied.  |
| 58  | Koylash Chandra Banerjee (owner, Nilmorey Mitter) ...             | 13, ditto ...                                     | 50 0 0                          |           |  |
| 59  | Hurrish Chandra Dutt ... ..                                       | 10, Chitpore Ghat Lane ...                        | ...                             |           | Ditto.   |
| 60  | Messrs. Ernsthauseu, Oesterley & Co. (owner, Cally Doss Seal) ... | 3, Cally Prasanna Singha's Street, Chitpore ...   | 420 0 0                         |           | Now Mr. P. N. Mitter.                                    |
| 61  | Messrs. Ernsthauseu, Oesterley & Co. (owner, Cally Doss Seal) ... | 3A, Cally Prasanna Singha's Street, Chitpore ...  | 300 0 0                         |           | Now Mr. R. Quillette.                                    |
| 62  | Roma Nath Dass ... ..   | 1, Chitpore Bridge approach ...                   | 180 0 0                         |           | Now Messrs. George Henderson & Co.                       |
| 63  | Cally Charan Poddar ... ..  | 2, Badri Doss Temple Street ...                   | ...                             |           | Unoccupied.  |
| 64  | Sarup Chandra Sengal (owner, Tarachand Poddar) ...                | 13, Frankissen Mookerjee's Lane ...               | 50 0 0                          |           |  |
| 65  | Hrojodoyal Shaw (owner, G. C. Roy) ...                            | 7, Settpukur Road ...                             | 60 0 0                          |           | Now Parash Nath and Ananth Nath Sen.                     |
| 66  | Hurrish Chandra Bose ... ..                                       | 12, Cally Prasanna Singha's Street ...            | 60 0 0                          |           | Unoccupied.  |
| 67  | Nalit Mohan Hindaban Shaw (owner, K. K. Poddar) ...               | 57-1, Chowiputtee Road ...                        | ...                             |           |  |
| 68  | Brindaban Chandra Roy (owner, Russick Lal Shaha) ...              | 8, Frankissen Mookerjee's Lane ...                | 124 0 0                         |           | Now Taracharan Guha.                                     |
| 69  | Brindaban Chandra Roy (owner, B. K. Chatterjee) ...               | 3, Frankissen Mookerjee's Lane ...                | 78 0 0                          |           | Now Dwarka Nath Roy.                                     |
| 70  | Mr. F. Augier ... ..  | 4, Cally Prasanna Singha's Street ...             | ...                             |           | Unoccupied.  |
| 71  | Koylash Chandra Mundal ... ..                                     | 7, Chitpore Bridge Road ...                       | ...                             |           | Ditto.   |
| 72  | Proo Nath Mitter ... ..   | 1, Lockgate Road ...                              | 300 0 0                         |           | Ditto.   |
| 73  | Messrs. Chew and Pal (owner, Giribala Dassee) ...                 | 10, Nawabputtee Street ...                        | ...                             |           | Ditto.   |
| 74  | Narottam Shikdar ... ..   | 60, Gourabare Lane ...                            | 103 0 0                         |           | Ditto.   |
| 75  | Kamala Kanta Chuckerbutty (owner, R. N. Kundu) ...                | 10, Nawabputtee Street ...                        | ...                             |           | Ditto.   |
| 76  | Shama Charan Ballav (S. C. Lahiri) ...                            | 5, Belgatcha Road ...                             | ...                             |           | Ditto.   |
| 77  | Nilmadhub Shikdar ... ..  | 16 & 17, Gulliff Street ...                       | ...                             |           | Ditto.   |
| 78  | Hurrish Chandra and Renodbihari Dutt ...                          | 39-3-1, Canal West Road ...                       | 120 0 0                         |           |  |
| 79  | Messrs. Chew and Pal (owner, Indro Narayan Biswas) ...            | 2, Shaikpara Road ...                             | 50 0 0                          |           | Now Indra Narayan Biswas.                                |
| 80  | Sidam Chandra and Issar Chandra Kundu ...                         | 55, Barrackpore Trunk Road ...                    | ...                             |           | Unoccupied.  |
| 81  | Issar Chandra Banerjee ... ..                                     | 55A, Barrackpore Trunk Road ...                   | ...                             |           | Ditto.   |
| 82  | B. L. Mitter and S. C. Bose (owner, A. L. Doss) ...               | 38, Belgatcha Road ...                            | 50 0 0                          |           |  |
| 83  | Messrs. Finlay, Muir & Co. (owner, A. C. Chatterjee) ...          | 15, Talla Road ...                                | ...                             |           | Ditto.   |
| 84  | Agent, Eastern Bengal State Railway ...                           | 6, Chitpore Street ...                            | 460 0 0                         |           |  |
| 85  | R. Quillette, Esq. (owner, Cally Doss Seal) ...                   | Portion of 3A, Cally Prasanna Singha's Street ... | ...                             |           | Ditto. Vide No. 61 and remark on the previous statement. |
| 86  | Messrs. Ernsthauseu, Oesterley & Co. (owner, Rajkristo Dass) ...  | 5A, Cally Prasanna Singha's Street ...            | 300 0 0                         |           |  |
| 87  | Cally Sankar Tarruck Nath Kundu ...                               | 39-4-1, Canal West Road ...                       | 60 0 0                          |           |  |
| 88  | Dwarka Nath Roy (owner, N. L. Mullick) ...                        | 6, Talla Road ...                                 | 64 12 0                         |           |  |
| 89  | Sreedhar and Gopal Mullick ... ..                                 | 5, Frankissen Mookerjee's Lane ...                | 50 0 0                          |           |  |
| 90  | Cally Doss Roy ... ..   | 6, Pran Kissen Mookerjee's Lane ...               | 50 0 0                          |           | Now Chandra Sekar Mahdal.                                |
| 91  | Sankar Prasad Bachaspati ... ..                                   | 4, Chitpore Street ...                            | 50 0 0                          |           |  |
| 92  | Bharat Chandra Shaw and Jeoban Kristo Ghosh ...                   | 35A, Belgatcha Road ...                           | 80 0 0                          |           |  |
| 93  | Sankar Prasad Bachaspati ... ..                                   | 14, Nawabputtee Street ...                        | 50 0 0                          |           |  |
| 94  | Khetter Mohan Bose ... ..   | 16, Pykepara Road ...                             | ...                             |           | Unoccupied.  |
| 95  | Nobin Chandra Roy (owner, N. C. Chatterjee) ...                   | 46A, Belgatcha Road ...                           | 50 0 0                          |           | Now Jessamudde Sirdar.                                   |
| 96  | Bidhu Nath Mundle and others ... ..                               | 46, ditto ...                                     | 50 0 0                          |           |  |
| 97  | Sidam Chandra Kundu ... ..  | 5A, Cally Coomar Banerjee's Lane ...              | 50 0 0                          |           | New; opened during the year.                             |



| No.  | Names of the owners or occupiers of the warehouses. | Locality of the warehouses.          | Amount of licence-fee realized. | Total.      | REMARKS.                     |
|--|---|--------------------------------------|---------------------------------|-------------|------------------------------|
| Ware houses for storage of Jute—concluded. |   |                                      | Rs. A. P.                       | Rs. A. P.   |                              |
| 98   | Umesh Chandra Roy and Parash Nath Sen.              | 2, Chitpore Street ...               | 50 0 0                          |             | New; opened during the year. |
| 99   | Sarup Chandra Saragi                                | 4, Frankisen Mukerjee's Lane.        | 90 0 0                          |             | Ditto ditto.                 |
| 100  | Kisori Lal Mukerjee                                 | 1, Chitpore Cross Road ...           | 50 0 0                          |             | Ditto ditto.                 |
| 101  | Protap Chandra Ta                                   | 18, Nawabpotee Street ...            | 50 0 0                          |             | Ditto ditto.                 |
| 102  | Frankisen Mukerjee                                  | 4, Settpukur Road ...                | 50 0 0                          |             | Ditto ditto.                 |
| 103  | E. Quilotta, Esq.                                   | 6-1, Kelly Prasanna Singha's Street. | 900 0 0                         |             | Ditto ditto.                 |
|  |   |                                      | .....                           | 33,912 13 0 |                              |

B.

| Dr.   | Jute License on account of Suburbs of Calcutta. | Cr.  |
|---|---|--|
| By amount of jute license fees for 1886-87 received during the year | Rs. A. P.<br>33,912 13 0                        | To amount of executive charge of the municipality at 20 per cent ... 6,782 9 0             |
| Total   | 33,912 13 0                                     | To amount paid to the Calcutta Police for Fire Brigade Fund at 50 per cent. ... 27,130 4 0 |
|   |   | Total ... 33,912 13 0  |

C.

Extract from the Register of Fires and operations of the Calcutta Fire-Brigade.

| Date.         | Locality of fire, with section letter.         | Time of out-break. | Time of alarm at fire station. | Time of arrival of brigade. | Property destroyed with approximate value, and whether insured or not.       | Cause of fire.   | REMARKS.                    |
|---------------|--|--------------------|--------------------------------|-----------------------------|--|--|-----------------------------|
| 1886.         |  |                    |                                |                             |  |  |                             |
| 24th April    | Section G, Suburbs, Baniapukur.                | 2-30 P.M.          | 8-45 P.M.                      | 9 P.M.                      | A tiled house containing seven rooms, value Rs. 200. Not insured.            | Fire from a choolah ignited the mat wall in the house of Ananto Bibee.                           | All out at 11 P.M.          |
| 13th June     | Section B, Suburbs, Sham Bazar.                | 4-15 A.M.          | 4-20 A.M.                      | 4-40 A.M.                   | Six mud huts; not insured. Total loss Rs. 100.                               | Fire from a chillum ignited the mat wall in the house of Pearl Bewal.                            | All out at 5-15 A.M.        |
| 23rd October  | Section I, Suburbs, Bhowanipore, Russa Road.   | 1-15 P.M.          | 1-20 P.M.                      | 1-30 P.M.                   | One tiled hut, value Rs. 70. Not insured.                                    | Unknown  | All out at 3 P.M.           |
| 19th December | Section F, Suburbs, Entally.                   | 1 A.M.             | 1 A.M.                         | 1-30 A.M.                   | Twelve tiled huts, value Rs. 1,000. Not insured.                             | Sparks from a fire supposed to have ignited a bundle of cotton in the house of Shaik Mohamed.    | All out at 3 A.M.           |
| 1887.         |  |                    |                                |                             |  |  |                             |
| 6th January   | Section B, Suburbs, Sham Bazar.                | 10-45 P.M.         | 10-50 P.M.                     | 11-30 P.M.                  | Four thatched huts, value Rs. 70. Not insured.                               | Fire from a cooking choolah supposed to have ignited the mat wall of the house of Machai Biswas. | All out at 12-30 mid-night. |
| 21st February | Section E, Suburbs, Choonaputty Ballia-ghatta. | 10-30 P.M.         | 10-40 P.M.                     | 11 P.M.                     | Ten tiled sheds and a large quantity of lime; not insured. Damage Rs. 6,000. | Unknown  | All out at 3 A.M.           |

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government during the week ending the 23rd July 1887..

| No.                       | District and date of return. | Rainfall at Sudder station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|---------------------------|------------------------------|---------------------------------------|---|
| <b>BENGAL.</b>            |                              |                                       |   |
| <b>Western Districts.</b> |                              |                                       |   |
| <b>BURDWAN DIV.</b>       | 1 Bardwan. July 23, '87      | 3.13                                  | Weather—showery with high temperature. State and prospects of crops favourable. Common rice 20 to 21 seers per rupee. With the exception of two local outbreaks of cholera, public health good.   |
|                           | 2 Bankura „ 23, '87          | 2.00                                  | Weather—rather dry for the season. Transplantation of rice proceeding, but more rain wanted. Prices stationary. Public health good.   |
|                           | 3 Bishenpore „ „             | 3.15                                  |   |
|                           | 4 Beerbhoom „ 23, '87        | 1.40                                  | Another break in the rains, but the heat is moderated by high winds. Rain is urgently needed for the transplantation of the paddy seedlings. Price of rice has risen probably in anticipation of a short crop. Sugarcane is promising. Public health has deteriorated owing to drought; fever very rife in the interior.          |
|                           | 5 Rampore Haut „ „           | 0.97                                  |   |
| <b>BURDWAN DIV.</b>       | 6 Midnapore „ 23, '87        | 5.02                                  | Weather—rainy with high winds. State and prospects of crops excellent all over the district.  |
|                           | 7 Hooghly „ 23, „            | 1.51                                  | Weather—abnormally dry. Prospects are fair so far, but much more rain is wanted, especially in the west of the Jehanabad sub-division. Public health continues good.  |
|                           | 8 Serampur „ „               | 2.52                                  |   |
|                           | 9 Jehanabad „ „              | 0.24                                  |   |
|                           | 10 Howrah „ 23, „            | 4.30                                  | Weather—seasonable. Prospects of <i>aus</i> , jute and sugarcane promising. Transplantation of <i>amun</i> in progress.   |
| <b>BURDWAN DIV.</b>       | 11 Oolooberiah „ „           | 6.98                                  |   |
| <b>Central Districts.</b> |                              |                                       |   |
| <b>PRESIDENCY DIV.</b>    | 12 24-Pergha „ „             | .....                                 | Report not received.  |
|                           | 13 Nudda „ 23, „             | 1.82                                  | Weather—less rain and cloud than usual at this season. All crops promise well. Indigo manufacture going on; outturn fair. More rain wanted for <i>aus</i> rice on high land and for transplanting <i>amun</i> . Public health good.   |
|                           | 14 Kushtia „ „               | 0.48                                  |   |
|                           | 15 Chuadanga „ „             | 1.98                                  |   |
|                           | 16 Ranaghat „ „              | 1.33                                  |   |
| <b>PRESIDENCY DIV.</b>    | 17 Khoolna „ 23, '87         | 2.69                                  | Weather—cloudy and sultry with some showers. <i>Aus</i> paddy doing well, but <i>amun</i> seedlings have suffered much in places from want of sufficient rain. Public health good.  |
|                           | 18 Jessore „ 23, „           | 1.45                                  | Weather—hot. Prospects of paddy crops continue good. More rain wanted for transplantation of <i>amun</i> paddy. General health good.  |
|                           | 19 Jhenidah „ „              | 1.09                                  |   |
|                           | 20 Magurah „ „               | 1.10                                  |   |
|                           | 21 Narail „ „                | 0.92                                  |   |
| <b>PRESIDENCY DIV.</b>    | 22 Bongong „ „               | 0.35                                  |   |
|                           | 23 Moorshedabad „ 23, '87    | 1.63                                  | Weather—very hot. Rain at intervals. Transplanting of <i>amun</i> going on. <i>24</i> , sugarcane and jute progressing. Public health good.   |
|                           | 24 Lalbagh „ „               | 2.10                                  |   |
|                           | 25 Kandi „ „                 | 0.20                                  |   |
|                           | 26 Jungipur „ „              | 0.55                                  |   |
| <b>RAJSHAHY DIV.</b>      | 27 Dinagenore „ 23, '87      | 2.06                                  | Weather—clear and hot. Present prospects fair. Rain is wanted. Rice selling at from 16 to 25 seers per rupee.   |
|                           | 28 Thakurgaon „ „            | 0.98                                  |   |
|                           | 29 Rajshahy „ 23, '87        | 1.46                                  | Weather—cloudy. Harvesting of <i>24</i> completed with outturn of half average crop. Paddy and jute, where not injured by floods, generally doing well. Land is being prepared for ganja cultivation. Public health fair.   |
|                           | 30 Nattore „ „               | 1.5                                   |   |
|                           | 31 Nowgong „ „               | 0.80                                  |   |
| <b>RAJSHAHY DIV.</b>      | 32 Rungpore „ 23, „          | 1.91                                  | Weather—unusually hot. Crops generally good. Rain wanted for planting out <i>amun</i> seedlings. Public health fair.  |
|                           | 33 Kurigram „ „              | 0.75                                  |   |
|                           | 34 Nilphamari „ „            | 1.81                                  |   |
|                           | 35 Bogra „ 23, '87           | 2.18                                  | Weather—seasonable. State and prospects of crops uninjured by floods are good. Public health fair.  |
|                           | 36 Sherpur „ „               | 0.56                                  |   |
| <b>RAJSHAHY DIV.</b>      | 37 Nowkhilla „ „             | 3.89                                  |   |
|                           | 38 Pubna „ 23, '87           | 0.66                                  | Weather—seasonable. Prospects of crops good. Rivers have risen. General health good.  |
|                           | 39 Serajgunge „ „            | 0.17                                  |   |
|                           | 40 Darjeeling „ 23, '87      | 1.75                                  | Weather—several bright days. State and prospects of crops good.   |
|                           | 41 Julpigoree „ 23, „        | 2.26                                  | The break in the rains continues. Intense heat on several days during the week. The break has done no damage as yet owing to some good showers having fallen, and early rice is slightly improved by the dry weather. Jute also shows slight improvement in places. Transplantation of late rice somewhat retarded in high lands. |
| <b>Eastern Districts.</b> |                              |                                       |   |
| <b>RAJSHAHY DIV.</b>      | 42 Dacca. July 23, '87       | 6.83                                  | Weather—seasonable. Jute is being harvested. <i>Amun</i> and <i>aus</i> paddy thriving. Rivers rising gradually. Public health good.  |
|                           | 43 Manickgunge „ „           | 2.69                                  |   |
|                           | 44 Munshigunge „ „           | 1.96                                  |   |
|                           | 45 Naraingunge „ „           | 3.27                                  |   |
|                           | 46 Furreedpore „ 23, '87     | 0.92                                  | Weather—seasonable. Crops doing well. Public health good.   |
| <b>RAJSHAHY DIV.</b>      | 47 Goalundo „ „              | 0.41                                  |   |
|                           | 48 Madaripore „ „            | 1.73                                  |   |
|                           | 49 Hackergunge „ 23, '87     | 2.49                                  | Weather—hot and rainy. Cultivation of <i>amun</i> is still going on. General health good.   |
|                           | 50 Mymensingh „ 23, '87      | 1.90                                  | Weather—hot. State and prospects of crops good.   |
|                           | 51 Jamalpur „ „              | 0.70                                  |   |
| <b>RAJSHAHY DIV.</b>      | 52 Kishoregunge „ „          | 2.29                                  |   |
|                           | 53 Attea „ „                 | Nil                                   |   |
|                           | 54 Netrokona „ „             | 1.18                                  |   |

| No.                               | District and date of return. | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|-----------------------------------|------------------------------|---------------------------------------|--|
| <b>BENGAL—contd.</b>              |                              |                                       |  |
| <i>Eastern Districts—contd.</i>   |                              |                                       |  |
| CHITTAGONG DIVN.                  | 22 Chittagong, July 26, '87  | 2.02                                  | Weather—variable. <i>Aus</i> being harvested and <i>aman</i> transplanted. Prices stationary. Fever and cholera still reported, but general health good.   |
|                                   | 23 Noakhally „ 22, „         | 3.80                                  | Weather—unseasonable. Rains rare. Reaping of <i>aus</i> continues. Prospects fair. Transplantation of <i>aman</i> will shortly commence. Rain much wanted.   |
|                                   | Fenny „ „                    | 1.40                                  | Fever prevailing here and there.   |
|                                   | 24 Tipperah July 21, '87     | 0.98                                  | Weather—not quite so much rain as is customary at this time of the year. A superb <i>aus</i> crop is being reaped. Jute harvest will also be an excellent one.   |
|                                   | Chandpur „ „                 | 2.50                                  | A great deal more rain is wanted for <i>aman</i> ; but there is plenty of time yet. Inundation in the north is subsiding slowly, without having caused any injury.   |
| CHITTAGONG DIVN.                  | 25 Chittagong Hill „ 19, '87 | 1.93                                  | Weather—cloudy and sunny throughout the week with occasional showers of rain. <i>Joom</i> paddy doing well. Paddy being transplanted in low lands in small quantities. More rain wanted.   |
|                                   | Tracts. „ „                  | 0.97                                  | Weather—hot. <i>Aus</i> paddy getting ripe. <i>Aman</i> paddy being transplanted. Sugarcane and <i>joom</i> crops doing well. Public health good.  |
| <b>BEHAR.</b>                     |                              |                                       |  |
| PATNA DIVN.                       | 26 Patna, July 23, '87       | Nil                                   | Weather—hot and sultry. Rain wanted for transplantation of paddy. <i>Bhadai</i> crops growing well. <i>Cheena</i> on dearah lands is being reaped. Cholera reported from the interior.   |
|                                   | 27 Gya „ 23 „                | 4.85                                  | Weather—hot. <i>Marua</i> and <i>makai</i> coming on well. Paddy being transplanted. Cholera, fever and small-pox reported.  |
|                                   | 28 Shahabad „ 23 „           | 0.11                                  | Weather—hot and occasionally cloudy with local showers. Transplantation of rice is retarded owing to want of rain. <i>Bhadai</i> crops and sugarcane generally doing well. Public health not so good: cholera prevails throughout the district. Prices stationary.   |
|                                   | Buxar „ „                    | 0.26                                  |  |
|                                   | Sasseram „ „                 | 0.43                                  |  |
|                                   | Blabush „ „                  | 1.90                                  |  |
|                                   | 29 Darbhanga „ 23 „          | 0.41                                  | Weather—occasionally cloudy. <i>Bhadai</i> sowings are in progress. Paddy is being transplanted. Prices remain unchanged. Cholera abating.   |
|                                   | 30 Mozufferpore „ 23, '87    | Nil                                   | Weather—mostly rainless with strong sun and great heat. The break in the rains has been generally advantageous. Crops in good condition. Transplantation of rice still going on.   |
|                                   | Hajipur „ „                  | 0.11                                  |  |
|                                   | Sitamarhi „ „                | 0.05                                  |  |
| BRABULFORE DIVN.                  | 31 Saran „ 23 „              | 0.08                                  | Weather—hot and close. Rain wanted again. Cholera still prevailing in the interior and town.   |
|                                   | Sewan „ „                    | 0.15                                  |  |
|                                   | 32 Champaran „ 23 „          | 1.11                                  | Weather—very hot; often cloudy. Weeding of <i>bhadai</i> crops going on. Transplantation of paddy progressing, but not rapidly for want of rain. Public health fair.   |
|                                   | 33 Monghyr, July 23, '87     | Nil                                   | Weather—very hot and bright. Prospects of crops continue favourable, but rain much wanted now for <i>bhadai</i> crops and transplanting of winter rice.  |
|                                   | Begusarai „ „                | 0.74                                  | Cholera still prevailing in places.  |
| BRABULFORE DIVN.                  | 34 Jamui „ 23 „              | 0.07                                  | Weather—hot and close. Prospects of <i>bhadai</i> crops fair, and weeding is in progress. More rain is wanted for transplantation of winter rice and <i>marua</i> , but otherwise prospects are good. Cholera still lingers.   |
|                                   | Bharguipore „ „              | 1.12                                  |  |
|                                   | Mudchpura „ „                | 0.38                                  |  |
|                                   | Banka „ „                    | 0.46                                  |  |
|                                   | 35 Purneah „ 23 „            | 0.53                                  | Weather—hot; rain much needed. Crops suffering and transplanting delayed for want of rain.   |
|                                   | Kishengunge „ „              | 0.50                                  |  |
|                                   | Arrareah „ „                 | 2.80                                  |  |
|                                   | 36 Malda „ 23 „              | 0.08                                  | Weather—sultry, and generally rather dry for the season. <i>Bhadai</i> crops are doing well, and are in ear in most places; but in the north some damage has been done by early floods. Transplanting of winter paddy going on.  |
|                                   | Chunchal „ „                 | 0.40                                  | Common rice 20 seers per rupee. Public health generally good.  |
|                                   | Shibgunge „ „                | 0.45                                  |  |
| BRABULFORE DIVN.                  | 37 Sonthal Pergna „ 23 „     | 1.13                                  | Weather—hot and cloudy with slight showers. Rain wanted except in Pakour.  |
|                                   | Deoghur „ „                  | 0.49                                  | It seems to be coming. Some cholera in Godda.  |
|                                   | Godda „ „                    | 0.70                                  |  |
|                                   | Pakour „ „                   | 2.87                                  |  |
|                                   | Rajmehal „ „                 | 0.87                                  |  |
| <b>ORISSA.</b>                    |                              |                                       |  |
| URISSA DIVN.                      | 38 Cuttack, July 22 '87      | 3.29                                  | Weather—hot and cloudy. <i>Beali</i> rice is being weeded and <i>sarad</i> reploughed. Heavy shower of rain yesterday (21st), beneficial to rice crop. Price of rice remains stationary. Cholera somewhat violent in Cuttack town and at Banki. Sporadic cases reported from all sides.  |
|                                   | 39 Pooner „ 21 „             | 1.34                                  | Weather—hot and cloudy. Several breaches have been made in the embankment of the river Bharguni by a flood, and considerable damage is apprehended to the <i>sarad</i> sowings in pergunnah Rahang; elsewhere prospects are fair. Common rice 23 seers 2 chittacks per rupee in the Sudder sub-division and 22 seers 5 chittacks in the Khoorda sub-division. Cases of cholera reported from most parts of the district. |
|                                   | Khoorda „ „                  | 2.11                                  |  |
| URISSA DIVN.                      | 40 Balasore July 22, „       | 3.04                                  | Weather—cloudy and seasonable. Weeding and transplanting of rice going on, but more rain wanted in the Bhadruck sub-division. A few cases of cholera reported; otherwise public health fair.   |
|                                   |                              |                                       |  |
| <b>CHOTA NAGPORE.</b>             |                              |                                       |  |
| <i>South-West Frontier Agency</i> |                              |                                       |  |
| CHOTA NAGPORE.                    | 41 Buxaribungl, July 22, '87 | 2.46                                  | Heavy rain since the 19th. Transplanting of rice progressing. All <i>bhadai</i> crops and sugarcane doing well. Cases of cholera continue to be reported from several thannas; otherwise public health good.   |
|                                   | 42 Lohardugga „ 23 „         | 1.05                                  | Weather—hot and cloudy. Slight rain during the week; more wanted. Prices as before. Cholera appears to be increasing in the sub-division; otherwise general health good.   |
|                                   | Palamow „ „                  | 0.80                                  |  |
|                                   | 43 Singbroom „ 22 „          | 0.30                                  | Another break in the rains. Weather cool. More rain required both at head-quarters and in the district generally. Prospects good. Public health good.  |
| CHOTA NAGPORE.                    | 44 Machhoo „ 23 „            | 1.32                                  | Weather—seasonable. Paddy is being transplanted. <i>Bhadai</i> crops doing well. More rain wanted in the west of the district. Public health good.   |
|                                   | Govindpur „ „                | 1.76                                  |  |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 26th July 1887.P. NOLAN,  
Secy. to the Govt. of Bengal.

**PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the**

| Number.            | DISTRICTS.    | QUANTITIES PER RUPEE IN |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |     |     |     |
|--------------------|---------------|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--|------------------------|------------------------------------|-----|-----|-----|
|                    |               | WHEAT.                  |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLU:<br>( <i>Sorghum Vulgare</i> ). |                        |                                    |     |     |     |
|                    |               | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                                | Next preceding return. | Corresponding return of last year. |     |     |     |
| BENGAL.            |               |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |     |     |     |
| Western Districts. |               |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |     |     |     |
| 1                  | Burdwan       | 12 12                   | 13 6                   | 15 0                               | ...             | ...                    | ...                                | 16 8             | 18 0                   | 13 8                               | 21 0            | 23 4                   | 18 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 2                  | Bankoora      | 15 8                    | 16 0                   | 17 0                               | 20 0            | 20 0                   | 23 0                               | 17 8             | 19 0                   | 18 12                              | 22 8            | 22 13                  | 22 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 3                  | Baerbhoom     | 18 0                    | 18 0                   | 18 0                               | ...             | ...                    | ...                                | 18 0             | 18 0                   | 16 0                               | 22 8            | 22 8                   | 19 8                               | ...  | ...                    | ...                                | ... | ... | ... |
| 4                  | Midnapore     | 16 0                    | 16 0                   | 18 0                               | ...             | ...                    | ...                                | 21 0             | 21 0                   | 15 0                               | 23 8            | 23 8                   | 21 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 5                  | Hooghly       | 15 0                    | 15 0                   | 16 0                               | ...             | ...                    | ...                                | 10 0             | 10 0                   | 10 0                               | 18 0            | 18 0                   | 15 0                               | ...  | ...                    | ...                                | ... | ... | ... |
|                    | Howrah        | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 13 12            | 13 8                   | 11 8                               | 18 4            | 20 0                   | 15 8                               | ...  | ...                    | ...                                | ... | ... | ... |
| Central Districts. |               |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |     |     |     |
| 6                  | Calcutta      | 14 4                    | 14 4                   | 15 0                               | 20 0            | 20 4                   | 21 8                               | 9 6              | 9 8                    | 8 8                                | 19 2            | 19 2                   | 15 6                               | 21 0   | 21 0                   | 19 12                              | ... | ... | ... |
| 6                  | 24-Pergunnahs | 14 0                    | 14 0                   | 14 0                               | 25 0            | 26 4                   | 20 0                               | 8 0              | 8 0                    | 8 0                                | 18 3            | 18 4                   | 13 14                              | ...  | ...                    | ...                                | ... | ... | ... |
| 7                  | Nuddea        | 16 0                    | 16 0                   | 17 2                               | 32 0            | 35 8                   | 23 0                               | 15 4             | 16 0                   | 13 54                              | 20 5            | 19 3                   | 15 2                               | ...  | ...                    | ...                                | ... | ... | ... |
| 8                  | Khoolna       | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 18 0             | 18 0                   | 14 0                               | 21 0            | 21 0                   | 17 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 9                  | Jessore       | 16 0                    | 16 0                   | 15 0                               | ...             | ...                    | ...                                | 17 0             | 16 0                   | 13 4                               | 22 12           | 22 0                   | 18 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 10                 | Moorshedabad  | 15 0                    | 16 0                   | 18 8                               | ...             | ...                    | ...                                | 15 0             | 16 0                   | 13 0                               | 22 0            | 21 0                   | 17 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 11                 | Dinapore      | 12 0                    | 10 12                  | 16 0                               | 22 0            | 19 0                   | 17 8                               | 17 0             | 16 12                  | 16 0                               | 21 0            | 21 0                   | 19 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 12                 | Rajahahye     | 16 8                    | 16 8                   | 20 4                               | 45 0            | 45 0                   | 33 8                               | 16 14            | 17 4                   | 15 12                              | 18 12           | 18 12                  | 18 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 13                 | Rungpore      | 18 12                   | 18 12                  | 16 0                               | ...             | ...                    | ...                                | 15 3             | 15 8                   | 10 12                              | 14 12           | 18 12                  | 16 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 14                 | Bogra         | 17 4                    | 15 0                   | 16 8                               | ...             | ...                    | ...                                | 13 8             | 13 8                   | 13 8                               | 21 0            | 21 0                   | 22 8                               | ...  | ...                    | ...                                | ... | ... | ... |
| 15                 | Pubna         | 18 12                   | 19 0                   | 21 4                               | ...             | ...                    | ...                                | 8 0              | 8 0                    | 8 0                                | 20 0            | 20 0                   | 18 12                              | ...  | ...                    | ...                                | ... | ... | ... |
| 16                 | Darjeeling    | 9 0                     | 9 0                    | 9 0                                | 11 0            | 11 0                   | 10 0                               | 5 0              | 5 0                    | 5 0                                | 13 6            | 13 0                   | 12 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 17                 | Julpigoree    | 13 0                    | 12 0                   | 13 4                               | 20 0            | 20 0                   | 20 0                               | 13 0             | 13 0                   | 15 0                               | 22 0            | 22 0                   | 22 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| Eastern Districts. |               |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |     |     |     |
| 18                 | Dacca         | 14 8                    | 14 0                   | 14 8                               | 26 0            | 22 0                   | 26 0                               | 16 0             | 16 0                   | 14 8                               | 19 0            | 12 0                   | 17 8                               | ...  | ...                    | ...                                | ... | ... | ... |
| 19                 | Furzedpore    | 22 0                    | 24 0                   | 24 0                               | 26 0            | 26 0                   | 25 0                               | 17 0             | 17 0                   | 12 0                               | 12 0            | 12 0                   | 17 0                               | ...  | ...                    | ...                                | ... | ... | ... |
| 20                 | Backergunge   | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 16 8             | 17 0                   | 14 8                               | ...             | 20 0                   | 16 8                               | ...  | ...                    | ...                                | ... | ... | ... |
| 21                 | Mymensingh    | 12 0                    | 13 4                   | 13 0                               | ...             | ...                    | ...                                | 12 0             | 14 8                   | 10 10                              | 16 0            | 17 0                   | 20 0                               | ...  | ...                    | ...                                | ... | ... | ... |

N. B.—This prices-current statement was not published in last week's Gazette, because the returns from Mungpore, Chittagong, Noakhally, Chittagong Hill Tracts, Hill Tipperah and Poores had not been received.

In the prices-current statement for the fortnight ending 31st May 1887, published at page 392 of the Supplement to the Calcutta Gazette of 5th June 1887, against Howrah in sub-column "present return" of column 2 "wheat" for 12 seers read 15 seers.

\* Wheat is not ordinarily sold in Howrah, but may be had if ordered.

A In sub-divisions retail prices of salt per rupee were:—Calna 12 seers, Cutwa 13 seers, and Banzergunge 12½ seers.

B In Bishenpore sub-division retail price of salt 12 seers per rupee.

C In Rampore Haut sub-division retail price of salt 12½ seers per rupee.

D In sub-divisions retail prices of salt per rupee were:—Tumlook 11 seers, Ghattal 13½ seers.

E In sub-divisions retail prices of salt per rupee were:—Serampore 13 seers and Jehanabad 13½ seers.

F In sub-divisions retail prices of salt per rupee were:—Barasat 12 seers, Bussirhat 13 seers, Diamond Harbour (at Magrahat) 10½ seers, Barrackpore 12½ seers, and Dum-Dum 11 seers.

G In sub-divisions retail prices of salt per rupee were:—Koochta and Meherpore 12 seers, Choudanga 11½ seers, and 10½ seers.

H In Satkhira and Bagirhat sub-divisions retail price of salt 11 seers per rupee.

| BAJRA OR CUMBU.<br>( <i>Pennisetum typhoides</i> .) |                        |                                    | MARUA OR RAGI.<br>( <i>Eleusine Corocana</i> .) |                        |                                    | KANGHI OR KAKUN.<br>ITALIAN MILLET.<br>( <i>Solaria italica</i> .) |                        |                                    | GRAM, CHANA.<br>CHHOLA, KADALAY,<br>OR SUNAGA.<br>( <i>Cicer arietinum</i> .) |                        |                                    |
|---|------------------------|------------------------------------|---|------------------------|------------------------------------|--|------------------------|------------------------------------|---|------------------------|------------------------------------|
| Present return.                                     | Next preceding return. | Corresponding return of last year. | Present return.                                 | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return.   | Next preceding return. | Corresponding return of last year. |

| S. | Ch. | S. | Ch. | S. | Ch. | S. | Ch. | S. | Ch. | S. | Ch. | S. | Ch. | S. | Ch. | S. | Ch. | S. | Ch. |
|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|
|    |     |    |     |    |     |    |     |    |     |    |     |    |     | 26 | 0   | 25 | 0   | 21 | 8   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     | 19 | 8   | 19 | 8   | 19 | 8   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     | 26 | 8   | 26 | 8   | 22 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     | 22 | 0   | 20 | 0   | 17 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     | 21 | 0   | 20 | 0   | 16 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     | 21 | 0   | 20 | 8   | 18 | 0   |
| 15 | 8   | 16 | 4   | 12 | 12  |    |     |    |     | 16 | 4   | 16 | 4   | 18 | 4   | 19 | 12  | 10 | 12  |
|    |     |    |     |    |     |    |     |    |     | 20 | 0   | 20 | 0   |    |     | 22 | 8   | 22 | 8   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 20 | 0   | 20 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 16 | 0   | 16 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 26 | 8   | 26 | 8   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 30 | 0   | 29 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 24 | 0   | 22 | 8   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 28 | 2   | 28 | 2   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 20 | 0   | 20 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 20 | 4   | 19 | 12  |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 32 | 0   | 32 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 11 | 0   | 11 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 16 | 10  | 16 | 2   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 20 | 0   | 16 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 24 | 0   | 24 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 16 | 0   | 16 | 0   |
|    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     | 16 | 0   | 17 | 8   |

**1310a**

[illegible]

\* This is the occasional and not the permanent rate.

\* This is the occasional and not the permanent rate.

In sub-divisions retail prices of salt per rupee were:—Jenida and Sarai 12 seers, Jaagora 10½ seers, and Bougong 13 seers.

In sub-divisions retail prices of salt per rupee were:—Lalbagh 13 seers and Jungipore and Kandi 12½ seers.

In Thakurgaon sub-division retail price of salt 10 seers per rupee.

In Natore sub-division retail price of salt 12 seers per rupee.

In sub-divisions retail prices of salt per rupee were:—Kurigram 12 seers, Nilphamari 13 seers and Gaibanda 9½ seers.

In sub-divisions retail prices of salt per rupee were:—

In Barajunga sub-division retail price of salt 12 seers per rupee.

At Bilguri retail price of salt 10 seers per rupee.

In Anupur sub-division (at Pabna) retail price of salt 10 seers per rupee.

In sub-divisions retail prices of salt per rupee were:—Munshiganje 11 seers and Munshiganje 10½ seers.

In sub-divisions retail prices of salt per rupee were:—Gonda 12 seers and Madaripur 12½ seers.

In sub-divisions retail prices of salt per rupee were:—Patanakhat 9½ seers, Porosope 11 seers, and Bhola 10½ seers.

In sub-divisions retail prices of salt per rupee were:—Patanakhat 9½ seers, Attou 12 seers, Jamalpore 10½ seers, Sherepo

кль 1887.

| NTH.            |                        | DISTRICT |
|-----------------|------------------------|----------|
| Present return. | Next preceding return. |          |
| COMMON MASON,   | Corresponding return   |          |
| CARPENTER, OR   | of last year.          |          |
| BLACKSMITH.     |                        |          |

**BENGAL.**

### Western Districts.

| Rs. A. | Rs. A. | Rs. A. |            |
|--------|--------|--------|------------|
| 10 0   | 10 0   | 10 0   | Burdwan.   |
| to     | to     | to     |            |
| 15 0   | 15 0   | 15 0   |            |
| 8 0    | 7 8    | 7 0    | Bankoora.  |
| to     | to     | to     |            |
| 16 0   | 15 0   | 15 0   |            |
| 7 8    | 8 0    | 8 0    | Beerbhoom. |
| to     | to     | to     |            |
| 10 0   | 10 0   | 10 0   |            |
| 7 8    | 7 8    | 7 8    | Midnapora. |
| to     | to     | to     |            |
| 9 0    | 8 8    | 11 4   |            |
| 0 0    | 10 0   | 10 0   | Hooghly.   |
| to     | to     | to     |            |
| 20 0   | 20 0   | 20 0   |            |
| 12 0   | 12 0   | 12 0   | Howrah.    |
| to     | to     | to     |            |
| 25 0   | 25 0   | 25 0   |            |

### Central Districts.

| masora |    |    |    |    |
|--------|----|----|----|----|
| 15     | 0  | 15 | 0  | 15 |
| 15     | 0  | 15 | 0  | 15 |
| to     | to | to | to | to |
| 30     | 0  | 20 | 0  | 20 |
| 7      | 8  | 7  | 8  | 7  |
| to     | to | to | to | to |
| 15     | 0  | 15 | 0  | 15 |
| 10     | 0  | 10 | 0  | 10 |
| to     | to | to | to | to |
| 16     | 0  | 15 | 0  | 16 |
| 15     | 0  | 15 | 0  | 15 |
| 7      | 8  | 7  | 8  | 7  |
| 10     | 0  | 10 | 0  | 10 |
| to     | to | to | to | to |
| 15     | 0  | 15 | 0  | 15 |
| 10     | 0  | 10 | 0  | 10 |
| to     | to | to | to | to |
| 14     | 0  | 14 | 0  | 14 |
| 12     | 0  | 12 | 0  | 12 |
| to     | to | to | to | to |
| 15     | 0  | 15 | 0  | 15 |
| 10     | 0  | 10 | 0  | 10 |
| to     | to | to | to | to |
| 20     | 0  | 22 | 0  | 22 |
| 12     | 0  | 2  | 0  | 15 |
| to     | to | to | to | to |
| 20     | 0  | 18 | 0  | 20 |
| 12     | 0  | 15 | 0  | 18 |
| to     | to | to | to | to |
| 22     | 0  | 25 | 0  | 22 |
| 15     | 0  | 20 | 0  | 20 |
| to     | to | to | to | to |
| 25     | 0  | 25 | 0  | 20 |

Calcutta.

24-Pergunnahs.

Nuddes.

Khoolna.

Jessore.

Mooringhshed.

Dinagapore.

Rajshahye.

Burghpore.

Bogra.

Pubna.

Dorjeeling.

Julpigonee.

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•

**Eastern District.**

|   |    |    |    |    |    |   |               |
|---|----|----|----|----|----|---|---------------|
| { | 8  | 0  | 8  | 0  | 8  | 0 | Dacca.        |
|   | 20 |    | to |    | 0  |   |               |
|   | 0  | 20 | 0  | 15 | 0  |   | Furra-shoppo. |
| { | 12 | 0  | 12 | 0  | 10 | 0 |               |
|   | 16 | 0  | to |    | to |   | Backergunge.  |
|   | 16 | 0  | 15 | 0  | 20 | 0 |               |
| { | 10 | 0  | 8  | 0  | 1  | 0 | Mymensinga.   |
|   | 15 | 0  | to |    | to |   |               |
|   | 15 | 0  | 15 | 0  | 15 | 0 |               |
| 0 | 12 | 0  | 12 | 0  | 12 | 0 |               |
| 0 | 30 | 0  | to |    | 0  |   |               |
| 0 | 30 | 0  | 30 | 0  | 3  | 0 |               |

\* This is the occasional and not the permanent rate.

\* This is the occasional and not the permanent rate.

In sub-divisions retail prices of salt per rupee were:—Jenida and Sarai 12 seers, Jaagora 10½ seers, and Bougong 13 seers.

In sub-divisions retail prices of salt per rupee were:—Lalbagh 13 seers and Jungipore and Kandi 12½ seers.

In Thakurgaon sub-division retail price of salt 10 seers per rupee.

In Natore sub-division retail price of salt 12 seers per rupee.

In sub-divisions retail prices of salt per rupee were:—Kurigram 12 seers, Nilphamari 13 seers and Gaibanda 9½ seers.

In sub-divisions retail prices of salt per rupee.

In Barajunga sub-division retail price of salt 12 seers per rupee.

At Bilguri retail price of salt 10 seers per rupee.

In Anupur sub-division (at Panchagarh) retail price of salt 10 seers per rupee.

In sub-divisions retail prices of salt per rupee were:—Munshiganje 11 seers and Munshiganje 10½ seers.

In sub-divisions retail prices of salt per rupee were:—Gonda 12 seers and Madaripore 12½ seers.

In sub-divisions retail prices of salt per rupee were:—Patanakhat 9½ seers, Porsopte 11 seers, and Bhola 10½ seers.

In sub-divisions retail prices of salt per rupee were:—Patanakhat 9½ seers, Attou 12 seers, Jamalpore 10½ seers, Sherepo

кль 1887.

| NTH.            |                        | DISTRICT |
|-----------------|------------------------|----------|
| Present return. | Next preceding return. |          |
| COMMON MASON,   | Corresponding return   |          |
| CARPENTER, OR   | of last year.          |          |
| BLACKSMITH.     |                        |          |

**BENGAL.**

### Western Districts.

| Rs. A. | Rs. A. | Rs. A. |            |
|--------|--------|--------|------------|
| 10 0   | 10 0   | 10 0   | Burdwan.   |
| to     | to     | to     |            |
| 15 0   | 15 0   | 15 0   |            |
| 8 0    | 7 8    | 7 0    | Bankoora.  |
| to     | to     | to     |            |
| 16 0   | 15 0   | 15 0   |            |
| 7 8    | 8 0    | 8 0    | Beerbhoom. |
| to     | to     | to     |            |
| 10 0   | 10 0   | 10 0   |            |
| 7 8    | 7 8    | 7 8    | Midnapora. |
| to     | to     | to     |            |
| 9 0    | 8 8    | 11 4   |            |
| 0 0    | 10 0   | 10 0   | Hooghly.   |
| to     | to     | to     |            |
| 20 0   | 20 0   | 20 0   |            |
| 12 0   | 12 0   | 12 0   | Howrah.    |
| to     | to     | to     |            |
| 25 0   | 25 0   | 25 0   |            |

### Central Districts.

| masora |    |    |    |    |
|--------|----|----|----|----|
| 15     | 0  | 15 | 0  | 15 |
| 15     | 0  | 15 | 0  | 15 |
| to     | to | to | to | to |
| 30     | 0  | 20 | 0  | 20 |
| 7      | 8  | 7  | 8  | 7  |
| to     | to | to | to | to |
| 15     | 0  | 15 | 0  | 15 |
| 10     | 0  | 10 | 0  | 10 |
| to     | to | to | to | to |
| 16     | 0  | 15 | 0  | 16 |
| 15     | 0  | 15 | 0  | 15 |
| 7      | 8  | 7  | 8  | 7  |
| 10     | 0  | 10 | 0  | 10 |
| to     | to | to | to | to |
| 15     | 0  | 15 | 0  | 15 |
| 10     | 0  | 10 | 0  | 10 |
| to     | to | to | to | to |
| 14     | 0  | 14 | 0  | 14 |
| 12     | 0  | 12 | 0  | 12 |
| to     | to | to | to | to |
| 15     | 0  | 15 | 0  | 15 |
| 10     | 0  | 10 | 0  | 10 |
| to     | to | to | to | to |
| 20     | 0  | 22 | 0  | 22 |
| 12     | 0  | 2  | 0  | 15 |
| to     | to | to | to | to |
| 20     | 0  | 18 | 0  | 20 |
| 12     | 0  | 15 | 0  | 18 |
| to     | to | to | to | to |
| 22     | 0  | 25 | 0  | 22 |
| 15     | 0  | 20 | 0  | 20 |
| to     | to | to | to | to |
| 25     | 0  | 25 | 0  | 20 |

**Eastern District.**

|   |    |    |    |    |    |   |              |
|---|----|----|----|----|----|---|--------------|
| { | 8  | 0  | 8  | 0  | 8  | 0 | Dacca.       |
|   | 20 |    | to |    | 0  |   |              |
|   | 0  | 20 | 0  | 15 | 0  |   | Furzeppore.  |
| { | 12 | 0  | 12 | 0  | 10 | 0 |              |
|   | 16 | 0  | to |    | to |   | Backergunge. |
|   | 16 | 0  | 15 | 0  | 20 | 0 |              |
| { | 10 | 0  | 8  | 0  | 1  | 0 | Mymensinga.  |
|   | 15 | 0  | to |    | to |   |              |
|   | 15 | 0  | 15 | 0  | 15 | 0 |              |
| 0 | 12 | 0  | 12 | 0  | 12 | 0 |              |
| 0 | 30 | 0  | to |    | 0  |   |              |
| 0 | 30 | 0  | 30 | 0  | 3  | 0 |              |

## PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

| Number.                        | DISTRICTS.              | QUANTITIES PER RUPEE IN |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |   |                        |                                    |  |  |  |
|--------------------------------|-------------------------|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|---|------------------------|------------------------------------|--|--|--|
|                                |                         | WHEAT.                  |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLU<br>( <i>Sorghum Vulgare.</i> ) |                        |                                    |  |  |  |
|                                |                         | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                               | Next preceding return. | Corresponding return of last year. |  |  |  |
|                                |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |   |                        |                                    |  |  |  |
| Eastern Districts.—Concluded.  |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |   |                        |                                    |  |  |  |
| 22                             | Chittagong              | 16 0                    | 16 0                   | 16 0                               | ...             | ...                    | ...                                | 12 0             | 12 0                   | 11 0                               | 17 0            | 16 9                   | 14 0                               | ...   | ...                    | ...                                |  |  |  |
| 23                             | Noakholly               | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 18 0             | 18 0                   | 14 0                               | 20 0            | 20 0                   | 16 0                               | ...   | ...                    | ...                                |  |  |  |
| 24                             | Tipperah                | 11 7                    | 11 6                   | 11 4                               | ...             | ...                    | ...                                | 17 8½            | 15 0½                  | 15 0                               | 19 14           | 17 13                  | 17 8                               | ...   | ...                    | ...                                |  |  |  |
| 25                             | Chittagong Hill Tracts. | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 11 7             | 11 7                   | 10 0                               | 13 6            | 12 6                   | 13 6                               | ...   | ...                    | ...                                |  |  |  |
|                                | Hill Tipperah           | 12 0                    | 12 0                   | 12 0                               | ...             | ...                    | ...                                | 10 0             | 10 0                   | 11 0                               | 15 0            | 14 0                   | 16 0                               | ...   | ...                    | ...                                |  |  |  |
| BEHAR.                         |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |   |                        |                                    |  |  |  |
| 26                             | Patna                   | 18 0                    | 18 0                   | 21 0                               | 28 0            | 28 0                   | 30 0                               | 11 8             | 11 8                   | 11 8                               | 31 0            | 21 0                   | 18 0                               | 26 0  | 26 0                   | 17 0                               |  |  |  |
| 27                             | Gya                     | 16 0                    | 16 0                   | 18 0                               | 31 0            | 35 0                   | 32 0                               | 9 8              | 9 8                    | 9 0                                | 18 8            | 18 8                   | 15 8                               | ...   | ...                    | ...                                |  |  |  |
| 28                             | Shahabad                | 16 0                    | 15 0                   | 19 0                               | 30 0            | 30 0                   | 27 8                               | 8 0              | 8 0                    | 8 0                                | 16 0            | 17 0                   | 18 0                               | ...   | ...                    | ...                                |  |  |  |
| 29                             | Durbhanga               | 17 9                    | 17 8                   | 18 0                               | 30 12           | 28 0                   | 25 0                               | 12 0             | 12 0                   | 10 0                               | 18 10           | 18 0                   | 16 0                               | ...   | ...                    | ...                                |  |  |  |
| 30                             | Muzaffarpore            | 20 0                    | 20 0                   | 20 0                               | 30 0            | 30 0                   | 26 0                               | 12 0             | 10 0                   | 13 0                               | 20 0            | 20 0                   | 15 0                               | ...   | ...                    | ...                                |  |  |  |
| 31                             | Saran                   | 15 0                    | 14 0                   | 18 8                               | 27 0            | 28 0                   | 27 0                               | 8 0              | 8 0                    | 8 0                                | 20 0            | 20 0                   | 19 0                               | ...   | ...                    | ...                                |  |  |  |
| 32                             | Chumprau                | 20 0                    | 19 8                   | 19 0                               | 35 0            | 35 0                   | 32 0                               | 7 8              | ...                    | 10 8                               | 16 0            | 16 0                   | 16 0                               | ...   | ...                    | ...                                |  |  |  |
| 33                             | Monghyr                 | 18 9                    | 18 9                   | 21 0                               | 33 8            | 33 8                   | 31 8                               | 13 14            | 13 14                  | 12 1                               | 16 13           | 17 6                   | 15 4                               | 13 14   | 21 0                   | ...                                |  |  |  |
| 34                             | Bhagulpore              | 17 10                   | 17 10                  | 17 10                              | 35 5            | 37 14                  | 27 12                              | 17 10            | 17 10                  | 13 4                               | 20 3            | 18 15                  | 16 0                               | ...   | ...                    | ...                                |  |  |  |
| 35                             | Purneah                 | 16 0                    | 16 0                   | 20 0                               | ...             | ...                    | ...                                | 16 0             | 16 0                   | 16 0                               | 18 0            | 19 0                   | 20 0                               | ...   | ...                    | ...                                |  |  |  |
| 36                             | Maldah                  | 16 0                    | 16 0                   | 19 0                               | ...             | ...                    | ...                                | 13 0             | 14 0                   | 10 0                               | 20 0            | 20 0                   | 19 8                               | ...   | ...                    | ...                                |  |  |  |
| 37                             | Southal Pargana         | 13 0                    | 14 0                   | 16 0                               | ...             | ...                    | ...                                | 17 0             | 17 0                   | 15 0                               | 25 0            | 25 0                   | 22 8                               | ...   | ...                    | ...                                |  |  |  |
| ORISSA.                        |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |   |                        |                                    |  |  |  |
| 38                             | Cuttack                 | 15 12                   | 14 7                   | 14 7                               | ...             | ...                    | ...                                | 11 13            | 13 2                   | 10 8                               | 19 11           | 19 11                  | 15 13                              | ...   | ...                    | ...                                |  |  |  |
| 39                             | Pooree                  | 10 8                    | 11 13                  | 15 12                              | ...             | ...                    | ...                                | 13 2             | 13 2                   | 13 2                               | 23 5            | 23 10                  | 18 6                               | ...   | ...                    | ...                                |  |  |  |
| 40                             | Balasore                | 15 0                    | 15 0                   | 15 0                               | 18 0            | 18 0                   | 18 0                               | 15 0             | 15 0                   | 13 0                               | 25 0            | 25 0                   | 24 0                               | ...   | ...                    | ...                                |  |  |  |
| CHOTA NAGPORE.                 |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |   |                        |                                    |  |  |  |
| South-Western Frontier Agency. |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |   |                        |                                    |  |  |  |
| 41                             | Hazaribagh              | 17 0                    | 10 0                   | 17 0                               | 18 0            | 18 0                   | 20 0                               | 10 0             | 9 0                    | 10 0                               | 17 8            | 18 0                   | 18 0                               | Not procurable.                               |                        |                                    |  |  |  |
| 42                             | Lehringra               | 22 0                    | 22 0                   | 20 0                               | 26 0            | 28 0                   | 20 0                               | 17 0             | 17 0                   | 16 0                               | 23 0            | 23 0                   | 21 0                               | ...   | ...                    | ...                                |  |  |  |
| 43                             | Singbhum                | 20 0                    | 20 0                   | 24 0                               | 32 0            | 32 0                   | 32 0                               | 20 0             | 20 0                   | 28 0                               | 28 0            | 24 0                   | 33 0                               | ...   | ...                    | ...                                |  |  |  |
| 44                             | Manbhum                 | 18 0                    | 18 0                   | 16 0                               | 28 0            | 36 0                   | 32 0                               | 17 0             | 17 0                   | 15 0                               | 26 0            | 28 0                   | 26 0                               | ...   | ...                    | ...                                |  |  |  |

U In Cox's Bazar sub-division retail price of salt 12 seers per rupee.

V In Fenny sub-division (at Pauchgatchia) retail price of salt 9 seers per rupee.

W In Chandpore sub-division retail price of salt 11½ seers per rupee.

X In sub-divisions retail prices of salt per rupee were:—Basseram 12 seers, Buxar 12½ seers and Bhabooh 11 seers.

Y In sub-divisions retail prices of salt per rupee were:—Madhubani 11 seers and Tajpore 12 seers.

Z In sub-divisions retail prices of salt per rupee were:—Seetamarhee 11 seers and Hajepore 12 seers.

Z1 In sub-divisions retail prices of salt per rupee were:—Sewan 11½ seers and Gopalgaunge 11½ seers.

Z2 In Bettiah sub-division retail price of salt 11½ seers per rupee.

CALCUTTA,

The 26th July 1887.

## • Districts of Bengal during the Fortnight ending 15th July 1887—(Concluded)

| INDIAN-CORN OR MAIZE.<br>(Zea Mays.) |                        |                                    | ARHAR OR THUR.<br>CAJAN PNA.<br>(Cajanus indicus.) |                        |                                    | FIRWOOD.        |                        |                                    |
|--------------------------------------|------------------------|------------------------------------|--|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
| Present return.                      | Next preceding return. | Corresponding return of last year. | Present return.                                    | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |

TH.

COMMON MASON  
SPRINTER, OR  
BLACKSMITH.

DISTRICTS.

## Eastern Districts.—Conclusion.

| A.  | Rs. | A.  | Rs. | A.  |
|-----|-----|-----|-----|-----|
| 0   | 7   | 0   | 7   | 0   |
| ... | ... | ... | ... | ... |
| 0   | 13  | 0   | 11  | 0   |
| 0   | 7   | 0   | 7   | 0   |
| 0   | 15  | 0   | 20  | 0   |
| 0   | 6   | 0   | 7   | 0   |
| 0   | 15  | 0   | 10  | 0   |
| 0   | 15  | 0   | 15  | 0   |

Chittagong.

Noakhtoly.

Fippera.

Chittagong Hill  
Tracts.  
Hill Tracts  
ORISSA.

BEHAR.

|   |    |    |    |    |
|---|----|----|----|----|
| 3 | 6  | 0  | 3  | 0  |
| 0 | 8  | 0  | 8  | 0  |
| 0 | 6  | 0  | 5  | 8  |
| 0 | 8  | 0  | 4  | 0  |
| 0 | 7  | 8  | 7  | 8  |
| 2 | 3  | 8  | 3  | 13 |
| 8 | 9  | 0  | 9  | 6  |
| 0 | 6  | 0  | 6  | 0  |
| 0 | 8  | 0  | 8  | 0  |
| 9 | 6  | 9  | 6  | 9  |
| 0 | 10 | 0  | 10 | 0  |
| 8 | 7  | 8  | 8  | 0  |
| 0 | 5  | 10 | 5  | 0  |
| 0 | 7  | 8  | 12 | 0  |
| 9 | 7  | 0  | 6  | 0  |
| 4 | 13 | 0  | 10 | 0  |
| 0 | 7  | 0  | 7  | 0  |
| 0 | 16 | 0  | 16 | 0  |
| 0 | 7  | 8  | 8  | 0  |
| 0 | 11 | 4  | 10 | 0  |
| 8 | 7  | 8  | 4  | 0  |
| 8 | 9  | 8  | 5  | 0  |
| 5 | 7  | 8  | 7  | 0  |
| 0 | 10 | 0  | 10 | 0  |
| 0 | 8  | 0  | 8  | 0  |
| 0 | 10 | 0  | 10 | 0  |
| 8 | 7  | 8  | 7  | 8  |
| 8 | 9  | 0  | 9  | 0  |

Patna.

Gyn.

Shahabad.

Durbhunga.

Mozufferpore.

Baran.

Chumpran.

Monghyr.

Bhagulpore.

Furness.

Malnah.

Sontal Perga.

Cuttack.

Purora.

Balasore.

CHOTA NAGPORE.

South-Western Frontier Agency.

|   |    |   |    |   |
|---|----|---|----|---|
| 0 | 8  | 0 | 8  | 0 |
| 0 | 6  | 0 | 6  | 0 |
| 0 | 12 | 0 | 12 | 0 |
| 0 | 5  | 0 | 5  | 0 |
| 0 | 13 | 0 | 12 | 0 |
| 5 | 9  | 8 | 10 | 0 |
| 2 | 15 | 0 | 10 | 0 |

Hazareenaga.

Loharanga.

Singbhoon.

Manbhoom.

1312b

- 21 In Bhadrachal sub-division retail price of salt 9 seers per rupee.  
22 In Ghadi sub-division retail price of salt 11 seers per rupee.  
23 In Govindpore sub-division retail price of salt 12 seers per rupee.

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2.

at Raneeunge) 11½ seers.

*PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt in th*

| Number. | MARKTS.        | WHEAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    |
|---------|----------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|         |                | WHYAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    |
|         |                | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|         |                | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.         | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |
| 1       | Calcutta ...   | 2 10 3          | 2 10 0                 | 2 8 8                              | 1 8 6           | 1 9 6                  | 1 9 4                              | 3 4 3            | 3 2 3                  | 3 14 9                             | 1 13 8          | 1 13 3                 | 2 5 0                              |
| 2       | Seraijunge ..  | 2 5 0           | ...                    | 2 1 7                              | ...             | ...                    | ...                                | 4 0 0            | 4 0 0                  | 4 12 0                             | 2 0 0           | 2 2 0                  | 1 14 8                             |
| 3       | Dacca ...      | 2 11 0          | 2 12 0                 | 2 8 0                              | 2 0 0           | 1 11 0                 | 1 8 0                              | 2 7 0            | 2 7 0                  | 2 11 0                             | 2 0 0           | 2 2 0                  | 2 5 0                              |
| 4       | Narsingunge*   | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...             | ...                    | ...                                |
| 5       | Chittagong ... | 2 6 0           | 2 0 0                  | 2 0 0                              | ...             | ...                    | ...                                | 3 2 0            | 3 2 0                  | 3 8 0                              | 2 5 0           | 2 4 0                  | 2 4 0                              |
| 6       | Patna          | 2 4 0           | 2 4 0                  | 1 13 6                             | 1 5 3           | 1 5 3                  | 1 4 0                              | 3 0 0            | 3 0 0                  | 3 0 0                              | 1 13 0          | 1 13 0                 | 2 1 0                              |
| 7       | Balasore ..    | 2 8 0           | 2 8 0                  | 2 7 0                              | 3 0 0           | 3 0 0                  | 3 0 0                              | 2 8 0            | 2 8 0                  | 3 0 0                              | 2 7 0           | 1 7 0                  | 1 10 0                             |
| 8       | Poorbe ...     | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | 1 11 0          | 1 8 0                  | 2 0 8                              |
| 9       | Cuttack        | 2 5 0           | 2 10 0                 | 2 10 0                             | ...             | ...                    | ...                                | 3 4 0            | 3 0 0                  | 3 10 0                             | 2 0 0           | 2 3 0                  | 2 5 0                              |

CALCUTTA,  
the 26th July 1887. \*

\* Return not



undermentioned *Marts* of Bengal during the fortnight ending 15th July 1887.

| GRAM, CHAWA, CHHOLA,<br>KADALAY OR MUKAGA.<br>( <i>Cleor Aristinum.</i> ) |                        |                                    | INDIAN-CORN OR MAIZE.<br>( <i>Zea Mays.</i> ) |                        |                                    | ARHAR OR THUR<br>CHANDAN PRA.<br>( <i>Cajanus indicus.</i> ) |                        |                                    | FIREWOOD.       |                        |                                    | SALT.           |                        |                                    | MARTS.       |
|---|------------------------|------------------------------------|---|------------------------|------------------------------------|--|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--------------|
| Present return.   | Next preceding return. | Corresponding return of last year. | Present return.                               | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |              |
| R. A. P.  | R. A. P.               | R. A. P.                           | R. A. P.                                      | R. A. P.               | R. A. P.                           | R. A. P.   | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |              |
| 1 11 0  | 1 10 9                 | 1 11 6                             | 2 0 0   | 1 10 0                 | 2 0 0                              | 1 15 0   | 1 15 0                 | 2 0 0                              | 0 6 9           | 0 6 9                  | 0 7 0                              | 3 0 0           | 3 0 0                  | 2 13 0                             | Calcutta.    |
| 2 1 0   | ...                    | 2 3 6                              | ...   | ...                    | ...                                | ...  | ...                    | ...                                | ...             | ...                    | ...                                | 2 12 0          | 3 0 0                  | 3 3 0                              | Seraingunge. |
| 1 14 0  | 2 7 0                  | 2 4 0                              | ...   | ...                    | ...                                | 2 0 0  | 2 6 0                  | ...                                | 0 5 0           | 0 5 0                  | 0 5 0                              | 3 3 0           | 3 3 0                  | 3 8 0                              | Dacca.       |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                | ...  | ...                    | ...                                | ...             | ...                    | ...                                | ...             | ...                    | ...                                | Naraingunge. |
| 2 6 0   | 2 10 0                 | 2 14 0                             | ...   | ...                    | ...                                | 4 6 0  | 4 4 0                  | 3 12 0                             | ...             | ...                    | ...                                | ...             | 3 13 0                 | 3 4 0                              | Chittarong.  |
| 1 5 3   | 1 5 6                  | 1 6 6                              | 1 8 0   | 1 8 0                  | 1 5 6                              | 1 8 0  | 1 8 0                  | 1 6 0                              | 0 6 0           | 0 6 0                  | 0 6 3                              | 3 1 6           | 3 1 6                  | 3 1 6                              | Patna.       |
| 2 8 0   | 2 8 0                  | 2 6 0                              | ...   | ...                    | ...                                | 3 5 0  | 3 4 0                  | 2 12 0                             | 0 4 6           | 0 4 3                  | 0 5 0                              | 3 5 0           | 3 5 0                  | 3 13 0                             | Balasore.    |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                | ...  | ...                    | ...                                | ...             | ...                    | ...                                | 2 10 0          | 2 10 0                 | 2 10 0                             | Poorce.      |
| 2 0 0   | (Kulai)<br>2 0 0       | 2 2 0                              | ...   | ...                    | ...                                | 2 10 0   | ...                    | ...                                | 0 8 0           | 0 8 0                  | 0 8 0                              | 2 14 0          | 3 1 0                  | 2 12 0                             | Cuttack.     |

received.

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#### PRICES PER MAUND

JOWAR OR 'HOLAM' (*Sorghum Vulgare.*)      BAJRA OR 'CUMBI' (*Pennisetum typhoides.*)

| Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
| R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |
| 1 10 0          | 1 10 0                 | 1 14 0                             | 3 8 0           | 3 6 0                  | 3 4 0                              |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| 1 6 0           | 1 6 0                  | 2 4 0                              | 1 6 0           | 1 6 0                  | 1 6 0                              |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |

# Meteorological Report of the Province of Bengal

| METEOROLOGICAL DIVISION. | DISTRICT.                 | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
|--------------------------|---------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------------|-------------------|---------------------|-------------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|
|                          |                           |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.               |                   |                     |                         |                           |                                   |                                 |                                     |
|                          |                           |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week.       | Date.             | Lowest during week. | Date.                   | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. |
|                          |                           |                         |                                 |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
| ORIGINAL.                | Pooree                    | Gopalsore               | 29.584                          | 29.634                     | +0.046               | Variable              | 151.0               | 93.2                       | 18th July         | 76.8                | 18th July               | 87.1                      | 79.5                              | 83.3                            | +0.3                                |
|                          |                           | False Point             | 29.613                          | 29.631                     | +0.008               | NW                    | 186.0               | 93.0                       | 18th "            | 75.1                | 18th "                  | 89.0                      | 77.1                              | 82.6                            | -0.6                                |
|                          | Cuttack                   | Cuttack                 | 29.538                          | 29.638                     | +0.024               | Calm                  | 34.0                | 94.4                       | 18th "            | 74.8                | 18th "                  | 91.0                      | 78.2                              | 84.0                            | +0.6                                |
|                          | Balasore                  | Balasore                | 29.565                          | 29.633                     | +0.021               | NE                    | 89.1                | 92.4                       | 17th & 18th July. | 75.3                | 18th "                  | 90.0                      | 79.9                              | 83.5                            | +0.2                                |
|                          | South-West Midnapore      | Sangor Island           | 29.602                          | 29.623                     | +0.023               | Variable              | 103.0               | 93.7                       | 18th "            | 70.3                | 18th "                  | 88.6                      | 79.3                              | 84.0                            | +0.1                                |
|                          | South 24-Pergunnahs       | Midnapore               | 29.491                          | 29.641                     | +0.037               | NNE                   | 60.3                | 97.3                       | 19th "            | 75.3                | 20th "                  | 92.3                      | 78.0                              | 85.3                            | +1.7                                |
|                          | 24-Pergunnahs             |                         |                                 |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | Howrah                    | Calcutta                | 29.596                          | 29.617                     | +0.009               | ENE                   | 82.0                | 92.5                       | 18th "            | 77.2                | 18th, 19th & 21st July. | 86.3                      | 78.1                              | 83.2                            | -0.2                                |
|                          | Hooghly                   |                         |                                 |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | Burdwan                   | Burdwan                 | 29.524                          | 29.623                     | +0.021               | Variable              | 55.0                | 93.0                       | 18th & 19th July. | 77.4                | 18th "                  | 91.7                      | 79.4                              | 85.0                            | +0.0                                |
| SOUTH-WEST BENGAL.       | Bankoora                  | Bankoora                | 29.303                          | -                          | -                    | NW, Calm              | 4.3                 | 93.1                       | 18th "            | 75.0                | 18th "                  | 89.1                      | 78.6                              | 83.9                            | -                                   |
|                          | Beerbhoom                 | Raneegunge              | 29.279                          | -                          | +0.010               | NE, NW                | 70.3                | 97.0                       | 16th "            | 74.9                | 16th "                  | 91.3                      | 79.3                              | 84.6                            | +1.1                                |
|                          | West Burdwan              |                         |                                 |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | Moorshedabad              | Berhampore              | 29.564                          | 29.630                     | +0.029               | Variable              | 72.9                | 93.7                       | 18th "            | 77.3                | 18th, 20th July.        | 90.3                      | 79.1                              | 84.7                            | -0.3                                |
|                          | Nuddea                    | Krishnaghar             | 29.572                          | -                          | -                    | Variable              | 62.2                | 92.8                       | 18th "            | 70.8                | 21st "                  | 90.5                      | 78.6                              | 84.0                            | -                                   |
|                          | Jessore                   | Jessore                 | 29.586                          | 29.620                     | +0.020               | Variable              | 59.2                | 94.3                       | 18th "            | 77.4                | 18th & 19th July.       | 90.6                      | 78.8                              | 84.4                            | +0.1                                |
|                          | Khoolna                   |                         |                                 |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | Chittagong                | Chittagong              | 29.586                          | 29.656                     | -0.017               | Southerly             | 93.0                | 89.6                       | 21st "            | 74.0                | 18th "                  | 87.2                      | 76.8                              | 82.0                            | +0.6                                |
|                          | Chittagong Hill Tracts    | Demagiri                |                                 |                            |                      |                       |                     | Observations not received. |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | Backergunge               | Barisal                 | 29.616                          | 29.628                     | +0.024               | S                     | 69.8                | 92.3                       | 18th July         | 76.3                | 18th & 19th July.       | 88.0                      | 78.2                              | 83.6                            | +2.6                                |
| EAST BENGAL.             | Noakholly                 | Noakholly               | 29.581                          | 29.605                     | -                    | Calm                  | 22.4                | 90.5                       | 18th "            | 77.3                | 22nd "                  | 87.0                      | 78.6                              | 82.8                            | -                                   |
|                          | Furzedpore                | Furzedpore              | 29.585                          | -                          | +0.027               | S                     | 69.0                | 87.0                       | 17th "            | 77.9                | 18th "                  | 86.4                      | 78.8                              | 82.6                            | -0.1                                |
|                          | Dacca                     | Dacca                   | 29.612                          | 29.635                     | +0.018               | ESE                   | 99.0                | 92.1                       | 18th "            | 77.2                | 18th "                  | 89.3                      | 79.4                              | 84.4                            | +0.4                                |
|                          | Commillah                 | Commillah               | 29.607                          | 29.642                     | +0.009               | SE                    | 73.7                | 92.3                       | 18th "            | 74.8                | 18th "                  | 89.9                      | 76.7                              | 82.8                            | +1.0                                |
|                          | Mymensingh                | Mymensingh              | 29.581                          | -                          | +0.026               | SE                    | 73.0                | 93.3                       | 18th "            | 77.0                | 20th "                  | 90.2                      | 79.4                              | 84.8                            | +2.0                                |
|                          |                           |                         |                                 |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | Bogra                     | Bogra                   | 29.548                          | 29.610                     | -                    | E, Calm               | 64.7                | 94.8                       | 18th "            | 77.3                | 19th "                  | 90.7                      | 79.1                              | 84.9                            | -                                   |
|                          | Pubna                     | Serajgunge              | 29.581                          | 29.627                     | +0.049               | SE?                   | 56.5                | 94.1                       | 18th "            | 78.7                | 16th "                  | 90.6                      | 79.2                              | 84.9                            | +1.1                                |
|                          | Rajshahye                 | Rampore Beau-<br>lah.   | 29.586                          | 29.625                     | +0.032               | Easterly              | 67.5                | 94.3                       | 18th "            | 69.7                | 19th "                  | 90.9                      | 78.3                              | 84.1                            | -2.0                                |
|                          | Maldah                    | Maldah                  | 29.655                          | -                          | -                    | SE                    | 22.4                | 94.0                       | 19th "            | 78.2                | 19th "                  | 91.4                      | 79.2                              | 85.3                            | -                                   |
| NORTH BENGAL.            | Dinapore                  | Dinapore                | 29.488                          | 29.607                     | +0.009               | ESE                   | 53.0                | 95.6                       | 19th "            | 78.0                | 20th "                  | 92.2                      | 80.5                              | 86.4                            | +1.6                                |
|                          | Rungpore                  | Rungpore                | 29.603                          | 29.626                     | -0.009               | Calm                  | 47.0                | 95.3                       | 18th "            | 76.7                | 19th & 20th July.       | 91.9                      | 79.5                              | 85.7                            | +1.3                                |
|                          | Julpigoree                | Julpigoree              | 29.350                          | 29.634                     | +0.042               | SE                    | 92.4                | 94.0                       | 19th "            | 76.3                | 22nd "                  | 91.6                      | 78.0                              | 84.8                            | +1.5                                |
|                          | Cooch Behar               |                         |                                 |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | Darjeeling Hill Districts | Darjeeling              | 22.904                          | -                          | +0.013               | E                     | 47.0                | 69.6                       | 17th "            | 56.7                | 18th & 19th July.       | 67.7                      | 67.7                              | 62.7                            | +0.6                                |
|                          | Purneah                   | Purneah                 | 29.510                          | 29.635                     | +0.041               | Calm                  | 21.3                | 95.2                       | 18th & 19th July. | 77.6                | 16th "                  | 91.5                      | 79.6                              | 85.5                            | +0.9                                |
|                          | North Bhagulpore          |                         |                                 |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | Mozufferpore              | Mozufferpore            |                                 |                            |                      |                       |                     | Observations suspended.    |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | Durbhunga                 | Durbhunga               | 29.402                          | 29.628                     | +0.045               | Variable              | 110.0               | 93.4                       | 20th July         | 77.5                | 22nd "                  | 91.6                      | 80.6                              | 86.1                            | +1.6                                |
|                          | Champaran                 | Motihari                | 29.350                          | 29.604                     | +0.027               | SW, SE                | 207.1               | 95.8                       | 20th "            | 77.9                | 17th "                  | 93.1                      | 79.5                              | 86.3                            | +1.1                                |
| NORTH BENGAL.            | Sarun                     | Chupra                  | 29.433                          | -                          | +0.059               | WNW                   | 10.8                | 95.5                       | 21st & 22nd July. | 78.6                | 16th "                  | 92.9                      | 80.2                              | 86.6                            | +0.3                                |
|                          |                           | Dehree*                 | 29.276                          | 29.637                     | +0.070               | WSW                   | 216.1               | 91.9                       | 20th "            | 77.0                | 21st "                  | 89.5                      | 79.8                              | 84.7                            | +2.0                                |
|                          | Shahabad                  | Buxar                   | 29.376                          | 29.615                     | +0.057               | WNW                   | 150.8               | 93.9                       | 17th "            | 78.2                | 16th "                  | 92.4                      | 79.9                              | 86.2                            | +1.4                                |
|                          |                           | Arrah                   | 29.409                          | 29.604                     | +0.046               | W                     | 77.1                | 95.4                       | 21st "            | 78.6                | 16th & 18th July.       | 93.2                      | 79.8                              | 85.5                            | +0.3                                |
|                          | Gya                       | Gya                     | 29.259                          | 29.603                     | +0.005               | NW                    | 72.0                | 95.0                       | 21st "            | 78.9                | 21st "                  | 92.5                      | 79.4                              | 85.9                            | +0.6                                |
|                          | Patna                     | Bankipore               | 29.448                          | 29.629                     | +0.049               | Variable              | 69.0                | 94.4                       | 20th "            | 77.2                | 16th "                  | 92.5                      | 80.3                              | 86.3                            | +0.8                                |
|                          | South Bhagulpore          | Bhagulpore              | 29.416                          | 29.677                     | -0.013               | Variable              | 37.4                | 94.4                       | 18th "            | 76.0                | 16th "                  | 91.5                      | 79.1                              | 85.3                            | +0.4                                |
|                          | Monghyr                   |                         |                                 |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | South 24-Pergunnahs       | Dumka                   | 29.119                          | -                          | -                    | Calm                  | 8.7                 | 92.8                       | 18th "            | 76.1                | 16th "                  | 90.3                      | 78.8                              | 84.6                            | -                                   |
|                          | Hazaribagh                | Hazaribagh              | 27.064                          | 29.632                     | +0.075               | NW                    | 100.0               | 88.5                       | 21st "            | 76.7                | 16th "                  | 89.0                      | 73.3                              | 79.4                            | +0.4                                |
| SOUTH BENGAL.            | Lohardugga                | Ranchee                 | 27.527                          | 29.630                     | +0.058               | NW                    | 133.3               | 89.0                       | 17th & 18th July. | 68.4                | 16th "                  | 84.0                      | 72.1                              | 78.1                            | -0.3                                |
|                          | Manbhoom                  |                         |                                 |                            |                      |                       |                     |                            |                   |                     |                         |                           |                                   |                                 |                                     |
|                          | Singbhoom                 | Chyebasa                | 28.864                          | -                          | -                    | SSW                   | 39.8                | 92.9                       | 18th "            | 74.7                | 16th "                  | 88.3                      | 76.7                              | 82.5                            | -                                   |
|                          |                           | Sibsagar                | 29.357                          | 29.698                     | +0.019               | SW                    | 55.0                | 95.0                       | 18th & 21st July. | 76.5                | 21st & 22nd July.       | 91.9                      | 78.6                              | 85.2                            | +0.4                                |
|                          | Assam                     | Dhubri                  | 29.517                          | 29.633                     | +0.039               | SW                    | 113.0               | 92.7                       | 19th "            | 76.8                | 22nd "                  | 89.9                      | 79.2                              | 84.6                            | +0.5                                |
|                          |                           | Silchar                 | 29.549                          | 29.633                     | -0.023               | Calm                  | 62.0                | 95.0                       | 22nd "            | 76.2                | 22nd "                  | 93.2                      | 77.6                              | 85.4                            | +1.3                                |

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the past years. The humidity of the atmosphere is expressed as percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The number in the district ending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch falls.

\* Mean for 5 days.

for the week ending Friday, the 22nd of July 1887.

| DISTRICT OBSERVATIONS.      |   |   |                    |              |                     |              |            |                      |              |            |                               |                              |                |                           | Representative station. | DISTRICT.          | METEOROLOGICAL DIVISION. |
|-----------------------------|---|---|--------------------|--------------|---------------------|--------------|------------|----------------------|--------------|------------|-------------------------------|------------------------------|----------------|---------------------------|-------------------------|--------------------|--------------------------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing stations. | RAINFALL.          |              |                     |              |            |                      |              |            |                               |                              |                |                           |                         |                    |                          |
|                             |   |   | Of week.           |              | Since 1st of month. |              |            | Since 18th May 1887. |              |            | Average number of rainy days. | Normal number of rainy days. |                |                           |                         |                    |                          |
|                             |   |   | Mean for district. | Normal mean. | Mean for district.  | Normal mean. | Variation. | Mean for district.   | Normal mean. | Variation. |                               |                              |                |                           |                         |                    |                          |
| 27                          | 5.6                                       | 0.25                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —              | Gopalpore                 | Poorce                  | ORISSA.            |                          |
| 78                          | 6.1                                       | 1.00                                    | —                  | 2.90         | —                   | 8.75         | —          | —                    | 19.12        | —          | —                             | 4.4                          | —              | False Point               | —                       |                    |                          |
| 70                          | 6.4                                       | 3.10                                    | —                  | 2.35         | —                   | 9.00         | —          | —                    | 20.54        | —          | —                             | 4.1                          | —              | Cuttack                   | Cuttack                 |                    |                          |
| 80                          | 6.9                                       | 3.09                                    | —                  | 2.23         | —                   | 8.86         | —          | —                    | 19.70        | —          | —                             | 4.0                          | —              | Balasore                  | Balasore                |                    |                          |
| 85                          | 7.9                                       | 3.61                                    | —                  | 3.09         | —                   | 10.23        | —          | —                    | 23.34        | —          | —                             | 4.6                          | —              | Saugor Island             | South-West Midnapore    | SOUTH-WEST BENGAL. |                          |
| 78                          | 4.9                                       | 6.23                                    | 3.38               | 2.86         | 13.62               | 8.40         | +5.16      | 26.02                | 19.40        | +6.12      | 4.7                           | 4.1                          | Midnapore      | Midnapore                 |                         |                    |                          |
| 81                          | 7.9                                       | 2.16                                    | 2.81               | 2.72         | 10.17               | 7.89         | +2.24      | 19.85                | 20.55        | -0.70      | 4.6                           | 4.7                          | Calcutta       | 24-Pargunnahs             |                         |                    |                          |
| 74                          | 7.7                                       | 2.80                                    | 2.87               | 2.26         | 9.55                | 6.07         | +2.84      | 24.55                | 17.96        | +6.57      | 3.7                           | 4.1                          | Burdwan        | Howrah                    |                         |                    |                          |
| 48                          | 6.3                                       | 2.04                                    | 2.80               | 2.23         | 10.70               | 8.27         | +2.43      | 22.44                | 19.97        | +2.51      | 4.3                           | 4.3                          | Bankoora       | Bankoora                  | SOUTH-WEST BENGAL.      |                    |                          |
| 79                          | 6.9                                       | 2.17                                    | 1.20               | 2.09         | 9.19                | 8.17         | +1.02      | 23.19                | 20.11        | +3.08      | 3.0                           | 4.3                          | Raneegunge     | Beerbhoom                 |                         |                    |                          |
| 84                          | 9.4                                       | 1.83                                    | 1.89               | 2.00         | 8.84                | 7.19         | +1.35      | 20.08                | 19.11        | +10.07     | 3.2                           | 4.6                          | Berhampore     | West Burdwan              |                         |                    |                          |
| 78                          | 7.9                                       | 1.84                                    | 1.01               | 1.82         | 5.50                | 6.06         | 1.39       | 18.74                | 20.20        | -1.26      | 2.8                           | 4.0                          | Krishnaghur    | Moorshedabad              |                         |                    |                          |
| 62                          | 7.9                                       | 1.50                                    | 1.02               | 2.32         | 5.02                | 7.62         | -2.60      | 18.50                | 23.48        | -6.98      | 3.8                           | 4.6                          | Jessore        | Nuddes                    | SOUTH-WEST BENGAL.      |                    |                          |
| 79                          | 7.4                                       | 2.31                                    | 3.32               | 0.55         | 18.47               | 20.07        | -1.60      | 37.07                | 55.93        | -18.85     | 5.0                           | 5.4                          | Chittagong     | Jessore                   |                         |                    |                          |
| 81                          | 6.3                                       | 2.71                                    | 2.59               | 4.35         | 9.14                | 12.39        | -3.25      | 20.14                | 36.20        | -16.06     | 5.3                           | 5.9                          | Barrisal       | Khoolna                   |                         |                    |                          |
| 84                          | 2.4                                       | 1.00                                    | 1.23               | 5.07         | 8.04                | 10.16        | -7.51      | 25.35                | 40.42        | -24.07     | 4.0                           | 5.0                          | Noakholly      | Chittagong Hill Tracts    |                         |                    |                          |
| 62                          | 2.6                                       | 0.92                                    | 1.01               | 2.03         | 3.89                | 7.33         | -3.52      | 16.24                | 21.46        | -5.22      | 2.0                           | 4.0                          | Furzedpore     | Chittagong Hill Tracts    | SOUTH-WEST BENGAL.      |                    |                          |
| 79                          | 7.3                                       | 0.33                                    | 3.14               | 3.20         | 7.83                | 9.61         | -1.78      | 19.14                | 27.13        | -7.99      | 3.0                           | 4.9                          | Dacca          | Buckergunge               |                         |                    |                          |
| 78                          | 5.6                                       | 1.15                                    | 0.88               | 3.00         | 4.95                | 8.34         | -4.39      | 18.74                | 31.10        | -12.36     | 2.3                           | 5.2                          | Commillah      | Noakholly                 |                         |                    |                          |
| 78                          | 5.7                                       | 2.42                                    | 1.12               | 2.71         | 4.38                | 8.93         | -4.55      | 31.19                | 20.91        | +1.28      | 2.8                           | 4.5                          | Mymensingh     | Noakholly                 |                         |                    |                          |
| 73                          | 6.6                                       | 1.80                                    | 2.19               | 3.64         | 0.12                | 9.40         | -3.28      | 34.28                | 25.89        | +8.39      | 2.0                           | 4.2                          | Bogra          | Furzedpore                | SOUTH-WEST BENGAL.      |                    |                          |
| 81                          | 6.0                                       | 0.02                                    | 0.80               | 2.04         | 6.61                | 7.19         | -0.58      | 22.44                | 22.10        | +0.34      | 1.5                           | 3.8                          | Serajungo      | Dacca                     |                         |                    |                          |
| 80                          | 4.0                                       | 1.60                                    | 1.23               | 2.39         | 5.53                | 8.90         | -3.37      | 22.03                | 22.04        | -0.01      | 2.0                           | 4.0                          | Rampore Beulah | Tipperah                  |                         |                    |                          |
| 79                          | 6.0                                       | 0.08                                    | 0.19               | 2.15         | 5.48                | 9.08         | -3.60      | 27.14                | 23.29        | +3.85      | 1.5                           | 4.6                          | Maldah         | Mymensingh                |                         |                    |                          |
| 76                          | 4.9                                       | 2.05                                    | 1.18               | 2.34         | 5.61                | 9.58         | -3.97      | 38.49                | 25.86        | +12.63     | 2.0                           | 3.9                          | Dinagore       | Dacca                     | SOUTH-WEST BENGAL.      |                    |                          |
| 77                          | 1.7                                       | 1.98                                    | 1.78               | 2.80         | 5.33                | 10.77        | -5.44      | 50.08                | 38.23        | +11.85     | 2.0                           | 3.4                          | Rungpore       | Dinagore                  |                         |                    |                          |
| 76                          | 5.0                                       | 1.16                                    | 1.23               | 5.31         | 9.73                | 15.69        | -5.96      | 65.11                | 54.39        | +10.72     | 2.1                           | 5.0                          | Julpigoree     | Rungpore                  |                         |                    |                          |
| 80                          | 7.9                                       | 1.75                                    | 5.05               | 5.70         | 18.43               | 22.15        | -3.72      | 58.06                | 50.27        | +7.79      | 4.0                           | 5.6                          | Darjeeling     | Julpigoree                |                         |                    |                          |
| 79                          | 3.7                                       | 0.08                                    | 0.84               | 2.62         | 5.62                | 10.30        | -4.68      | 34.62                | 23.74        | +10.88     | 1.9                           | 3.8                          | Purneah        | Cooch Behar               | SOUTH-WEST BENGAL.      |                    |                          |
| 77                          | 4.4                                       | 0.47                                    | 1.07               | 2.15         | 0.76                | 8.61         | -4.18      | 21.95                | 16.87        | +5.08      | 0.7                           | 3.1                          | Mozufferpore   | Darjeeling Hill Districts |                         |                    |                          |
| 67                          | 5.9                                       | 0.72                                    | 0.55               | 2.13         | 5.94                | 8.84         | -2.90      | 21.02                | 18.04        | +2.98      | 0.5                           | 2.8                          | Motihari       | Purneah                   |                         |                    |                          |
| 73                          | 1.0                                       | 0.08                                    | 0.08               | 2.22         | 5.97                | 8.78         | -2.81      | 16.00                | 16.11        | +0.75      | 0.7                           | 3.1                          | Chupra         | North Bhagulpore          |                         |                    |                          |
| 78                          | 4.5                                       | 0.97                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —              | Dohree                    | —                       | SOUTH-WEST BENGAL. |                          |
| 64                          | 5.4                                       | 0.27                                    | 0.48               | 2.33         | 4.42                | 7.64         | -3.22      | 13.99                | 13.53        | +0.47      | 2.0                           | 3.6                          | Buxar          | Chumpanun                 |                         |                    |                          |
| 73                          | 5.4                                       | 0.18                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —              | Arrah                     | Sarun                   |                    |                          |
| 68                          | 7.6                                       | 4.85                                    | 1.67               | 2.31         | 8.20                | 7.62         | +0.58      | 18.00                | 14.32        | +3.74      | 1.3                           | 3.4                          | Gya            | Shahabad                  |                         |                    |                          |
| 83                          | 6.4                                       | 0.04                                    | 0.15               | 2.20         | 5.04                | 7.57         | -2.83      | 17.97                | 15.24        | +2.73      | 0.5                           | 3.6                          | Bankipore      | Gya                       | SOUTH-WEST BENGAL.      |                    |                          |
| 73                          | 4.0                                       | 1.35                                    | 0.39               | 2.34         | 6.24                | 7.45         | -1.21      | 26.39                | 15.69        | +4.90      | 0.3                           | 3.9                          | Bhagulpore     | Patna                     |                         |                    |                          |
| 85                          | 5.1                                       | 1.11                                    | 0.82               | 2.40         | 8.13                | 8.53         | -0.40      | 20.25                | 19.00        | +6.65      | 2.7                           | 4.5                          | Doomka         | South Bhagulpore          |                         |                    |                          |
| 75                          | 2.00                                      | 1.42                                    | 2.85               | 6.96         | 9.12                | 2.17         | 18.08      | 18.00                | -0.28        | 2.6        | 4.7                           | Hazaribagh                   | Monghyr        |                           |                         |                    |                          |
| 78                          | 8.0                                       | 1.05                                    | 1.22               | 2.50         | 9.29                | 8.30         | +0.98      | 22.02                | 17.45        | +4.57      | 2.8                           | 4.8                          | Ranchee        | Sonthal Pargunnahs        | SOUTH-WEST BENGAL.      |                    |                          |
| 78                          | 6.9                                       | 0.30                                    | 0.80               | 3.05         | 10.13               | 9.25         | +0.88      | 25.28                | 19.84        | +5.44      | 3.0                           | 4.6                          | Chyobassa      | Hazaribagh                |                         |                    |                          |
| 83                          | 7.3                                       | 1.56                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —              | Lohardugga                |                         | Manbhoom           |                          |
| 81                          | 2.9                                       | 0.31                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —              | Singbhoom                 |                         | —                  |                          |
| 76                          | 7.0                                       | 2.35                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —              | Sibsagar                  | —                       | SOUTH-WEST BENGAL. |                          |
| 81                          | 2.9                                       | 0.31                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —              | Dhubri                    | Assam                   |                    |                          |
| 76                          | 7.0                                       | 2.35                                    | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —              | Silchar                   | —                       | ASSAM.             |                          |

are. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.  
 noting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall, the normal mean  
 are. The means of the district are the numerical averages of the rainfall return received in the district, i.e., from the total rainfall at the sub-division





Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 22nd of July 1887—*concluded*.

| Met-ecological Division.        | District.   | Station.             | RAINFALL           |                    |                     |                       |                      |                    |                      | TOTAL                 |                   | Total rain-fall since 1st of month. | Average total rain fall from 1st of month. | Total rain-fall since 1st of May 1887. | Average rainfall from 1st of May to date. |
|---------------------------------|-------------|----------------------|--------------------|--------------------|---------------------|-----------------------|----------------------|--------------------|----------------------|-----------------------|-------------------|-------------------------------------|--|--|---|
|                                 |             |                      | Sunday, 16th July. | Monday, 17th July. | Tuesday, 18th July. | Wednesday, 19th July. | Thursday, 20th July. | Friday, 21st July. | Saturday, 22nd July. | Number of rainy days. | of rainfall week. |                                     |  |  |   |
| NORTH BEHAR— <i>concluded</i> . | Muzaffarpur | Gopalgunge ...       | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | Nil                   | Nil               | 7.58                                | 0.73                                       | 16.70                                  | 17.38                                     |
|                                 |             | Bowman ...           | .....              | .....              | .....               | .....                 | 0.15                 | .....              | .....                | 1                     | 0.15              | 4.27                                | 0.00                                       | 15.14                                  | 15.85                                     |
| SOUTH BEHAR                     | Shahabad    | Chaurah ...          | .....              | .....              | .....               | .....                 | 0.08                 | .....              | .....                | 1                     | 0.08              | 0.05                                | 0.02                                       | 15.72                                  | 15.13                                     |
|                                 |             | Debrue ...           | .....              | .....              | .....               | 0.07                  | .....                | .....              | .....                | 1                     | 0.07              | 2.20                                | 7.47                                       | 11.05                                  | 12.46                                     |
|                                 |             | Bhuboah ...          | .....              | .....              | .....               | .....                 | 0.43                 | 0.48               | 0.07                 | 3                     | 0.97              | 6.41                                | ?  | 14.35                                  | ?   |
|                                 |             | Ramwaran ...         | .....              | .....              | .....               | .....                 | 0.16                 | 0.40               | 0.20                 | 3                     | 0.76              | 6.67                                | 6.67                                       | 15.82                                  | 14.48                                     |
|                                 |             | Arrah ...            | 0.35               | .....              | .....               | .....                 | 0.03                 | 0.40               | .....                | 3                     | 0.56              | 3.90                                | 7.04                                       | 11.29                                  | 12.70                                     |
|                                 |             | Mohania ...          | .....              | .....              | .....               | .....                 | .....                | 0.10               | .....                | 3                     | 0.50              | 4.90                                | 7.30                                       | 20.18                                  | 14.05                                     |
|                                 |             | .....                | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | Nil                   | Nil               | 4.50                                | ?  | ?                                      | ?   |
|                                 |             | Aurangabad ...       | .....              | .....              | .....               | .....                 | 1.13                 | .....              | .....                | 1                     | 1.13              | 0.82                                | 7.92                                       | 17.23                                  | 14.31                                     |
|                                 |             | Gya ...              | .....              | .....              | .....               | .....                 | 1.28                 | 5.42               | 0.15                 | 3                     | 4.83              | 9.12                                | 7.26                                       | 20.02                                  | 14.62                                     |
|                                 |             | Nowadah ...          | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | Nil                   | Nil               | 8.54                                | 7.19                                       | 16.03                                  | 14.10                                     |
|                                 |             | Jehanabad ...        | .....              | .....              | .....               | .....                 | 0.50                 | .....              | .....                | 1                     | 0.50              | 8.73                                | 8.00                                       | 18.98                                  | 14.15                                     |
|                                 |             | Arrah ...            | .....              | .....              | .....               | .....                 | 0.46                 | 1.08               | .....                | 3                     | 2.44              | 7.67                                | ?  | 18.72                                  | ?   |
|                                 |             | Bandhagar ...        | .....              | .....              | .....               | .....                 | 0.00                 | 0.80               | .....                | 2                     | 1.40              | 4.50                                | ?  | 15.52                                  | ?   |
|                                 |             | Sherghati ...        | .....              | .....              | .....               | .....                 | 1.50                 | 0.09               | .....                | 2                     | 1.59              | 6.02                                | ?  | 15.35                                  | ?   |
|                                 |             | Rajauli ...          | .....              | .....              | .....               | .....                 | 0.23                 | .....              | .....                | 1                     | 0.20              | 4.11                                | ?  | 8.96                                   | ?   |
|                                 |             | Pakri Sarawan ...    | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | Nil                   | Nil               | 2.64                                | ?  | 6.77                                   | ?   |
|                                 |             | Patna ...            | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | Nil                   | Nil               | 8.81                                | 8.92                                       | 19.87                                  | 16.32                                     |
|                                 |             | Dinapore ...         | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | Nil                   | Nil               | 5.01                                | 7.09                                       | 21.34                                  | 14.97                                     |
|                                 |             | Behar ...            | .....              | .....              | .....               | .....                 | 0.30                 | .....              | .....                | 1                     | 0.30              | 6.81                                | 7.75                                       | 15.44                                  | 15.58                                     |
|                                 |             | Barh ...             | .....              | .....              | .....               | .....                 | 0.30                 | .....              | .....                | 1                     | 0.30              | 5.50                                | 7.81                                       | 16.50                                  | 14.06                                     |
|                                 |             | Bickram ...          | .....              | .....              | .....               | .....                 | 0.20                 | .....              | .....                | 1                     | 0.20              | 4.00                                | ?  | 18.50                                  | ?   |
|                                 |             | Hilsa ...            | .....              | .....              | .....               | .....                 | 1.20                 | .....              | 0.21                 | 2                     | 1.41              | 7.87                                | ?  | 18.34                                  | ?   |
|                                 |             | Bagoosai ...         | .....              | .....              | .....               | .....                 | 0.38                 | .....              | .....                | 1                     | 0.38              | 7.4                                 | 7.35                                       | 21.53                                  | 14.86                                     |
|                                 |             | Monahyr ...          | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | Nil                   | Nil               | 8.18                                | 7.70                                       | 24.16                                  | 15.57                                     |
|                                 |             | Jamui ...            | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | Nil                   | Nil               | 0.43                                | 7.72                                       | 16.57                                  | 15.50                                     |
|                                 |             | Gogri ...            | .....              | .....              | .....               | .....                 | 0.15                 | .....              | .....                | 1                     | 0.15              | 4.33                                | ?  | 24.48                                  | ?   |
|                                 |             | Shikhpura ...        | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | Nil                   | Nil               | 4.50                                | ?  | 12.80                                  | ?   |
|                                 |             | Bungulpore ...       | .....              | .....              | 1.09                | .....                 | .....                | 0.05               | .....                | 2                     | 1.14              | 5.06                                | 7.10                                       | 22.34                                  | 16.01                                     |
|                                 |             | Banka ...            | .....              | .....              | .....               | .....                 | 0.46                 | .....              | .....                | 1                     | 0.46              | 5.37                                | 7.37                                       | 19.32                                  | 16.70                                     |
|                                 |             | Kolpung ...          | .....              | .....              | .....               | .....                 | 0.48                 | .....              | .....                | 1                     | 0.48              | 8.64                                | ?  | 27.27                                  | ?   |
|                                 |             | Raymonal ...         | .....              | .....              | .....               | 0.03                  | .....                | .....              | .....                | 1                     | 0.03              | 6.43                                | 8.58                                       | 33.01                                  | 22.06                                     |
|                                 |             | Godda ...            | .....              | .....              | .....               | .....                 | 0.40                 | .....              | .....                | 1                     | 0.40              | 10.37                               | 7.17                                       | 30.91                                  | 15.59                                     |
|                                 |             | Pasour ...           | .....              | .....              | .....               | 0.55                  | 0.13                 | 0.53               | 1.41                 | 4                     | 2.62              | 11.34                               | 8.50                                       | 31.34                                  | 21.88                                     |
|                                 |             | Nya Doomba ...       | 0.06               | 0.10               | .....               | 0.30                  | 0.40                 | 0.12               | 0.04                 | 6                     | 1.11              | 5.06                                | 8.51                                       | 21.86                                  | 19.31                                     |
|                                 |             | Deoghar ...          | .....              | .....              | .....               | .....                 | 0.06                 | 0.18               | .....                | 2                     | 0.24              | 4.40                                | 8.81                                       | 22.71                                  | 18.90                                     |
|                                 |             | Jamara ...           | .....              | .....              | .....               | .....                 | 0.31                 | 0.19               | .....                | 3                     | 0.50              | 7.89                                | 8.50                                       | 17.63                                  | 19.97                                     |
|                                 |             | Simra ...            | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | .....                 | .....             | ?                                   | ?  | ?                                      | ?   |
|                                 |             | Nawihat ...          | 0.80               | .....              | .....               | 0.43                  | .....                | 0.33               | .....                | 3                     | 1.38              | 7.24                                | ?  | 14.32                                  | ?   |
| MUTIA NAGPUR.                   | Hazaribagh  | Pachamba (Girid) ... | .....              | .....              | .....               | 0.25                  | .....                | .....              | 0.63                 | 2                     | 0.63              | 8.31                                | 8.11                                       | 17.70                                  | 17.84                                     |
|                                 |             | Hazaribagh ...       | 0.02               | .....              | .....               | 0.04                  | 0.78                 | 0.03               | 0.06                 | 5                     | 2.63              | 9.48                                | 8.77                                       | 19.08                                  | 17.43                                     |
|                                 |             | Simgarua ...         | .....              | .....              | .....               | .....                 | 0.26                 | 0.00               | .....                | 3                     | 1.18              | 7.21                                | 8.21                                       | 18.56                                  | 18.21                                     |
|                                 |             | Mahua Hill ...       | .....              | .....              | .....               | .....                 | .....                | 0.77               | .....                | 1                     | 0.77              | .....                               | 8.24                                       | 10.71                                  | 10.71                                     |
|                                 |             | Jhoomrah Hill ...    | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | .....                 | .....             | 12.31                               | ?  | 24.56                                  | ?   |
|                                 |             | Bark ...             | .....              | .....              | .....               | .....                 | 1.45                 | 0.15               | .....                | 2                     | 1.60              | 6.09                                | ?  | 12.85                                  | ?   |
|                                 |             | Chitra ...           | .....              | .....              | .....               | .....                 | 1.60                 | 0.72               | .....                | 2                     | 2.41              | 7.81                                | ?  | 19.34                                  | ?   |
|                                 |             | Haragdeha ...        | .....              | .....              | .....               | .....                 | 1.74                 | .....              | .....                | 1                     | 1.74              | 21.66                               | ?  | 34.78                                  | ?   |
|                                 |             | Uamphur ...          | .....              | .....              | .....               | .....                 | 0.40                 | .....              | 1.10                 | 2                     | 1.50              | 16.36                               | ?  | 26.04                                  | ?   |
|                                 |             | Lohardugga ...       | .....              | .....              | .....               | .....                 | 0.90                 | .....              | 0.50                 | 2                     | 1.40              | 8.53                                | ?  | 21.32                                  | ?   |
|                                 |             | Kazari ...           | .....              | .....              | .....               | .....                 | 0.60                 | .....              | 0.32                 | 2                     | 1.12              | 8.22                                | 8.97                                       | 31.06                                  | 18.81                                     |
|                                 |             | Patanow ...          | .....              | .....              | .....               | .....                 | 0.03                 | 1.37               | .....                | .....                 | .....             | 12.33                               | 8.09                                       | 20.82                                  | 15.05                                     |
|                                 |             | Salk ...             | .....              | .....              | .....               | .....                 | 2.30                 | 0.05               | 0.10                 | 3                     | 2.45              | 10.14                               | ?  | 21.24                                  | ?   |
|                                 |             | Balsmat ...          | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | .....                 | .....             | ?                                   | ?  | ?                                      | ?   |
|                                 |             | Hosetabad ...        | .....              | .....              | .....               | .....                 | .....                | 1.03               | .....                | .....                 | .....             | ?                                   | ?  | ?                                      | ?   |
|                                 |             | Garwah ...           | .....              | .....              | .....               | .....                 | 2.30                 | 1.50               | .....                | .....                 | .....             | ?                                   | ?  | ?                                      | ?   |
|                                 |             | Chyemasa ...         | .....              | .....              | .....               | .....                 | 0.10                 | 0.20               | 0.50                 | 3                     | 0.80              | 10.18                               | 0.25                                       | 25.20                                  | 19.84                                     |
|                                 |             | Chakradhar-pore ...  | .....              | .....              | .....               | .....                 | 0.09                 | 0.34               | 0.78                 | 3                     | 1.33              | 8.73                                | ?  | 20.15                                  | ?   |
|                                 |             | Chatetia ...         | .....              | .....              | .....               | .....                 | .....                | 0.05               | .....                | .....                 | .....             | ?                                   | ?  | ?                                      | ?   |
|                                 |             | Baharagura ...       | .....              | .....              | .....               | .....                 | 0.08                 | 0.45               | 0.50                 | .....                 | .....             | ?                                   | ?  | ?                                      | ?   |
|                                 |             | Puruli ...           | .....              | .....              | .....               | .....                 | 1.08                 | 0.23               | 0.02                 | 3                     | 1.32              | 6.47                                | 8.28                                       | 17.16                                  | 19.00                                     |
|                                 |             | Goumipore ...        | .....              | .....              | .....               | .....                 | 0.51                 | 0.11               | 0.16                 | 4                     | 1.02              | 4.50                                | 8.08                                       | 12.77                                  | 16.83                                     |
|                                 |             | Baghwanth-pore ...   | 0.06               | .....              | .....               | .....                 | 0.39                 | .....              | 0.93                 | 4                     | 1.67              | 3.77                                | ?  | 15.20                                  | ?   |
|                                 |             | Barraboom ...        | .....              | .....              | .....               | .....                 | 0.12                 | 1.40               | 0.03                 | 5                     | 2.22              | 6.97                                | ?  | 14.82                                  | ?   |
|                                 |             | Jhalda ...           | .....              | .....              | .....               | .....                 | .....                | .....              | .....                | .....                 | .....             | ?                                   | ?  | ?                                      | ?   |
|                                 |             | Chui ...             | .....              | .....              | .....               | .....                 | 0.04                 | 0.34               | .....                | .....                 | .....             | ?                                   | ?  | ?                                      | ?   |

Explanation.— indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 26th July 1887.

**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE 22ND OF JULY 1887.**

At the close of the previous week a small cyclonic storm, which had passed through South Bengal between Calcutta and Saugor Island, had moved away through the Central Provinces and Central India, and on the morning of the 15th, that is the last day of the previous week, it was near Hoshungabad. On the morning of the 16th the small storm had reached Hyderabad in Sind, and was disappearing across the Indus, while on the 17th it had disappeared over Beluchistan. The storm which appeared in South Bengal on the 12th had therefore a life history of from five to six days, and it travelled over a distance of from 1,500 to 1,600 miles quite unbroken; the direction of its movement was a little to the north of west. The indraught towards this storm had ceased to affect Bengal at the close of the previous week, and the most noticeable feature in the weather on the first day of the present week was the setting in of a westerly wind current over the greater part of the province, which drove back the easterly and south-easterly wind current which had previously been blowing. A slight area of comparatively low pressure was also developed on this day over the eastern part of South Behar. Conditions on this day were not favourable for heavy rain, and only light and local falls were reported over the greater part of the province. On Sunday, the 17th, the weather conditions over Bengal became extremely abnormal in the fact that at practically all stations in the province wind was north-westerly. This was apparently brought about by the unusual strength of the westerly Bombay current, which entirely drove back the very feeble monsoon current which was blowing from the Bay of Bengal, and thus practically at all stations from Buxar down to Negapatam winds became westerly and north-westerly. Under these circumstances, a short break in the rains became established, and on this day practically the whole province became rainless. Such abnormal conditions as these however, could not continue long, and on the Monday the Bay of Bengal current commenced to strengthen slightly, and in South Bengal there were distinct indications of interaction between the two opposing wind currents, which gave rise to somewhat numerous and heavy local showers, but it was evident that the southerly winds would gradually drive back the abnormal north-westerly winds. On Monday, the 19th, the advancing southerly current had made further progress, and at all, except a few stations in the west of Behar and Chutia Nagpur, winds had become southerly and south-easterly. The amount of interaction became larger, and in North Bengal heavy rain fell, but elsewhere rainfall was light and local. At the same time on this day a rapid fall of pressure took place in the north-west angle of the Bay, the fall at False Point being 0.127". A distinct, but feeble barometric depression was thus formed, the centre of which was to the south-east of False Point, and which was accompanied by a feeble cyclonic circulation of winds. This small depression has been the principal feature in the meteorology of the remainder of the week, and it has continued to exist without intensifying to any material extent, and without any movement beyond a slight shifting of the centre from day to day. On Wednesday, the 20th, the centre of the depression was apparently to the south of Saugor Island; on the 21st, the centre of the wind circulation was between Saugor Island and Balasore; and on Friday, the 22nd, the centre of the wind circulation was between Balasore and False Point. In the rear of the depression a strong monsoon current has been blowing, but the current has been deflected by the existence of this depression, and the monsoon winds have thus to a great extent been prevented from flowing over Bengal, and thus, during the existence of this depression, rainfall has been to a great extent absent from the greater part of Bengal, except the area immediately affected by the small storm.

**Pressure**—Which was at the close of the previous week rather largely above the normal, the average excess being rather more than a tenth of an inch, has fallen almost steadily during the first five days of the present week, though on the last two days pressure again commenced to rise. At the close of the week pressure was almost normal over a considerable part of the province, while it was below the normal at the stations affected by the depression, and above it at many of the stations in the north and west of the province. The mean pressure for the week has therefore been above the normal in all districts, the excess varying for 0.075" at Hazaribagh to one of 0.008" at False Point.

**Temperature**—Owing to the general deficiency of rainfall, has been somewhat above the normal in all districts; the general excess is, however, small, and is considerably less than a degree.

**Rainfall**—Has been largely below the normal in all districts except Orissa and South-West Bengal, which have been to a certain extent under the influence of the depression above described. In Orissa the fall is slightly in excess of the average amount, while in South-West Bengal, the rainfall is only slightly below the normal for the week. Thus in South-West Bengal an average fall of 2.10 inches has been received, the normal fall being 2.40 inches; in Orissa the average fall has been 2.90 inches and the normal is 2.74 inches, so that both these districts have received good falls of rain. In East Bengal the average fall has been 2.02 inches, against a normal of 3.45 inches, and this district has thus received little more than half the usual fall. In North Bengal the actual fall has averaged 1.32 inches against 3.08 inches, and in Chutia Nagpur 1.30 inches against the normal 2.85 inches, so that both these districts have received little more than a third to one-half of the

usual amount, while in Behar only about six to seven tenths have been received against a normal fall of about two and a half inches, so that the actual fall is only about a quarter of the normal.

In Assam the falls during the week have also been small:—Silchar has received 2·35 inches, Sibsagar 1·56 inches, and Dhubri 0·31 inch only.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the Province for the week ending Friday, the 22nd of July 1887:—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  | RAINFALL. |                 |            |                         |                                |            |                     |                 |                      |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week.  |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 15th May 1887. |                 |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average.  | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal Average. | Average.             | Normal average. |
|                              |                               |                              |                         |                        |                       |  |           |                 |            |                         |                                |            |                     |                 |                      |                 |
|                              |                               |                              |                         |                        |                       |  |           |                 |            |                         |                                |            |                     |                 |                      |                 |
| Orissa                       | 94·4                          | 74·8                         | 89·0                    | 77·9                   | 83·5                  | +0·1   | 2·90      | 2·74            | +0·16      | 3·5                     | 4·1                            | —0·6       | 7·06                | 8·88            | 19·48                | 19·88           |
| South-West Bengal            | 97·3                          | 74·9                         | 89·2                    | 78·8                   | 84·5                  | +0·4   | 2·10      | 2·40            | —0·30      | 3·7                     | 4·3                            | —0·6       | 8·83                | 7·86            | 21·88                | 20·44           |
| East Bengal                  | 93·3                          | 74·0                         | 88·3                    | 78·3                   | 83·3                  | +1·1   | 2·02      | 3·45            | —1·43      | 3·6                     | 5·1                            | —1·5       | 4·07                | 10·90           | 23·87                | 33·93           |
| North Bengal                 | 95·6                          | 69·7                         | 91·3                    | 78·4                   | 84·9                  | +0·7   | 1·33      | 3·08            | —1·76      | 2·0                     | 4·3                            | —2·3       | 6·57                | 10·70           | 41·71                | 33·02           |
| North Behar                  | 95·8                          | 77·5                         | 82·3                    | 80·0                   | 86·1                  | +1·0   | 0·68      | 2·43            | —1·75      | 1·0                     | 3·2                            | —2·2       | 5·70                | 9·16            | 25·41                | 19·11           |
| South Behar                  | 95·4                          | 76·0                         | 81·7                    | 79·6                   | 85·7                  | +0·9   | 0·67      | 2·34            | —1·67      | 1·5                     | 3·9                            | —2·3       | 6·55                | 7·87            | 19·26                | 15·96           |
| Chota Nagpur                 | 88·5                          | 68·4                         | 85·0                    | 72·7                   | 78·8                  | 0  | 1·30      | 2·85            | —1·55      | 2·6                     | 4·7                            | —2·1       | 7·85                | 8·88            | 19·66                | 18·44           |
| Assam                        | 95·6                          | 76·2                         | 91·7                    | 78·5                   | 85·1                  | +0·9   |           |                 |            |                         |                                |            |                     |                 |                      |                 |

\* Chyebassam not included.

METEOROLOGICAL OFFICE, BENGAL: A. PEDLER,  
The 26th July 1887. Offg. Meteorological Reporter to the Govt. of Bengal

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 17th to 23rd July 1887.

| TEMPERATURE. |      |       |          |          |      | HYGROMETRY.    |                 |            |           |        |
|--------------|------|-------|----------|----------|------|----------------|-----------------|------------|-----------|--------|
|              |      | Mean. | Maximum. | Minimum. |      | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. |        |
|              |      |       |          |          |      |                |                 |            |           |        |
| 1887.        |      |       |          |          |      |                | Inches.         |            | %         | Inches |
| July         | 17th | 85·9  | 93·0     | 13·0     | 80·0 | 82·4           | 1·061           | 81·1       | 85        | .....  |
|              | 18th | 79·9  | 83·4     | 6·6      | 76·8 | 78·3           | ·972            | 78·4       | 86        | 0·87   |
|              | 19th | 83·8  | 92·0     | 14·2     | 77·8 | 79·8           | ·971            | 78·4       | 85        | .....  |
|              | 20th | 81·9  | 89·0     | 10·4     | 78·6 | 79·8           | ·990            | 78·9       | 91        | 0·88   |
|              | 21st | 82·2  | 90·5     | 13·7     | 76·8 | 79·5           | ·972            | 78·4       | 88        | 1·08   |
|              | 22nd | 82·4  | 90·5     | 11·2     | 79·3 | 79·9           | ·989            | 78·9       | 89        | 0·84   |
|              | 23rd | 83·1  | 90·8     | 12·0     | 76·8 | 80·3           | ·998            | 79·3       | 88        | 0·86   |

The mean temperature of the seven days ... 82·7  
The extreme variation of temperature ... 16·2  
The maximum temperature ... 98·0  
The mean relative humidity ... 89  
The total fall of rain from 17th to 23rd July 1887 ... 4·08

The mean temperature and humidity are obtained by applying to the mean of the 10a, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA; JOHN ELIOT,  
The 25th July 1887. Offg. Meteorological Reporter to the Govt. of India.



## MEMORANDUM.

THE returns from the principal Municipalities in Bengal presented, during the week ending 9th July 1887, the following results:—

1. That the birth-rate in these Municipalities amounted to 16·9 per 1,000 of population against 20 per 1,000 in the preceding week ending 2nd July, showing a considerable diminution in the registration of the events, and the death-rate to 24·5 per 1,000 against, very nearly the same proportion, viz. 24·8 per 1,000.

2. That the following Municipalities returned the highest proportions of births and deaths:—

| <i>Births.</i> |     |     |                  | <i>Deaths.</i> |     |     |                  |
|----------------|-----|-----|------------------|----------------|-----|-----|------------------|
|                |     |     | Ratio per mille. |                |     |     | Ratio per mille. |
| Arrah          | ..  | ... | 59·8             | Puri           | ... | ... | 71·3             |
| Comillah       | ... | ... | 53·9             | Arrah          | ... | ... | 63·4             |
| Durbhanga      | ... | ... | 29·9             | Gya            | ... | ... | 50·7             |
| Bhagulpore     | ... | ... | 29·0             | Comillah       | ... | ... | 34·6             |
|                |     |     |                  | Purneah        | ... | ... | 31·1             |
|                |     |     |                  | Midnapore      | ... | ... | 31·0             |

3. That in comparison with the results of the preceding week, there was a sensible reduction in the death-rate from fever, while the fatal results from the other diseases exhibited only fractional differences:—

|                  |     |     |     | Ratio per mille during the weeks ending— |                |
|------------------|-----|-----|-----|--|----------------|
|                  |     |     |     | 9th July 1887.                           | 2nd July 1887. |
| Cholera          | ... | ... | ... | 5·7                                      | 5·5            |
| Small-pox        | ... | ... | ... | ·03                                      | ·2             |
| Fever            | ... | ... | ... | 7·5                                      | 8·6            |
| Bowel-complaints | ... | ... | ... | 3·3                                      | 2·9            |
| Injury           | ... | ... | ... | ·6                                       | ·5             |
| Other cause      | ... | ... | ... | 7·3                                      | 7·1            |

4. That the undermentioned Municipalities suffered pre-eminently from cholera fever and the maladies classed under the head of "Other causes," the rest of the diseases manifesting no noticeable local exacerbation:—

| <i>Cholera.</i>     |     |                  | <i>Fever.</i> |                  | <i>Other causes.</i> |                  |
|---------------------|-----|------------------|---------------|------------------|----------------------|------------------|
|                     |     | Ratio per mille. |               | Ratio per mille. |                      | Ratio per mille. |
| Puri                | ... | 56·6             | Beanleah      | 23·6             | Gya                  | 26·0             |
| Arrah               | ... | 21·5             | Comillah      | 23·1             | Bhagulpore           | 15·4             |
| Midnapore           | ... | 18·6             | Arrah         | 22·7             |                      |                  |
| Gya                 | ... | 12·3             |               |                  |                      |                  |
| Suburbs of Calcutta | ... | 6·2              |               |                  |                      |                  |
| Chupra              | ... | 5·8              |               |                  |                      |                  |
| Durbhanga           | ... | 5·5              |               |                  |                      |                  |
| Patna               | ... | 5·2              |               |                  |                      |                  |
| Mozufferpore        | ... | 4·9              |               |                  |                      |                  |

That under the heads of *Sex*, *Class* and *Age*, the mortality stood as follows:—

| <i>According to Sex.</i>                        |     |                  | <i>According to Class.</i> |                  | <i>According to Age.</i> |                  |
|---|-----|------------------|----------------------------|------------------|--------------------------|------------------|
|   |     | Ratio per mille. |                            | Ratio per mille. |                          | Ratio per mille. |
| Males   | ... | 25·7             | Christians                 | 4·3              | Under 1 year             | 202·4            |
| Females   | ... | 23·1             | Hindus                     | 26·5             | 1 and under 5 years      | 46·0             |
| Ratio of male deaths to every 100 female deaths | 126 |                  | Mahomedans                 | 20·6             | 5 " " 10 "               | 17·1             |
|   |     |                  | Other classes              | 36·4             | 10 " " 15 "              | 14·0             |
|   |     |                  |                            |                  | 15 " " 20 "              | 21·4             |
|   |     |                  |                            |                  | 20 " " 30 "              | 11·3             |
|   |     |                  |                            |                  | 30 " " 40 "              | 13·4             |
|   |     |                  |                            |                  | 40 " " 50 "              | 20·8             |
|   |     |                  |                            |                  | 50 " " 60 "              | 24·0             |
|   |     |                  |                            |                  | 60 years and upwards     | 43·3             |

R. LIDDERDALE, M.D., *Deputy Surgeon-General,*  
*Sanitary Commissioner for Bengal.*

The 25th July 1887.

*Statement showing the Results of the Registration of Births and Deaths in the Principal Municipalities in Bengal during the week ending 9th July 1887.*

[illegible]

| 13                       |  |  | 14            |  |  | 15  |  |  | MORTALITY ACCORDING TO—                   |  |  |  |  |  |  |  |  |  |
|--------------------------|--|--|---------------|--|--|---|--|--|---|--|--|--|--|--|--|--|--|--|
| DISTRICTS.               |  |  | CLASS.        |  |  | AGE.                                      |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM.  |  |  |  |  |  |  |  |  |  |
| NAMES OF MUNICIPALITIES. |  |  | DEATHS AMONG— |  |  | DEATHS.                                   |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM.  |  |  |  |  |  |  |  |  |  |
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OFFICE OF SANITARY COMMISSIONER FOR BENGAL,  
The 25th July 1887.

R. LADDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 27, 1887.

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

ORISSA COAST CANAL.

LENGTH OF CANAL OPEN, 91 MILES.

Statement showing Quantities of Goods carried during the month of June 1887.

| Number of boats or rafts.                           | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |                    |                       |  | PRIVATE.              |          | REMARKS.  |
|---|-----------------------------------|-------------------------------|--------------------|-----------------------|--|-----------------------|----------|---|
|   |                                   | Quantity—Tons.                |                    |                       | Value.   | Quantity.             | Value.   |   |
|   |                                   | Up.                           | Down.              | Total.                | Rupces.  | Tons.                 | Rupces.  |   |
| 164   | 1. Grain ...                      | 1,753                         | 23                 | 1,776                 | 46,145   | 1,776                 | 46,145   | Rangees IV A, 17 miles, and V, 38 miles, closed for private traffic during this month. The traffic shown was in Range III, only 36 miles in length. |
|   | 2. Cotton ...                     | .....                         | .....              | .....                 | .....  | .....                 | .....    |   |
|   | 3. Oilseeds ...                   | .....                         | .....              | .....                 | .....  | .....                 | .....    |   |
| 24  | 4. Salt ...                       | .....                         | 237                | 237                   | 15,900   | 237                   | 15,900   |   |
| 6   | 5. Piece-goods ...                | .....                         | 22                 | 22                    | 10,500   | 22                    | 10,500   |   |
| 1   | 6. Metal ...                      | .....                         | 9                  | 9                     | 400  | .....                 | .....    |   |
| 1   | 7. Building materials ...         | .....                         | 11                 | 11                    | 100  | 11                    | 100      |   |
| 387   | 8. Miscellaneous ...              | 42                            | 273                | 315                   | 35,401   | 315                   | 35,401   |   |
| 12  | 9. Fuel ...                       | 5                             | 115                | 120                   | 1,643  | 120                   | 1,643    |   |
| .....   | 10. Timber ...                    | .....                         | .....              | .....                 | .....  | .....                 | .....    |   |
| 2 rafts   | 11. Bamboos ...                   | 125 Nos.                      | .....              | 125 Nos.              | 10   | 125 Nos.              | 10       |   |
| 595 &<br>2 rafts                                    | 12. Total ...                     | 1,800 &<br>125 Nos.           | 690                | 2,490 &<br>125 Nos.   | 1,10,099   | 2,481 &<br>125 Nos.   | 1,09,699 |   |
| 629 &<br>9 rafts                                    | 13. Total of same month last year | 1,502 &<br>52½ c. ft.         | 452 &<br>31 c. ft. | 2,254 &<br>556 c. ft. | 95,236   | 2,246 &<br>556 c. ft. | 95,136   |   |
| 14. Total number of boats plying cargo ... No.      |                                   | Up.                           | Down.              | Total.                | Total tollage of month—<br>24+25+26 ...              |                       |          | Rs. A. P.   |
|   |                                   | 263                           | 332                | 595                   |  |                       |          | 2,468 0 0   |
| 15. Total number of boats plying passenger ... No.  |                                   | 22                            | 23                 | 45                    | Total tollage of same month last year ...            |                       |          | 2,266 15 9  |
| 16. Total registered tonnage, cargo ...             |                                   | 3,671                         | 2,575              | 6,246                 | Memorandum of Tollage.                               |                       |          |   |
| 17. Total registered tonnage, passenger ...         |                                   | 132                           | 108                | 240                   |  |                       |          |   |
| 18. Ton mileage ...                                 |                                   | 86,817                        | 51,613             | 138,430               |  |                       |          |   |
| 19. Estimated value of cargo Rs.                    |                                   | 43,642                        | 66,447             | 110,089               | 1. Balance not recovered on the 1st of the month ... |                       |          | Rs. A. P.   |
| 20. Number of passengers ...                        |                                   | 81                            | 215                | 296                   |  |                       |          | 294 8 0   |
| 21. Rafts, bamboos... c. ft.                        |                                   | 125                           | .....              | 125                   | 2. Tollage per month ...                             |                       |          | 2,468 0 0   |
| 22. Do., bullahs ...                                |                                   | .....                         | .....              | .....                 | 3. Total ...   |                       |          | 2,762 8 0   |
| 23. Estimated value of rafts Rs.                    |                                   | 10                            | .....              | 10                    | 4. Amount paid into treasury during the month ...    |                       |          | 2,343 12 0  |
| 24. Tollage on boats                                |                                   | 1,438-7-0                     | 822-14-0           | 2,261-5-0             | 5. Balance due at the end of the month ...           |                       |          | 418 12 0  |
| 25. Compounded tollage on boats Rs.                 |                                   | 99-8-0                        | 106-12-0           | 206-4-0               |  |                       |          |   |
| 26. Tollage on rafts                                |                                   | 0-7-0                         | .....              | 0-7-0                 |  |                       |          |   |
| 27. Total tollage on boats per ton-mile ... Rs.     |                                   | .....                         | .....              | 0-0-3                 |  |                       |          |   |
| 28. Total tollage on rafts per 100 cubic feet . Rs. |                                   | .....                         | .....              | 0-5-7                 |  |                       |          |   |

CALCUTTA,

The 26th July 1887.

C. W. I. HARRISON, Lieut.-Col., R.E.,

Offg. Joint-Secretary to the Government of Bengal.

**PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.**  
**SOUTH-WESTERN CIRCLE.**

NUDDRA RIVERS.

*Statement showing Quantities of Goods carried during the month of June 1887.*

| Number of boats or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |                            |                            |  | PRIVATE.                   |             | REMARKS. |
|---------------------------|---|-------------------------------|----------------------------|----------------------------|--|----------------------------|-------------|----------|
|                           |   | Quantity—Tons.                |                            |                            | Value.   | Quantity.                  | Value.      |          |
|                           |   | Up.                           | Down.                      | Total.                     | Rupees.  | Tons.                      | Rupees.     |          |
| 627                       | 1. Grain ...                                  | 995                           | 6,555                      | 7,550                      | 3,75,195   | 7,550                      | 3,75,195    |          |
| .....                     | 2. Cotton ...                                 | .....                         | .....                      | .....                      | .....  | .....                      | .....       |          |
| 139                       | 3. Oilseeds ...                               | 33                            | 2,197                      | 2,230                      | 2,16,142   | 2,230                      | 2,16,142    |          |
| 246                       | 4. Salt ...                                   | 2,571                         | .....                      | 2,571                      | 2,16,033   | 2,571                      | 2,16,033    |          |
| .....                     | 5. Piece-goods ...                            | .....                         | .....                      | .....                      | .....  | .....                      | .....       |          |
| 20                        | 6. Metal ...                                  | 15                            | 34                         | 49                         | 45,165   | 49                         | 45,165      |          |
| 58                        | 7. Building materials ...                     | 188                           | 407                        | 595                        | 9,415  | 595                        | 9,415       |          |
| 719                       | 8. Miscellaneous ...                          | 1,308                         | 3,315                      | 4,623                      | 6,04,641   | 4,623                      | 6,04,641    |          |
| 58                        | 9. Fuel ...                                   | 370                           | 503                        | 873                        | 4,227  | 873                        | 4,227       |          |
| 40 rafts                  | 10. Timber ...                                | 453 c. ft.                    | 17,033 c. ft.              | 17,486 c. ft.              | 13,500   | 17,486 c. ft.              | 13,500      |          |
| 8 "                       | 11. Bamboos ...                               | .....                         | 5,500 "                    | 5,500 "                    | 550  | 5,500                      | 550         |          |
| 1,867 & 48 rafts.         | 12. Total ...                                 | { 5,480 & 453 c. ft. }        | { 13,011 & 22,533 c. ft. } | { 18,491 & 22,986 c. ft. } | 14,84,868  | { 18,491 & 22,986 c. ft. } | 14,84,868   |          |
| 1,589 & 90 rafts          | 13. Total of same month last year             | { 7,679 & 1,136 No }          | { 15,759 & 675 No. }       | { 23,438 & 1,811 No. }     | 11,92,631  | { 23,438 & 1,811 No. }     | 11,92,631   |          |
|                           |   | Up.                           | Down.                      | Total.                     |  |                            | Rs. A. P.   |          |
| 14.                       | Total number of boats plying cargo No.        | 717                           | 1,150                      | 1,867                      | Total tollage of month—<br>24 + 25 + 26 ...          |                            | 10,384 9 0  |          |
| 14a.                      | Total number of empty boats and steamers ...  | 577                           | 195                        | 772                        |  |                            |             |          |
| 15.                       | Total number of boats plying passengers No.   | 737                           | 1,254                      | 1,991                      | Total tollage of same month last year ...            |                            | 9,127 12 3  |          |
| 16.                       | Total registered tonnage, cargo ...           | 2,09,086                      | 3,46,057                   | 5,55,143                   |  |                            |             |          |
| 17.                       | Total registered tonnage, passenger ...       | 286                           | 202                        | 488                        | Memorandum of Tollage.                               |                            |             |          |
| 18.                       | Ton-mileage ...                               | .....                         | .....                      | .....                      |  |                            | Rs. A. P.   |          |
| 19.                       | Estimated value of cargo ...                  | 5,47,902                      | 9,22,916                   | 14,70,818                  | 1. Balance not recovered on the 1st of the month ... |                            | 355 3 2     |          |
| 20.                       | Number of passengers ...                      | 2,781                         | 3,552                      | 6,333                      |  |                            |             |          |
| 21.                       | Rafts, bamboos c. ft.                         | .....                         | 5,500                      | 5,500                      |  |                            |             |          |
| 22.                       | Do., bullahs "                                | 453                           | 17,033                     | 17,486                     | 2. Tollage per month ...                             |                            | 10,384 9 0  |          |
| 23.                       | Estimated value of rafts ...                  | 1,360                         | 12,690                     | 14,050                     |  |                            |             |          |
| 24.                       | Tollage on boats Rs.                          | 3,823-6-6                     | 6,391-9-0                  | 10,214-15-6                | 3. Total ...   |                            | 10,739 12 2 |          |
| 25.                       | Compounded tollage on boats Rs.               | .....                         | .....                      | .....                      |  |                            |             |          |
| 26.                       | Tollage on rafts "                            | 12-12-0                       | 156-13-6                   | 169-9-6                    | 4. Amount paid into treasury during the month ...    |                            | 9,707 13 6  |          |
| 27.                       | Total tollage on boats per ton-mile ...       | .....                         | .....                      | .....                      |  |                            |             |          |
| 28.                       | Total tollage on rafts per 100 cubic feet ... | .....                         | .....                      | .....                      | 5. Balance due at the end of the month ...           |                            | 1,031 14 8  |          |

CALCUTTA,

The 26th July 1887.

C. W. I. HARRISON, Lieut.-Col., R.E.,

Offg. Joint-Secretary to the Government of Bengal.

CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 23rd July 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.                 | WEEK ENDING SATURDAY, THE<br>23RD JULY 1887. |                     |              | WEEK ENDING SATURDAY, THE<br>24TH JULY 1886. |                     |              |
|----------------------------------|--|---------------------|--------------|--|---------------------|--------------|
|                                  | Number of<br>boats.                          | Weight of<br>cargo. | Tollage.     | Number of<br>boats.                          | Weight of<br>cargo. | Tollage.     |
|                                  | No.  | Mds.                | Rs.          | No.  | Mds.                | Rs.          |
| Rice and paddy      ...      ... | 531  | 71,440              | 1,189        | 215  | 38,111              | 693          |
| Jute      ...      ...           | 18   | 6,725               | 126          | 12   | 4,975               | 94           |
| Firewood      ...      ...       | 169  | 84,300              | 1,210        | 70   | 27,300              | 418          |
| Other articles      ...      ... | 842  | 1,86,925            | 2,891        | 622  | 1,37,911            | 2,243        |
| <b>Total</b> ...      ...        | <b>1,560</b>                                 | <b>3,49,390</b>     | <b>5,116</b> | <b>919</b>                                   | <b>2,08,297</b>     | <b>3,448</b> |

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 16th July 1887, on 1,519 miles open.

|   | COACHING TRAFFIC.     |               | MERCHANDISE AND MINERAL TRAFFIC. |                | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |          |
|---|-----------------------|---------------|----------------------------------|----------------|-----------------------------|-----------------|--------------------------|--------------|----------|
|   | Number of passengers. | Receipts.     | Weight carried.                  | Receipts.      |                             |                 | Coaching.                | Merchandise. | Total.   |
|   |                       | Rs. A. P.     | Mds. S.                          | Rs. A. P.      | Rs. A. P.                   | Rs. A. P.       |                          |              |          |
| Total traffic for the week                              | 231,200               | 2,23,070 0 0  | 21,67,980 0                      | 4,78,938 7 0   | 21,462 14 0                 | 7,23,471 14 0   | 61,534½                  | 87,476½      | 152,011½ |
| Or per mile of railway                                  | .....                 | 146 13 8      | .....                            | 315 4 0        | 14 2 1                      | 470 4 6         | .....                    | .....        | .....    |
| For previous 9 days of July of half-year                | 342,524               | 3,21,915 10 0 | 30,52,840 0                      | 6,72,103 9 0   | 25,469 11 9                 | 10,10,489 15 3  | 83,410                   | 110,294½     | 202,704½ |
| Total for 2 weeks                                       | 573,823               | 5,44,985 3 0  | 52,20,820 0                      | 11,51,043 0 6  | 46,932 9 9                  | 17,42,960 13 3  | 147,944½                 | 208,771      | 354,715½ |
| COMPARISON.   |                       |               |                                  |                |                             |                 |                          |              |          |
| Total for corresponding week of previous year           | 260,724½              | 2,31,789 10 0 | 23,44,909 30                     | 5,06,735 1 3   | 10,260 1 5                  | 7,56,870 12 8   | 63,759                   | 97,456       | 163,215  |
| Per mile of railway corresponding week of previous year | .....                 | 153 0 1       | .....                            | 335 12 0       | 10 11 9                     | 490 8 7         | .....                    | .....        | .....    |
| Total to corresponding date of previous year            | 618,707               | 5,54,534 13 3 | 56,33,800 0                      | 12,46,606 12 3 | 39,276 15 9                 | 18,40,418 9 3   | 100,071                  | 230,249      | 400,320  |

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 1,515                                    | 7,56,801  | 500              | 1,519                                    | 7,23,472  | 476              | 1,515   | 1,46,24,007     | 9,653            | 1,519   | 1,42,01,433     | 9,349            | .....                   | 4,22,568                |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 16th July 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week                              | 10,270                | 4,785 3 0   | 39,250 0                         | 2,321 10 0 | 26 12 0                     | 7,133 9 0       | 1,022                    | 732          | 2,306  |
| Or per mile of railway                                  | 180                   | 83 10 6     | 686 10                           | 40 9 5     | 0 7 6                       | 124 11 5        | .....                    | .....        | .....  |
| For previous 9 days of July half-year                   | 14,732                | 6,367 6 0   | 52,411 20                        | 3,764 8 0  | 31 6 0                      | 10,736 4 0      | 2,003½                   | 1,012½       | 3,079  |
| Total for 2 weeks                                       | 25,002                | 11,722 9 0  | 91,661 20                        | 6,086 2 0  | 61 2 0                      | 17,869 13 0     | 3,727½                   | 1,744½       | 5,472  |
| COMPARISON.   |                       |             |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year           | 10,277                | 4,825 13 3  | 52,476 30                        | 3,446 15 0 | 47 1 0                      | 8,338 13 3      | 1,511                    | 1,022        | 2,539  |
| Per mile of railway corresponding week of previous year | 180                   | 84 5 10     | 917 20                           | 60 9 9     | 0 12 11                     | 145 12 6        | .....                    | .....        | .....  |
| Total to corresponding date of previous year            | 24,772½               | 11,804 13 3 | 1,00,360 0                       | 6,874 7 0  | 89 12 6                     | 18,777 15 9     | 3,825                    | 2,134        | 5,959  |

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 57½                                      | 8,339     | 146              | 57½                                      | 7,134     | 125              | 57½   | 1,46,465        | 2,543            | 57½   | 1,38,022        | 2,413            | .....                   | 7,448                   |

DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 16th July 1887, on 12 miles open.

|  | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Receipts.  | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.  | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                 | 3,270                 | 521 5 0    | 7,054 0                          | 184 14 0  | 9 2 0                       | 715 5 0         | 387½                     | 106          | 493½   |
| Or per mile of railway ...                                     | .....                 | 43 7 1     | .....                            | 15 6 6    | 0 13 2                      | 59 9 9          | .....                    | .....        | .....  |
| For previous 9 days of half-year                               | 4,723                 | 730 8 0    | 11,512 30                        | 286 2 0   | 11 12 0                     | 1,008 6 0       | 388½                     | 256          | 634½   |
| Total for 2 weeks ...  | 7,993                 | 1,251 13 0 | 19,466 30                        | 451 0 0   | 20 14 0                     | 1,723 11 0      | 776                      | 362          | 1,138  |
| COMPARISON.  |                       |            |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...              | 2,851                 | 461 8 3    | 8,234 20                         | 254 2 0   | 11 5 9                      | 727 0 0         | 395                      | 98           | 493    |
| Or per mile of railway corresponding week of previous year ... | .....                 | 38 7 4     | .....                            | 21 2 10   | 0 15 2                      | 60 9 4          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...               | 6,606                 | 1,093 2 0  | 34,682 10                        | 638 0 0   | 36 5 0                      | 1,767 10 9      | 911                      | 437          | 1,348  |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 12                                       | 727       | 61               | 12                                       | 715       | 60               | 12  | 19,044          | 1,587            | 13  | 16,052          | 1,338            | .....                   | 2,988                   |

SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 16th July 1887, on 74½ miles open.

|  | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.  | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                 | 4,917                 | 3,607 4 0  | 91,445 0                         | 2,871 3 0  | 66 9 0                      | 6,545 0 0       | 700                      | 1,216½       | 1,916½ |
| Or per mile of railway ...                                     | .....                 | 48 3 7     | .....                            | 38 6 2     | 0 14 3                      | 87 8 0          | .....                    | .....        | .....  |
| For previous 9 days of July of half-year ...                   | 7,081                 | 5,564 0 0  | 1,11,326 10                      | 3,372 9 0  | 85 9 0                      | 9,022 2 0       | 806                      | 1,800        | 2,606  |
| Total for 2 weeks ...  | 11,998                | 9,171 4 0  | 2,02,771 10                      | 6,243 12 0 | 152 2 0                     | 15,567 2 0      | 1,506                    | 3,016½       | 4,522½ |
| COMPARISON.  |                       |            |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...              | 5,051½                | 3,752 4 6  | 50,917 30                        | 2,603 2 0  | 98 9 6                      | 6,444 0 0       | 735                      | 771          | 1,506  |
| Or per mile of railway corresponding week of previous year ... | .....                 | 50 2 8     | .....                            | 34 12 10   | 1 2 11                      | 86 2 5          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...               | 12,162½               | 8,803 15 0 | 1,32,197 30                      | 5,769 14 0 | 279 11 3                    | 14,943 8 3      | 1,745                    | 1,880        | 3,625  |

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 74½                                      | 6,444     | 80               | 74½                                      | 6,545     | 88               | 74½   | 1,11,310        | 1,498            | 74½   | 1,30,367        | 1,743            | 10,038                  | .....                   |



## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 16th July 1887, on 22½ miles open.*

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week                              | 14,629                | 3,074 3 0  | 4,388 10                         | 131 12 0  | 7 6 0                       | 4,117 5 0       | 903                      | 65           | 968    |
| Or per mile of railway                                  | .....                 | 178 12 8   | .....                            | 5 14 9    | 0 5 4                       | 185 0 9         | .....                    | .....        | .....  |
| For previous 9 days of half-year                        | 26,663                | 7,284 14 0 | 4,578 0                          | 161 15 0  | 9 8 0                       | 7,456 5 0       | 1,237½                   | 94½          | 1,332  |
| Total for 2 weeks                                       | 40,791                | 11,263 1 0 | 8,966 10                         | 293 11 0  | 16 14 0                     | 11,573 10 0     | 2,140½                   | 159½         | 2,300  |
| COMPARISON.   |                       |            |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year           | 21,422½               | 5,580 11 9 | 3,205 29                         | 126 2 0   | 1 4 9                       | 5,708 2 6       | 1,040                    | 16           | 1,056  |
| Per mile of railway corresponding week of previous year | .....                 | 250 13 1   | .....                            | 5 10 9    | 0 0 11                      | 256 8 9         | .....                    | .....        | .....  |
| Total to corresponding date of previous year            | 52,227½               | 12,369 8 9 | 7,851 30                         | 304 3 0   | 6 1 6                       | 12,679 13 3     | 2,390                    | 52           | 2,442  |

*Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 22½                                      | Rs. 5,708 | Rs. 257          | 22½                                      | Rs. 4,117 | Rs. 185          | 22½   | Rs. 85,412      | Rs. 3,830        | 22½   | Rs. 86,306      | Rs. 3,879        | Rs. 894                 | .....                   |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 16th July 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week                              | 2,153                 | 972 10 0   | 7,845 10                         | 575 13 0   | 25 2 0                      | 1,573 9 6       | 261                      | 327          | 588    |
| Or per mile of railway                                  | .....                 | 23 2 6     | .....                            | 13 11 4    | 0 9 7                       | 37 7 5          | .....                    | .....        | .....  |
| For previous 9 days of half-year                        | 2,791                 | 1,301 5 3  | 12,632 30                        | 2,087 14 0 | 32 4 0                      | 3,121 7 3       | 259                      | 497          | 756    |
| Total for 2 weeks                                       | 4,944                 | 2,273 15 3 | 19,478 0                         | 2,663 11 0 | 57 6 0                      | 4,695 0 3       | 520                      | 824          | 1,344  |
| COMPARISON.   |                       |            |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year           | 2,676½                | 1,120 14 9 | 3,019 10                         | 63 12 0    | 6 2 0                       | 1,190 12 9      | 467                      | 121          | 588    |
| Per mile of railway corresponding week of previous year | .....                 | 24 11 0    | .....                            | 1 8 4      | 0 2 4                       | 28 5 8          | .....                    | .....        | .....  |
| Total to corresponding date of previous year            | 6,773                 | 2,837 11 7 | 6,904 0                          | 536 3 0    | 11 8 0                      | 3,465 6 7       | 1,091                    | 347          | 1,438  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 42                                       | Rs. 1,101 | Rs. 28           | 42                                       | Rs. 1,574 | Rs. 37           | 42  | Rs. 29,578      | Rs. 704          | 42  | Rs. 57,604      | Rs. 1,372        | Rs. 28,026              | .....                   |

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D. AND ASSAM-BEHAR SECTIONS.)

*Approximate Return of Traffic for first 9 days of July 1887, on 645 miles open.*

|   | COACHING TRAFFIC.     |                         | MERCHANDISE AND MINERAL TRAFFIC. |                         | Other earnings (estimated), including steam boat. | Total earnings.           | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------------------|----------------------------------|-------------------------|---|---------------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts.      | Weight carried.                  | Receipts.               |   |                           | Coaching.                | Merchandise. | Total. |
| Total traffic for the first 9 days of July 1887           | 156,500               | Rs. A. P.<br>65,500 0 0 | Mds. s.<br>4,14,500 0            | Rs. A. P.<br>65,300 0 0 | Rs. A. P.<br>14,300 0 0                           | Rs. A. P.<br>1,45,100 0 0 | 25,094                   | 18,480       | 43,533 |
| Or per mile of railway                                    | 243                   | 102 0 0                 | 643 0                            | 101 0 0                 | 1 0 0   | 204 0 0                   | .....                    | .....        | .....  |
| For previous weeks of half-year                           | .....                 | .....                   | .....                            | .....                   | .....   | .....                     | .....                    | .....        | .....  |
| Total for 1 week  | 156,500               | 65,500 0 0              | 4,14,500 0                       | 65,300 0 0              | 14,300 0 0  | 1,45,100 0 0              | 25,094                   | 18,430       | 43,533 |
| COMPARISON.   |                       |                         |                                  |                         |   |                           |                          |              |        |
| Total for corresponding 10 days of previous year          | 149,288               | 62,956 0 0              | 4,02,341 0                       | 62,585 0 0              | 12,303 0 0  | 1,37,934 0 0              | 24,487                   | 20,740       | 45,236 |
| Per mile of railway corresponding period of previous year | 246                   | 104 0 0                 | 604 0                            | 103 0 0                 | .....   | 207 0 0                   | .....                    | .....        | .....  |
| Total to corresponding date of previous year              | 149,288               | 62,956 0 0              | 4,02,341 0                       | 62,585 0 0              | 12,303 0 0  | 1,37,934 0 0              | 24,487                   | 20,740       | 45,236 |

\* Steam-boat earnings, Rs. 13,700, have been excluded from the calculation.  
*Note.* Dacca and Assam-Bihar Sections are also published separately.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Eastern Bengal State Railway.*

| RECEIPTS FOR FIRST 10 DAYS OF JULY 1886. |           |                  | RECEIPTS FOR FIRST 9 DAYS OF JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |  | Rs.             | Rs.              |                         | Rs.                     |
| 606                                      | 1,37,934  | 228              | 645                                     | 1,45,100  | 225              | 606   | 19,81,376       | 294              | 645  | 10,21,194       | 213              | ..                      | 60,177                  |

## BENGAL CENTRAL RAILWAY.

*Approximate Return of Traffic for week ended 16th July 1887, on 125 miles open*

|   | COACHING TRAFFIC.     |                        | MERCHANDISE AND MINERAL TRAFFIC. |                        | Other earnings (estimated). | Total earnings.         | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------------------|----------------------------------|------------------------|-----------------------------|-------------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts.     | Weight carried.                  | Receipts.              |                             |                         | Coaching.                | Merchandise. | Total. |
| Total traffic for the week                                | 25,200                | Rs. A. P.<br>8,600 0 0 | Mds. s.<br>42,000 0              | Rs. A. P.<br>3,600 0 0 | Rs. A. P.<br>110 0 0        | Rs. A. P.<br>11,110 0 0 | 3,501                    | 1,700        | 5,210  |
| Or per mile of railway                                    | 202                   | 64 0 0                 | 336 0                            | 24 0 0                 | 1 0 0                       | 80 0 0                  | .....                    | .....        | .....  |
| For previous 1 week of half-year                          | 32,000                | 10,600 0 0             | 43,000 0                         | 3,100 0 0              | 60 0 0                      | 14,060 0 0              | 4,530                    | 2,211        | 6,750  |
| Total for 2 weeks   | 57,200                | 18,600 0 0             | 85,000 0                         | 6,400 0 0              | 170 0 0                     | 25,170 0 0              | 8,040                    | 3,920        | 11,960 |
| COMPARISON.   |                       |                        |                                  |                        |                             |                         |                          |              |        |
| Total for corresponding week of previous year             | 30,682                | 8,013 0 0              | 16,115 0                         | 1,076 0 0              | 25 0 0                      | 10,015 0 0              | 3,845                    | 1,365        | 5,210  |
| Per mile of railway corresponding period of previous year | 245                   | 71 0 0                 | 129 0                            | 9 0 0                  | .....                       | 80 0 0                  | .....                    | .....        | .....  |
| Total to corresponding date of previous year              | 61,999                | 10,498 0 0             | 36,725 0                         | 2,563 0 0              | 81 0 0                      | 22,142 0 0              | 9,370                    | 3,361        | 12,730 |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Bengal Central Railway.*

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 125                                      | 10,014    | 80               | 125                                      | 11,110    | 89               | 125   | 1,07,700        | 105              | 125   | 1,89,365*       | 101              | .....                   | 8,335                   |

\* Audited up to week ending 7th May 1887.

## DACCA STATE RAILWAY.

*Approximate Return of Traffic for first 9 days of July 1887, on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the first 9 days of July 1887           | 13,000                | 4,000 0 0          | 6,500 0                          | 550 0 0   | 60 0 0                      | 4,610 0 0       | 2,788                    | 1,000        | 3,788  |
| Or per mile of railway                                    | 151                   | 47 0 0             | 76 0                             | 6 0 0     | 1 0 0                       | 54 0 0          | .....                    | .....        | .....  |
| For previous weeks of half-year                           | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Total for 1 week  | 13,000                | 4,000 0 0          | 6,500 0                          | 550 0 0   | 60 0 0                      | 4,610 0 0       | 2,788                    | 1,000        | 3,788  |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding 10 days of previous year          | 12,802                | 4,181 0 0          | 2,618 0                          | 278 0 0   | 34 0 0                      | 4,553 0 0       | 1,402                    | 498          | 1,900  |
| Per mile of railway corresponding period of previous year | 149                   | 49 0 0             | 30 0                             | 3 0 0     | .....                       | 52 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year              | 12,802                | 4,181 0 0          | 2,618 0                          | 278 0 0   | 34 0 0                      | 4,553 0 0       | 1,402                    | 498          | 1,900  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Dacca State Railway.*

| RECEIPTS FOR FIRST 10 DAYS OF JULY 1886. |           |                  | RECEIPTS FOR FIRST 9 DAYS OF JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 86                                       | 4,553     | 53               | 86                                      | 4,610     | 54               | 86  | 70,953          | 59               | 86   | 66,695          | 55               | .....                   | 1,258                   |

## ASSAM-BIHAR STATE RAILWAY.

## PUBNAH SECTION.

*Approximate Return of Traffic for the first 9 days of July 1887, on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the first 9 days of July 1887           | 3,500                 | 1,100 0 0          | 35,000 0                         | 3,500 0 0 | 50 0 0                      | 4,650 0 0       | 803                      | 520          | 1,323  |
| Or per mile of railway                                    | 90                    | 28 0 0             | 897 0                            | 90 0 0    | 1 0 0                       | 119 0 0         | .....                    | .....        | .....  |
| For previous weeks of half-year                           | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Total for 1 week  | 3,500                 | 1,100 0 0          | 35,000 0                         | 3,500 0 0 | 50 0 0                      | 4,650 0 0       | 803                      | 520          | 1,323  |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding 10 days of previous year          | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year              | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR FIRST 10 DAYS OF JULY 1886. |           |                  | RECEIPTS FOR FIRST 9 DAYS OF JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 10TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 9TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|---|-----------|------------------|---|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                    | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |   | Rs.       | Rs.              |   | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| .....                                    | .....     | .....            | 39                                      | 4,650     | 119              | .....   | .....           | .....            | 39   | 45,160          | 83               | 45,160                  | .....                   |

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 16th July 1887, on 27½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 3,880                 | 1,324 0 0          | 6,632 0                          | 423 0 0   | 7 0 0                       | 1,754 0 0       | 500                      | 254          | 763    |
| Or per mile of railway ...                                  | 124                   | 48 9 0             | 222 0                            | 15 8 0    | 0 4 0                       | 64 5 0          | .....                    | .....        | .....  |
| For previous 1 week of half-year ...                        | 3,029                 | 1,301 0 0          | 12,241 0                         | 837 0 0   | 37 0 0                      | 2,235 0 0       | 654½                     | 320½         | 981    |
| Total for 2 weeks ...                                       | 7,009                 | 2,625 0 0          | 18,293 0 0                       | 1,260 0 0 | 44 0 0                      | 3,989 0 0       | 1,153½                   | 580½         | 1,734  |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding period of previous year ...         | 2,114                 | 894 1 10           | 6,883 30                         | 506 6 0   | 15 10 0                     | 1,416 1 10      | 500                      | 254          | 763    |
| Per mile of railway corresponding week of previous year ... | 70                    | 52 13 0            | 253 0                            | 18 9 0    | 0 9 0                       | 51 15 0         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 5,181                 | 2,070 7 7          | 14,334 20                        | 1,134 9 0 | 33 4 0                      | 3,238 4 7       | 1,230                    | 671½         | 1,907½ |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 27½                                      | 1,416     | 52               | 27½                                      | 1,754     | 64               | 27½   | 27,574          | 1,012            | 27½   | 28,837          | 1,059            | 1,263                   | .....                   |

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 16th July 1887, on 249 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week on 249 miles open ...                    | 35,236                | 11,491 0 0         | 1,47,982 0                       | 12,533 0 0  | 2,507 0 0                   | 26,241 0 0      | 6,982                    | 5,300        | 12,282 |
| Or per mile of railway ...  | 142                   | 45 13 0            | 594 0                            | 50 5 0      | 2 13 0                      | 99 15 0*        | .....                    | .....        | .....  |
| For previous 1 week of half-year ...                                | 46,200                | 15,203 0 0         | 2,07,918 0                       | 17,586 0 0  | 3,653 0 0                   | 36,442 0 0      | 8,345                    | 7,705        | 16,050 |
| Total for 2 weeks ...   | 81,436                | 26,694 0 0         | 3,55,900 0                       | 30,119 0 0  | 6,160 0 0                   | 62,683 0 0      | 15,327                   | 13,005       | 28,332 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year on 246 miles open ... | 36,779½               | 17,771 3 5         | 1,23,416 0                       | 15,118 14 0 | 2,915 15 11                 | 20,896 1 4      | 5,325                    | 3,026        | 9,351  |
| Or mile of railway corresponding week of previous year ...          | 149                   | 47 14 0            | 502 0                            | 61 7 0      | 1 1 0                       | 110 6 0*        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...                    | 16,514½               | 29,909 13 6        | 3,10,824 10                      | 32,367 7 0  | 7,885 3 11                  | 69,783 8 5      | 12,110                   | 10,170       | 22,280 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 249                                      | 29,806    | 111              | 249                                      | 26,241    | 105              | 246   | 5,17,910        | 2,104            | 24,833  | 5,35,039        | 2,114            | 17,129                  | .....                   |

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|   |     |     |     |           |          |
|---|-----|-----|-----|-----------|----------|
| Approximate earnings for first 9 days of July 1887 .. | ... | ... | ... | Rs.       | 9.414    |
| Corresponding week last year                          | ... | ... | ... | Rs.       | 9.505    |
| Decrease  | ... | ... | ... |           | 91       |
| Miles open, for first 9 days of July 1887...          | ... | ... | ... | Miles.    | 51       |
| Corresponding week last year                          | ... | ... | ... | Miles.    | 51       |
| Receipts per mile open for first 9 days of July 1887  | ... | ... | ... | Rs. A. P. | 181 9 5  |
| Corresponding week last year                          | ... | ... | ... | Rs. A. P. | 186 5 11 |
| Decrease  | ... | ... | ... |           | 1 12 6   |

CHIEF OFFICE, DARJEELING, the 18th July 1887.

D. L. PRESTAGE, for Acting Manager, D. H. Ry.





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, AUGUST 3, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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### DISTRICT ROAD FUND.

No. 2220R C.

GOVERNMENT OF BENGAL—PUBLIC WORKS DEPARTMENT.

GENERAL—ROAD CESS.

*Dated Calcutta, the 23rd July 1887.*

READ—

Letter from the Accountant-General, Bengal, No. 384L.F., dated the 16th July 1887, submitting an abstract of the receipts and expenditure of the several District Road Committees in Bengal for the quarter ending the 31st March 1887.

### RESOLUTION.

The Lieutenant-Governor directs that the accounts of the receipts and expenditure of the several District Road Committees for the second quarter of the cess year 1886-87 be published in the *Calcutta Gazette* and circulated to the officers concerned.

ORDER.—Ordered that a copy of this Resolution, together with a copy of the abstract of receipts and expenditure, be published in the Supplement to the *Calcutta Gazette*.

Ordered also that a copy of this Resolution, and of the abstract referred to, be forwarded to all Commissioners of Divisions, to all Superintending Engineers of Public Works Circles in Bengal, and to the Financial Department of this Government, for information.

By order of the Lieutenant-Governor of Bengal,

W. B. BESTIC,

*Under-Secy. to the Govt. of Bengal,*

*P. W. Dept.*

## DISTRICT

## Statement of Receipts and Expenditure of the several District

| RECE                   |  |                   |                                   |                    |                                |              |   |                       |  |
|------------------------|--|-------------------|-----------------------------------|--------------------|--------------------------------|--------------|---|-----------------------|--|
| DISTRICTS.             | Balance in<br>treasury on 1st<br>January 1887. | PROVINCIAL RATES. |                                   |                    |                                |              | Interest on<br>arrears of<br>road cess. | PUBLIC<br>Road tolls. |  |
|                        |  | Cess on lands.    | Cess on<br>mines and<br>railways. | Cess<br>on houses. | One per<br>cent. road<br>cess. | Total.       |   |                       |  |
|                        |  |                   |                                   |                    |                                |              |   |                       |  |
| Rs. A. P.              | Rs. A. P.                                      | Rs. A. P.         | Rs. A. P.                         | Rs. A. P.          | Rs. A. P.                      | Rs. A. P.    | Rs. A. P.                               | Rs. A. P.             |  |
| 1 Dinagepore           | 23,409 7 11                                    | 23,061 2 0        | .....                             | .....              | .....                          | 23,061 2 0   | 46 7 11                                 | .....                 |  |
| Bangpore               | 39,209 8 4                                     | 41,313 5 4        | .....                             | .....              | .....                          | 41,313 5 4   | 148 9 10                                | .....                 |  |
| Bogra                  | 23,848 8 2                                     | 16,475 3 7        | .....                             | .....              | .....                          | 16,475 3 7   | 21 8 9                                  | .....                 |  |
| Darjeeling             | 16,844 15 9                                    | 8,890 7 0         | 2,681 6 1                         | .....              | .....                          | 11,511 13 1  | 1 3 11                                  | .....                 |  |
| 5 Jalpore              | 8,203 11 6                                     | 12,577 0 4        | .....                             | .....              | .....                          | 12,577 0 4   | 27 12 2                                 | .....                 |  |
| Backergunge            | 30,554 6 7                                     | 45,322 1 0        | .....                             | .....              | .....                          | 45,322 1 0   | 815 8 0                                 | .....                 |  |
| Tipperah               | 61,720 13 11                                   | 29,007 13 9       | .....                             | .....              | .....                          | 29,007 13 9  | 231 2 0                                 | .....                 |  |
| Mymensingh             | 52,117 10 4                                    | 75,049 0 7        | .....                             | .....              | .....                          | 75,049 0 7   | 470 4 10                                | .....                 |  |
| Chittagong             | 7,001 0 0                                      | 21,221 6 10       | .....                             | .....              | .....                          | 21,221 6 10  | 244 4 1                                 | .....                 |  |
| 10 Noakhali            | 14,993 10 11                                   | 30,509 3 0        | .....                             | .....              | .....                          | 30,509 3 0   | 184 6 0                                 | .....                 |  |
| Gya                    | 12,724 3 5                                     | 87,062 1 9        | 8 9 6                             | .....              | .....                          | 87,060 11 3  | 507 10 9                                | .....                 |  |
| Shahabad               | 35,142 12 4                                    | 75,901 15 8       | 6 0 3                             | .....              | .....                          | 75,907 15 11 | 1,108 8 1                               | .....                 |  |
| Mozufferpore           | 11,372 6 9                                     | 54,002 8 3        | .....                             | .....              | .....                          | 54,002 8 3   | 332 15 7                                | .....                 |  |
| Durhhunga              | 94,200 9 1                                     | 99,533 1 0        | .....                             | .....              | .....                          | 99,533 1 0   | 195 4 4                                 | .....                 |  |
| 15 Sarun               | 1,38,180 15 6                                  | 63,863 13 7       | .....                             | .....              | .....                          | 63,863 13 7  | 589 4 6                                 | .....                 |  |
| Chumparun              | 7,198 8 1                                      | 25,777 6 0        | .....                             | .....              | .....                          | 25,787 6 0   | 157 12 7                                | .....                 |  |
| Monghyr                | 32,087 12 8                                    | 55,725 3 3        | .....                             | .....              | .....                          | 55,725 3 3   | 446 12 9                                | .....                 |  |
| Bhagulpur              | 21,806 11 3                                    | 75,201 1 8        | .....                             | .....              | .....                          | 75,201 1 8   | 287 13 8                                | .....                 |  |
| Purneah                | 20,564 4 0                                     | 34,577 13 4       | .....                             | .....              | .....                          | 34,577 13 4  | 7 13 0                                  | .....                 |  |
| 20 Maldah              | 15,681 9 10                                    | 5,278 2 0         | .....                             | .....              | .....                          | 8,278 2 9    | 67 8 0                                  | .....                 |  |
| Cuttack                | 40,307 6 4                                     | 2,022 13 2        | .....                             | .....              | .....                          | 2,022 13 2   | 168 14 6                                | .....                 |  |
| Pooree                 | 4,985 11 3                                     | 7,421 4 2         | .....                             | .....              | .....                          | 7,431 4 2    | 235 8 4                                 | .....                 |  |
| Balasore               | 12,114 12 10                                   | 3,133 14 2        | .....                             | .....              | .....                          | 3,133 14 2   | 246 7 8                                 | .....                 |  |
| Hazaribagh             | 14,918 0 10                                    | 25,007 11 1       | 204 7 3                           | .....              | .....                          | 25,212 2 4   | 5 9 6                                   | .....                 |  |
| 25 Lohardugga          | 16,243 4 7                                     | 34,975 0 0        | 2 14 0                            | .....              | .....                          | 34,977 14 0  | 19 9 7                                  | .....                 |  |
| Manbhoom               | 17,968 1 1                                     | 10,076 7 10       | 3,028 1 10                        | .....              | .....                          | 13,099 9 8   | 343 7 5                                 | .....                 |  |
| Total                  | 7,51,996 15 4                                  | 9,64,977 1 10     | 5,926 6 11                        | .....              | .....                          | 9,70,903 8 9 | 7,108 4 3                               | .....                 |  |
| Non-cess<br>Districts. |  |                   |                                   |                    |                                |              |   |                       |  |
| Chittagong Hill Tracts | 606 10 8                                       | .....             | .....                             | .....              | .....                          | .....        | .....                                   | .....                 |  |
| Sonthal Pergunnahs     | 12,321 10 10                                   | .....             | .....                             | .....              | .....                          | .....        | .....                                   | .....                 |  |
| 29 Singbhoom           | 6,267 8 3                                      | 750 0 0           | .....                             | .....              | .....                          | 750 0 0      | .....                                   | .....                 |  |
| Total                  | 19,255 13 8                                    | 750 0 0           | .....                             | .....              | .....                          | 750 0 0      | .....                                   | .....                 |  |
| GRAND TOTAL            | 8,01,252 13 0                                  | 9,65,727 1 10     | 5,926 6 11                        | .....              | .....                          | 9,71,653 8 9 | 7,108 4 3                               | .....                 |  |

FORT WILLIAM,

The 2nd July 1887.



## ROAD FUND.

Road Committee.

IPTS.

| WORKS.       |           | IRRIGATION.  | MISCELLANEOUS.                        |                               |                |             | DISTRICTS.                 |
|--------------|-----------|--------------|---------------------------------------|-------------------------------|----------------|-------------|----------------------------|
| Ferry tolls. | Total.    | Canal tolls. | Rent of serais and staging bungalows. | Fees, fines, and forfeitures. | Miscellaneous. | Total.      |                            |
| Rs. A. P.    | Rs. A. P. | Rs. A. P.    | Rs. A. P.                             | Rs. A. P.                     | Rs. A. P.      | Rs. A. P.   |                            |
| .....        | .....     | .....        | .....                                 | 86 8 0                        | 70 0 0         | 155 8 0     | Dinapore ... 1             |
| .....        | .....     | .....        | 34 0 0                                | 1,157 1 0                     | 40 0 4         | 1,231 1 4   | Rangpore ...               |
| .....        | .....     | .....        | 2 0 0                                 | 60 0 0                        | 2,020 6 6      | 2,097 6 6   | Boogra ...                 |
| .....        | .....     | .....        | 262 10 0                              | 0 12 0                        | 6 15 0         | 270 5 0     | Darjeeling ... 5           |
| .....        | .....     | .....        | .....                                 | 250 2 0                       | 81 6 0         | 330 8 6     | Jalpigore ...              |
| .....        | .....     | .....        | .....                                 | 204 0 3                       | 134 6 9        | 439 0 0     | Beckergunge ...            |
| .....        | .....     | .....        | .....                                 | 241 4 0                       | .....          | 241 4 0     | Tipterah ...               |
| .....        | .....     | 1,870 0 6    | 5 4 0                                 | 120 3 3                       | 1,867 13 6     | 2,013 4 9   | Mymensingh ...             |
| .....        | .....     | .....        | .....                                 | 94 15 0                       | 0,046 14 10    | 9,141 13 10 | Chittagong ... 10          |
| .....        | .....     | .....        | 30 8 0                                | 463 13 4                      | 304 13 6       | 798 2 10    | Noakholly ...              |
| .....        | .....     | .....        | 60 0 0                                | 788 12 3                      | 3 8 0          | 878 4 3     | Gya ...                    |
| .....        | .....     | .....        | 82 0 0                                | 78 0 0                        | 87 9 9         | 245 9 9     | Shahabad ...               |
| .....        | .....     | .....        | 366 8 0                               | 441 4 0                       | 50 15 0        | 894 11 0    | Mozufferpore ...           |
| .....        | .....     | .....        | 352 2 8                               | 143 14 0                      | 7 14 5         | 503 15 1    | Duridunga ...              |
| .....        | .....     | .....        | .....                                 | 356 0 0                       | 0 1 6          | 356 1 6     | Saran ... 15               |
| .....        | .....     | .....        | .....                                 | -799 2 6                      | 115 1 4        | -614 1 2    | Chumparun ...              |
| .....        | .....     | .....        | .....                                 | 424 1 0                       | 324 7 1        | 748 8 1     | Monkhyr ...                |
| 112 8 0      | 112 8 0   | .....        | 0 8 0                                 | 27 12 0                       | 51 6 6         | 79 10 6     | Bhagulpur ...              |
| .....        | .....     | .....        | .....                                 | 5 0 0                         | 8 15 3         | 13 15 3     | Purneah ... 20             |
| .....        | .....     | .....        | 220 5 9                               | 1,142 2 4                     | 519 5 9        | 1,690 13 10 | Maldah ...                 |
| .....        | .....     | .....        | .....                                 | 3 12 0                        | 35 2 3         | 39 14 3     | Cuttack ...                |
| .....        | .....     | .....        | 8 0 0                                 | 8 0 0                         | 41 10 0        | 57 10 0     | Poorce ...                 |
| .....        | .....     | .....        | 73 7 6                                | 8 12 6                        | 20 6 0         | 102 9 6     | Bahalore ...               |
| .....        | .....     | .....        | 40 9 1                                | 72 8 0                        | 7 3 9          | 129 4 10    | Hazareibagh ...            |
| .....        | .....     | .....        | 1,783 14 0                            | .....                         | 0 6 6          | 1,784 4 6   | Lohardugga ... 25          |
| .....        | .....     | .....        | .....                                 | .....                         | .....          | .....       | Manbhoom ...               |
| 112 8 0      | 112 8 0   | 1,870 0 6    | 3,365 13 0                            | 5,631 0 2                     | 14,875 13 6    | 23,572 10 8 | Total.                     |
| .....        | .....     | .....        | .....                                 | .....                         | 10,000 0 0     | 10,000 0 0  | Chittagong Hill Tracts ... |
| .....        | .....     | .....        | 95 0 0                                | 12 0 0                        | 229 8 0        | 334 8 0     | South Pergunnah ...        |
| .....        | .....     | .....        | .....                                 | .....                         | 17 0 0         | 17 0 0      | Singbhoom ... 20           |
| .....        | .....     | .....        | 93 0 0                                | 12 0 0                        | 10,246 8 0     | 10,351 8 0  | Total.                     |
| 112 8 0      | 112 8 0   | 1,870 0 6    | 3,458 13 0                            | 5,643 0 2                     | 25,122 5 6     | 34,224 2 8  | GRAND TOTAL.               |

Offg. Accountant-General, Bengal.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government during the week ending the 30th July 1887.

| No.                      | District and date of return.   | Rainfall at Sudder station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|--------------------------|--|---------------------------------------|--|
| <b>BENGAL.</b>           |  |                                       |  |
| <i>Western Districts</i> |  |                                       |  |
| BUCKHAW DIV.             | 1 Baranwa, July 30, '87  | 1.32                                  | Weather—seasonable. State and prospects of crops good. Common rice about 20 seers per rupee. Cholera abated and public health fair. Two outbreaks of cattle-pox.   |
|                          | Culna ...  | 5.17                                  |  |
|                          | Cutwa ...  | 2.94                                  |  |
|                          | Raneegunge ...   | 1.53                                  |  |
|                          | 2 Bankura, „ 30, '87   | 3.71                                  |  |
| BUCKHAW DIV.             | Bishenpore ...   | 2.07                                  | Weather—seasonable. Rainfall general. More rain is wanted in the Mas Indas and Kotalpur. Transplantation of <i>amun</i> rice is going on. <i>Bhadai</i> plants are getting up well. Prospects of sugarcane, <i>biri kalai</i> , <i>arhar</i> and <i>til</i> are good. Prices remain unchanged. Public health good. |
|                          | 3 Beerbhoom, „ 30, „   | 2.93                                  |  |
|                          | Rampore Haut ...   | 1.82                                  |  |
|                          | 4 Midnapore, „ 30, '87   | 2.02                                  |  |
|                          | 5 Hooghly, „ 30, „   | 2.56                                  |  |
| PRESIDENCY DIV.          | Serampur ...   | 2.76                                  | Weather—unsettled. Tolerably cool with high winds and frequent showers. Rainfall has proved very opportune for the paddy crop; transplantation is now nearly complete. Sugarcane is thriving. Prices are steadily rising. Public health not good.  |
|                          | Jehanabad ...  | 2.03                                  |  |
|                          | Howrah, „ 30, „  | 1.61                                  |  |
|                          | Oulooberiah ...  | 2.59                                  |  |
|                          | <i>Central Districts</i>   |                                       |  |
| PRESIDENCY DIV.          | 6 24-Pergha, July 30, '87  | 0.90                                  | Weather—seasonable with occasional showers. Prospects of crops continue satisfactory. Transplantation going on. Public health generally good.  |
|                          | 7 Nuddea, „ 30, „  | 2.67                                  |  |
|                          | Kushtea ...  | 1.43                                  |  |
|                          | Meherpur ...   | 1.17                                  |  |
|                          | Chundanga ...  | 1.59                                  |  |
| PRESIDENCY DIV.          | Ranaghat ...   | Nil                                   |  |
|                          | 8 Khosla, „ 30, '87  | 2.89                                  | Weather—cloudy with some rain. <i>Amun</i> paddy on high lands ripening. Cultivation of <i>amun</i> continues. Public health good.   |
|                          | 9 Jessore, „ 30, „   | 1.56                                  |  |
|                          | Jhenidah ...   | 2.62                                  |  |
|                          | Magurah ...  | 2.34                                  |  |
|                          | Narail ...   | 2.07                                  |  |
| RAJSHAHY DIV.            | Bongong ...  | 4.08                                  | Weather—hot and cloudy with occasional showers. More rain is wanted, without which the paddy crops will suffer, and no progress can be made by the cultivators in transplanting the <i>amun</i> paddy.   |
|                          | 10 Moorshedabad, „ 30, '87   | 2.19                                  |  |
|                          | Lalbagh ...  | 2.41                                  |  |
|                          | Kundi ...  | 1.00                                  |  |
|                          | Jungipur ...   | 4.24                                  |  |
| RAJSHAHY DIV.            | 11 Dinajpur, „ 30, '87   | 2.39                                  | Light showers and hot sun. Rainfall has not been sufficiently general. More rain is wanted for <i>bhadai</i> rice, and especially for transplanting of winter rice.  |
|                          | Thakurgaon ...   | 0.94                                  |  |
|                          | 12 Rajshahy, „ 30, '87   | 2.39                                  |  |
|                          | Nattore ...  | 1.50                                  |  |
|                          | 13 Rangpur, „ 30, „  | 0.56                                  |  |
| RAJSHAHY DIV.            | Kurigram ...   | 0.21                                  | Recent rain has enabled planting of <i>amun</i> to be resumed. More rain is required. Public health good. Prices stationary.   |
|                          | Nilphamari ...   | 1.41                                  |  |
|                          | 14 Bogra, „ 30, '87  | 2.11                                  |  |
|                          | Sherpur ...  | 0.51                                  |  |
|                          | Nowkhilla ...  | 1.44                                  |  |
| RAJSHAHY DIV.            | 15 Pabna, „ 30, '87  | 1.59                                  | Weather—dry during first part of week. Seasonable rain during last two days has done much good to crops. Transplantation of <i>amun</i> going on actively. Prospect of standing crops fair, but more rain wanted. Public health fair.  |
|                          | Serajgunge ...   | 0.99                                  |  |
|                          | 16 Darjeeling, „ 30, '87   | 5.92                                  |  |
|                          | 17 Julpigore, „ 30, „  | 1.43                                  |  |
|                          | <i>Eastern Districts.</i>  |                                       |  |
| DACCA DIVISION.          | 18 Dacca, July 30, '87   | 2.93                                  | Weather—cloudy and rainy. Harvesting of jute and early rice going on. <i>Boochia</i> paddy is being sown. Prospects of <i>amun</i> good. Some <i>amun</i> has been lost by the rivers rising too rapidly. Public health good.  |
|                          | Manickgunge ...  | 0.75                                  |  |
|                          | Munshigunge ...  | 1.47                                  |  |
|                          | Narsingunge ...  | 1.65                                  |  |
|                          | 19 Faridpore, „ 30, '87  | 4.12                                  |  |
| DACCA DIVISION.          | Gondondo ...   | 4.2                                   | Weather—seasonable. Good rain during the week, but more still wanted. Prospects of crops satisfactory. Public health good.   |
|                          | Madaripore ...   | 2.21                                  |  |
|                          | 20 Bagergunge, „ 29, '87   | 5.02                                  |  |
|                          | 21 Aymensingh, „ 29, '87   | 1.57                                  |  |
|                          | Jamalpur ...   | 0.72                                  |  |
| DACCA DIVISION.          | Kasur-gunge ...  | 1.10                                  | Weather—hot and rainy. Cultivation of <i>amun</i> crop still going on. <i>Amun</i> paddy slightly injured by salt-water and insects. General health good.  |
|                          | Atta ...   | 0.61                                  |  |
|                          | Nutunoon ...   | 0.85                                  |  |
| DACCA DIVISION.          | Weather—hot with occasional showers. River continues falling. Prospects of crops fair. |                                       |  |

| No.                   | District and date of return.                          | Rainfall at Sudder Station in inches.        | Character of the weather, state and prospects of the crops, and state of health at date.  |
|-----------------------|---|--|---|
| <b>BENGAL—contd.</b>  |   |  |   |
| CHITTAGONG DIV.       | <i>Eastern Districts—contd.</i>                       |  |   |
|                       | 22 Chittagong, Aug. 2, '87                            | 10.72  | Weather—seasonable. <i>Amra</i> transplanted. Prices steady. General health good, notwithstanding a few sporadic cases of cholera.  |
|                       | 23 Noakhali Fenny July 29, "                          | 5.44<br>0.40                                 | Weather—seasonable and generally rainy. Prospects of <i>amra</i> crop fair. Transplantation of <i>amra</i> progressing. This week's rain will do much good to the crops. More rain wanted.  |
|                       | 24 Tipperah Brahmanbariah " 28, '87                   | 1.28<br>0.73                                 | Weather—hot and sultry; much more rain is required for <i>amra</i> . Prospects good. <i>Amra</i> and jute being harvested with good outturn.  |
|                       | 25 Chandpur " " "                                     | 0.66   |   |
|                       | 26 Chittagong Hill Tracts, " 26, '87                  | 4.85   | Weather—cloudy and sunny throughout the week. <i>Joom</i> paddy doing well. Transplanting of plough-paddy continues. More rain wanted.  |
|                       | Hill Tipperah " 27, "                                 | 1.22   | Weather—hot. Reaping of <i>amra</i> paddy commenced. Transplantation of <i>amra</i> paddy continues. Prospects of <i>joom</i> crops fair. Public health good.   |
| <b>BEHAR.</b>         |   |  |   |
| PATNA DIV.            | 26 Patna July 30, '87                                 | 2.76<br>0.30                                 | Weather—hot. Transplantation of paddy is retarded for want of sufficient rain. <i>Bhadai</i> crops are thriving well. <i>Rahar</i> and <i>jowar</i> growing. Cholera reported from the interior.  |
|                       | 27 Gaya " 30 "  | 0.84   | Weather—cloudy and rainy. Paddy transplantation going on. More rain wanted. Broadcast paddy being destroyed by grasshoppers. Cholera raging furiously almost everywhere. Fever also reported.   |
|                       | 28 Shahabad " 30 "                                    | 2.05   | Weather—hot and close in the beginning of the week, but rainy in the latter part. Rain will benefit <i>bhadai</i> crops and sugarcane which are coming up well. More rain is wanted for transplanting of rice. Cholera prevails throughout the district, though somewhat abating. Prices stationary.  |
|                       | 29 Darbhanga " 30 "                                   | 1.38   | Weather—sultry and occasionally cloudy. Rain is much wanted for transplantation of paddy. <i>Bhadai</i> crops are promising. Manufacture of indigo in progress. Prices remain stationary. Public health generally good.   |
|                       | 30 Madhubani Tajpur " 30, '87                         | 3.31<br>0.10                                 | Weather—at first dry and hot; latterly rainy. Rain is said to be urgently needed, but recent showers must have been very beneficial. Crops look well. A good deal of cholera reported.  |
|                       | 31 Muzaffargarh Hajipur Sitamarhi " 30 "              | 1.22<br>0.24<br>0.71                         | Weather—sultry with east wind. Rain since yesterday (29th). More rain wanted for crops. Cholera prevailing all over the district in villages in the interior. Health of the town comparatively better for this season of the year.  |
|                       | 32 Saran " 30 "                                       | 2.04<br>0.18<br>Nil                          | Weather—variable, being sunny and cloudy alternately. <i>Bhadai</i> crops being cleared. Transplantation of paddy on high land retarded to some extent for want of sufficient rain. A heavy downpour is expected every day with often clouded sky. Public health not very good. Cholera still prevailing in the district.   |
| SHAHDOLE DIV.         | 33 Champaran " 30 "                                   | 0.83   | Weather—hot and close with occasional showers. <i>Bhadai</i> crops doing well. More rain wanted for transplantation of winter rice. Cholera still lingering in places.  |
|                       | 34 Monghyr July 30, '87                               | 2.77   | Weather—too dry early in week; now seasonable. Timely rain has started transplantation again. <i>Marwa</i> and early rice in good condition. <i>Makai</i> can scarcely be more than a half crop. Cholera still about.   |
|                       | 35 Begusarai " 30 "                                   | 0.94<br>0.55                                 | Weather—hot and dry; raining from 29th. Complaints of drought very general. Rain now falling will probably stop further injury for the present.   |
|                       | 36 Jamui " 30 "                                       | 0.55   | Weather—drier than usual till 29th, since which there has been moderate rain. Prospects of the <i>bhadai</i> crops generally fair except in the north, where the were partially damaged by early floods. Winter paddy is being transplanted and is doing fairly. There has been some apprehension owing to a break in the rains and to the rapid fall of the rivers, but moderate showers have since fallen. Common rice selling at 20 seers per rupee. Public health generally good. |
|                       | 37 Bankulpoore " 30 "                                 | 3.53   | Weather—cloudy and towards end of week rainy. Rainfall, though behind time, has done much good. Crops in Godda and Rajmehal suffer from want of rain. Prospects of Indian-corn middling. Cholera in north of district and in Sahabgunge.  |
|                       | 38 Purneah Kishengunge Arraah " 30 "                  | 0.86<br>0.26<br>0.08                         |   |
| ORISSA.               | 39 Maldan " 30 "                                      | 1.17   | Weather—sultry. <i>Sarad</i> and <i>beali</i> rice plants growing well. <i>Beali</i> in ear. Common rice 18½ seers per rupee in town and 22 to 25 seers in the interior. Cholera prevails in almost every part of the district, and somewhat violently in town. River rising.   |
|                       | 40 Chanchal " 30 "                                    | 0.29   | Weather—seasonable. Transplantation of <i>sarad</i> plants in progress. <i>Beali</i> in ear. Rivers still rising. Common rice 23 seers 13 chittacks per rupee in Sudder sub-division and 21 seers 14 chittacks in Khoorda sub-division. Cases of cholera reported from most parts of the district.  |
|                       | 41 Shibgunge " 30 "                                   | 1.60   | Weather—cloudy and rainy. Agricultural operations going on vigorously. Prospects of crops favourable. A few sporadic cases of cholera reported. Public health otherwise good.   |
|                       | 42 Gajole " 30 "                                      | 0.80   |   |
|                       | 43 Southal Pergna " 30 "                              | 4.01<br>1.43<br>0.13<br>3.21<br>3.22<br>1.71 |   |
|                       | 44 Deoghur Godda Jantara Pakour Rajmehal " " "        |  |   |
| <b>CHOTA NAGPORE.</b> |   |  |   |
| CHOTA NAGPORE.        | 45 East-West Frontier Agency Hazaribagh, July 29, '87 | 4.95   | Heavy rain at head-quarters. Want of rain reported from some thanas. Agricultural prospects generally favourable. All crops doing well, but in some places rain wanted. General health fair, but cases of cholera continue to be reported from several thanas.  |
|                       | 46 Lohardugga Palamow " 30 "                          | 4.5<br>1.5                                   | Weather—seasonable. Prospects of crops good. Transplanting of rice going on almost throughout the district. Prices steady. Cholera still prevails. Public health otherwise good.  |
|                       | 47 Singbhum " 29 "                                    | 3.90   | Weather—cool. Timely rain has been most useful. Agricultural operations in active progress. Good reports from all parts. Health good in general. Cholera in Seraikela.  |
|                       | 48 Nandabhum Govindpur " 30 "                         | 2.72<br>1.29                                 | Weather—cool and seasonable. Transplanting in progress. More rain wanted in north and west of district. Prospects of <i>bhadai</i> crops everywhere excellent. Price of rice rising. Public health good.  |
|                       |   |  |   |
|                       |   |  |   |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 2nd August 1887.W. C. MACPHERSON,  
Offg. Secy. to the Govt. of Bengal.



The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of March 1887.

### IMPORTS INTO CALCUTTA.

| SPECIFICATION OF ROUTES.                   | FOOD-GRAINS. |          |          |                  |                    | FIBROUS PRODUCTS. |             | OIL-SEEDS. |               | Tea, Indian. | Cotton, raw. | Silk, raw. | SUGAR.   |             | TOBACCO.  |              |
|--|--------------|----------|----------|------------------|--------------------|-------------------|-------------|------------|---------------|--------------|--------------|------------|----------|-------------|-----------|--------------|
|  | Rice.        | Paddy.   | Wheat.   | Gram and pulses. | Other food-grains. | Jute, raw.        | Gunny-bags. | Linseed.   | Mustard seed. |              |              |            | Drained. | Un-drained. | Bil-path. | Other kinds. |
|  | Mds.         | Mds.     | Mds.     | Mds.             | Mds.               | Mds.              | No.         | Mds.       | Mds.          | Mds.         | Mds.         | Mds.       | Mds.     | Mds.        | Mds.      | Mds.         |
| By country boats ...                       | 15,71,554    | 1,23,475 | 29,445   | 1,53,915         | 8,234              | 3,36,564          | 1,009,772   | 75,059     | 5,788         | .....        | 7,439        | 199        | 9,070    | 34,745      | ...       | 7,129        |
| By river steamers ...                      | 5,920        | 23       | 16,301   | 3,152            | .....              | 4,09,888          | .....       | 24,479     | 16,300        | .....        | 7,904        | 181        | 623      | 14          | ...       | 493          |
| By rail { East Indian Railway ...          | 3,46,003     | 3,035    | 5,16,020 | 1,38,764         | 13,855             | .....             | 20,985      | 2,36,094   | 2,36,320      | .....        | 2,47,111     | 508        | 2,905    | 1,790       | ...       | 1,009        |
| By rail { Eastern Bengal State Railway ... | 58,289       | 4,417    | 14,233   | 1,06,560         | .....              | 2,31,039          | 1,102,845   | 66,715     | 6,289         | 457          | 3,317        | 1,145      | 163      | 42,905      | 4,173     | 9,027        |
| By road ...                                | 93,228       | 7,746    | 619      | 12,640           | .....              | 32,050            | 23,700      | .....      | .....         | .....        | 45           | .....      | 12,622   | 23,456      | ...       | 12,193       |
| By sea ...                                 | 57,825       | 6,244    | 20       | 94               | .....              | 2,291             | 180         | .....      | 59            | 123          | 17,367       | 41         | 10,400   | .....       | ...       | 278          |
| Grand Total of Imports in March 1887 ...   | 21,34,819    | 1,46,026 | 3,77,444 | 4,05,122         | 22,069             | 9,60,732          | 2,104,322   | 4,01,875   | 2,64,754      | 7,780        | 2,83,073     | 2,082      | 30,342   | 1,07,970    | 4,173     | 30,189       |
| Grand Total of Imports in March 1886 ...   | 14,21,989    | 1,61,897 | 1,66,816 | 3,34,751         | 6,338              | 6,04,889          | 1,953,574   | 2,23,998   | 2,11,900      | 1,322        | 1,06,546     | 2,016      | 50,066   | 1,20,100    | 10,876    | 30,626       |

The following Statement shows the Values, Quantities, and Numbers of the Principal Staples of Traffic exported Inland from Calcutta during the month of March 1887.

### EXPORTS FROM CALCUTTA.

| Whither exported.      | Cotton piece-goods. |         | Cotton twist. |         | Salt.    | Gunny-bags. | Whither exported.  | Cotton piece-goods. |          | Cotton twist. |         | Salt.     | Gunny-bags. |
|------------------------|---------------------|---------|---------------|---------|----------|-------------|--|---------------------|----------|---------------|---------|-----------|-------------|
|                        | European.           | Indian. | European.     | Indian. |          |             |  | European.           | Indian.  | European.     | Indian. |           |             |
|                        | Rs.                 | Rs.     | Mds.          | Mds.    | Mds.     | No.         |  | Rs.                 | Rs.      | Mds.          | Mds.    | Mds.      | No.         |
| <b>BENGAL.</b>         |                     |         |               |         |          |             |  |                     |          |               |         |           |             |
| Burdwan ...            | 3,16,333            | 2,420   | 624           | 1,782   | 45,072   | 189,888     | Hazareebagh ...  | 84,924              | 600      | 13            | 184     | 3,608     | 5,440       |
| Beerbhoom ...          | 1,73,545            | 1,410   | 102           | 635     | 15,092   | 97,379      | Manbhoom ...   | 65,391              | 82       | 82            | 1,008   | 9,775     | 1,750       |
| Midnapore ...          | 2,01,123            | 11,809  | 4,174         | 43,210  | 27,867   | 27,867      | Total of Chota Nagpore ...   |                     |          |               |         |           |             |
| Hugli ...              | 1,20,080            | 902     | 151           | 2,556   | 79,895   | 79,895      |  | 1,50,318            | 680      | 85            | 1,792   | 18,443    | 7,310       |
| 24-Pergunnahs ...      | 1,85,235            | 6,785   | 493           | 12,314  | 17,773   | 17,773      | Grand Total of supplies into the provinces under the Lieutenant-Governor of Bengal.              |                     |          |               |         |           |             |
| Nudda ...              | 4,38,944            | 1,530   | .....         | 30,427  | 69,857   | 69,857      | OTHER PROVINCES.   |                     |          |               |         |           |             |
| Khulna ...             | 8,993               | 107     | .....         | 8,550   | 4,795    | 4,795       | Assam ...  | 1,99,292            | 3,410    | 67            | 50      | 33,010    | 1,285       |
| Jessore ...            | 1,20,393            | 590     | 24            | 24,597  | 13,120   | 13,120      | North-Western Provinces and Oudh ...   | 33,29,424           | 19,715   | 5,410         | 58      | 72,020    | 661,780     |
| Mooredhabad ...        | 60,543              | 1,969   | 63            | 26      | 5,855    | 13,541      | Punjab ...   | 11,23,974           | 5,400    | 1,729         | 48      | 153,140   | 153,140     |
| Dinagore ...           | 50,020              | .....   | 113           | 245     | 10,074   | 20,440      | Central Provinces ...  | 28,476              | 220      | 153           | .....   | 103,180   | 103,180     |
| Kajmahlye ...          | 1,40,527            | 54      | 73            | 15,047  | 8,191    | 8,191       | Kajputana States ...   | 46,491              | 26,840   | 159           | .....   | 72,768    | 72,768      |
| Rangpore ...           | 90,514              | 4,730   | 212           | 165     | 15,362   | 15,362      | Romby ...  | 315                 | 1,540    | .....         | .....   | 1,492,010 | 325,400     |
| Bowra ...              | 1,16,227            | 62      | 61            | 9,009   | 28,140   | 28,140      | Madras ...   | 72,751              | 260      | 1,333         | .....   | 27        | 9,975       |
| Pinna ...              | 50,838              | 247     | 60            | 62,523  | 31,145   | 3,780       | Bihar ...  | 893                 | .....    | .....         | .....   | .....     | 2,894,950   |
| Darjeeling ...         | 52,920              | 990     | 109           | 186     | 495      | 1,610       | Nizam's Territory ...  | 378                 | .....    | 1             | .....   | .....     | .....       |
| Jalpigore ...          | 43,911              | .....   | 175           | 91      | 14,038   | 745         | British Burmah ...   | 5,57,106            | 170      | 1,933         | 3,397   | .....     | 2,894,950   |
| Dacca ...              | 5,43,440            | .....   | 1,569         | 187     | 39,470   | 150         | Other places ...   | 30,535              | 8,754    | 30            | 456     | 54        | 2,310,379   |
| Farruckpore ...        | 2,54,564            | 1,194   | .....         | 31,145  | 45,710   | 70          | Grand Total of Exports in March 1887 ...   |                     |          |               |         |           |             |
| Backergunge ...        | 1,26,008            | .....   | 2             | .....   | 14,715   | 14,715      |  | 1,38,71,794         | 1,11,363 | 27,902        | 13,956  | 9,02,561  | 10,040,805  |
| Mymensingh ...         | 89,369              | 220     | .....         | .....   | 3,100    | 43,800      | March 1886 ...   | 1,30,14,882         | 93,653   | 26,952        | 6,586   | 6,58,356  | 13,455,828  |
| Tippurah ...           | .....               | .....   | .....         | .....   | 2,925    | 500         | The Sea-borne Trade of Calcutta in these Staples during the month of March 1887 was as follows:— |                     |          |               |         |           |             |
| Chittagong ...         | 1,00,660            | .....   | 310           | .....   | 3,460    | .....       | IMPORTED INTO CALCUTTA—  |                     |          |               |         |           |             |
| Noakhali ...           | 4,000               | .....   | 30            | .....   | .....    | .....       | From Foreign Ports—  |                     |          |               |         |           |             |
| Total of Bengal ...    | 34,27,770           | 30,434  | 12,097        | 3,058   | 4,40,190 | 599,896     | United Kingdom ...   | 99,38,500           | .....    | 17,014        | .....   | 5,70,435  | .....       |
| <b>BEHAR.</b>          |                     |         |               |         |          |             |  |                     |          |               |         |           |             |
| Patna ...              | 5,77,051            | 1,980   | 183           | 145     | 1,04,378 | 191,571     | Other Foreign ports ...  | 36,698              | .....    | 136           | .....   | 2,08,495  | .....       |
| Gya ...                | 2,42,760            | 1,050   | 66            | 516     | 17,173   | 67,410      | Total of Foreign Trade ...   |                     |          |               |         |           |             |
| Shahabad ...           | 4,01,023            | 1,540   | 5             | 163     | 26,334   | 21,805      |  | 99,75,098           | .....    | 17,200        | .....   | 8,36,930  | .....       |
| Muzafferpore ...       | 2,25,351            | 220     | 24            | 21      | 8,121    | 1,535       | From Indian Ports—   |                     |          |               |         |           |             |
| Burhanga ...           | 6,27,921            | 2,040   | 700           | 45,774  | 95,870   | 17,204      | Romby ...  | 28,130              | 1,43,382 | 4             | 8,090   | 62,552    | .....       |
| Barun ...              | 2,80,296            | 1,320   | 7             | 34      | 6,376    | 17,204      | Madras ...   | 6,405               | 2,124    | .....         | .....   | .....     | .....       |
| Chumpran ...           | 8,00,541            | 690     | 36            | 60      | 22,014   | 51,485      | British Burmah ...   | 8,072               | .....    | .....         | .....   | .....     | .....       |
| Munghyr ...            | 2,63,257            | .....   | 11            | 402     | 14,329   | 83,185      | Other Indian ports ...   | .....               | .....    | 30            | .....   | 980       | .....       |
| Bhagalpore ...         | 4,91,068            | .....   | 74            | 348     | 21,118   | 119,215     | Total of Interportal Trade ...   |                     |          |               |         |           |             |
| Purneah ...            | 2,58,237            | 220     | 262           | 920     | 13,239   | 2,295       |  | 43,207              | 1,45,508 | 4             | 8,110   | 62,552    | 980         |
| Maldah ...             | .....               | .....   | .....         | .....   | 6,825    | .....       | Grand Total of Imports in March 1887 ...   |                     |          |               |         |           |             |
| Southal Pergunnahs ... | 3,23,044            | 3,630   | 609           | 609     | 30,764   | 94,325      |  | 1,00,18,305         | 1,45,508 | 17,204        | 8,120   | 8,00,483  | 880         |
| Total of Behar ...     | 44,89,348           | 13,800  | 748           | 3,914   | 3,16,073 | 729,700     | March 1886 ...   | 1,04,33,737         | 1,17,396 | 18,572        | 8,872   | 7,64,845  | .....       |
| <b>ORISSA.</b>         |                     |         |               |         |          |             |  |                     |          |               |         |           |             |
| Cuttack ...            | .....               | .....   | .....         | .....   | 16,225   | 16,225      | * As per tariff declaration value.   |                     |          |               |         |           |             |
| Balasore ...           | 1,08,980            | .....   | 4,001         | 87      | 10,130   | 170,300     |  |                     |          |               |         |           |             |
| Total of Orissa ...    | 1,08,980            | .....   | 4,001         | 87      | 16,130   | 191,525     |  |                     |          |               |         |           |             |

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported from Calcutta during the month of March 1887.

| SPECIFICATION OF ROUTES.                   | COTTON PIECE-GOODS. |          | COTTON TWIST. |         | Salt.    | Gunny-bags. |
|--|---------------------|----------|---------------|---------|----------|-------------|
|  | European.           | Indian.  | European.     | Indian. |          |             |
|  | Rs.                 | Rs.      | Mds.          | Mds.    | Mds.     | No.         |
| By country boats ...                       | 3,59,040            | 9,945    | 4,716         | .....   | 3,14,624 | 133,789     |
| By river steamers ...                      | 4,94,347            | .....    | 1,155         | 191     | 23,210   | 90,272      |
| By rail { East Indian Railway ...          | 1,00,07,802         | 73,300   | 8,899         | 8,729   | 4,42,706 | 1,003,062   |
| By rail { Eastern Bengal State Railway ... | 18,52,515           | 9,350    | 5,301         | 943     | 1,03,092 | 137,163     |
| By road ...                                | 2,29,079            | 9,624    | 678           | 123     | 4,400    | 7,920       |
| By sea ...                                 | 9,30,002            | 9,184    | 7,113         | 3,970   | 14,400   | 7,796,964   |
| Grand Total of Exports in March 1887 ...   | 1,38,71,794         | 1,11,363 | 27,802        | 13,956  | 9,02,561 | 10,040,805  |
| Grand Total of Exports in March 1886 ...   | 1,30,14,882         | 93,653   | 26,952        | 6,586   | 6,58,356 | 13,455,828  |

STATISTICAL DEPARTMENT,  
The 29th July 1887.

P. NOLAN,  
Secretary to the Govt. of Bengal.

# Meteorological Report of the Province of Bengal.

| METEOROLOGICAL DIVISION. | DISTRICT.                 | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|--------------------------|---------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------|--------------------------|---------------------|-------------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|---------------------------|
|                          |                           |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.         |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|                          |                           |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week. | Date.                    | Lowest during week. | Date.                   | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean 10 A.M. temperature. |
|                          |                           |                         |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
| ORIGINAL.                | Pooree                    | Gopalpore               | 29°516                          | 29°560                     | -.044                | SSW                   | 278°0               | 88°2                 | 23rd July                | 78°8                | 24th July               | 87°1                      | 80°5                              | 83°8                            | +1°3                                | 83°9                      |
|                          | False Point               | False Point             | 29°548                          | 29°503                     | -.044                | WNW, NW               | 247°0               | 89°4                 | 27th "                   | 78°1                | 24th "                  | 85°5                      | 77°0                              | 81°7                            | -1°3                                | 82°9                      |
|                          | Outtaek                   | Outtaek                 | 29°490                          | 29°561                     | -.043                | Calm                  | 48°0                | 95°0                 | 27th "                   | 77°3                | 20th & 24th July.       | 87°9                      | 78°6                              | 83°8                            | +0°3                                | 84°4                      |
|                          | Balsore                   | Balsore                 | 29°464                          | 29°539                     | -.087                | SW                    | 134°8               | 90°4                 | 27th "                   | 76°7                | 24th & 25th July.       | 86°6                      | 78°0                              | 82°3                            | +0°2                                | 83°8                      |
|                          | South-West Midnapore      | Saugor Island           | 29°511                          | 29°537                     | -.060                | SSW                   | 418°0               | 89°7                 | 27th "                   | 78°0                | 24th "                  | 86°8                      | 80°1                              | 83°3                            | -0°1                                | 83°0                      |
|                          | Midnapore                 | Midnapore               | 29°407                          | 29°587                     | -.033                | NE                    | 105°7               | 90°3                 | 23rd "                   | 77°3                | 29th "                  | 87°3                      | 78°9                              | 83°8                            | -0°3                                | 83°9                      |
|                          | 24-Pergannahs             |                         |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|                          | Howrah                    | Calcutta                | 29°510                          | 29°537                     | -.069                | SE                    | 134                 | 89°0                 | 24th "                   | 77°7                | 25th "                  | 87°0                      | 79°1                              | 83°1                            | -0°1                                | 84°4                      |
|                          | Hooghly                   |                         |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|                          | Burdwan                   | Burdwan                 | 29°442                          | 29°541                     | -.047                | SE                    | 89°0                | 92°1                 | 27th "                   | 76°9                | 25th "                  | 89°9                      | 79°4                              | 84°6                            | -0°1                                | 84°3                      |
| SOUTH-WEST BENGAL.       | Bankura                   | Bankura                 | 29°217                          | -                          | -                    | Calm                  | 17°0                | 90°1                 | 28th "                   | 77°0                | 24th "                  | 87°7                      | 78°5                              | 83°1                            | -                                   | 84°3                      |
|                          | Beerbhoom                 |                         |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|                          | West Burdwan              | Ranecunje               | 29°190                          | 29°504                     | -.020                | Easterly              | 110°1               | 91°0                 | 28th "                   | 76°8                | 29th "                  | 89°1                      | 78°9                              | 84°1                            | +0°3                                | 84°6                      |
|                          | Mooredabad                | Berhampore              | 29°402                          | 29°550                     | -.028                | E                     | 130°1               | 90°1                 | 23rd, 24th, 27th July.   | 77°3                | 25th & 29th July.       | 89°2                      | 78°7                              | 84°0                            | -0°3                                | 84°7                      |
|                          | Nudda                     | Krishnagur              | 29°408                          | 29°564                     | -                    | ESE                   | 110°7               | 90°8                 | 23rd "                   | 76°8                | 25th "                  | 86°8                      | 78°1                              | 83°5                            | -                                   | 84°8                      |
|                          | Jessore                   | Jessore                 | 29°535                          | 29°560                     | -.030                | SSE                   | 119°5               | 90°7                 | 27th "                   | 78°4                | 23rd, 24th & 25th July. | 88°6                      | 79°0                              | 83°8                            | -0°0                                | 83°4                      |
|                          | Khoolna                   |                         |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|                          | Chittagong                | Chittagong              | 29°551                          | 29°641                     | -.030                | SSE                   | 151°0               | 88°8                 | 24th "                   | 75°0                | 23rd & 29th July.       | 85°0                      | 76°8                              | 80°8                            | -0°3                                | 82°8                      |
|                          | Chittagong Hill Tracts    | Demasiri                |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|                          | Backergunge               | Barrisal                | 29°567                          | 29°579                     | -.018                | S                     | 112°1               | 89°3                 | 27th July                | 70°3                | 28th "                  | 86°7                      | 78°4                              | 82°6                            | +1°5                                | 82°8                      |
| EAST BENGAL.             | Noakholly                 | Noakholly               | 29°563                          | 29°607                     | -                    | SE                    | 79°6                | 88°5                 | 24th "                   | 76°3                | 28th "                  | 85°6                      | 77°4                              | 81°5                            | -                                   | 81°8                      |
|                          | Furzedpore                | Furzedpore              | 29°541                          | 29°581                     | -.000                | E                     | 131                 | 87°0                 | 27th "                   | 76°4                | 28th "                  | 86°9                      | 78°6                              | 82°3                            | -0°8                                | 83°0                      |
|                          | Dacca                     | Dacca                   | 29°566                          | 29°589                     | -.019                | SE                    | 189                 | 91°6                 | 23rd "                   | 78°2                | 29th "                  | 89°4                      | 79°3                              | 84°4                            | +0°9                                | 84°3                      |
|                          | Comillah                  | Comillah                | 29°568                          | 29°604                     | -.031                | SE                    | 105°3               | 92°3                 | 24th "                   | 74°8                | 28th "                  | 89°6                      | 78°4                              | 83°0                            | +1°4                                | 83°9                      |
|                          | Mymensingh                | Mymensingh              | 29°563                          | 29°620                     | +°010                | SE                    | 135°0               | 91°3                 | 23rd & 27th July.        | 77°0                | 28th & 29th July.       | 90°0                      | 78°4                              | 84°2                            | +1°1                                | 83°9                      |
|                          | Bogra                     | Bogra                   | 29°504                          | 29°507                     | -                    | SE                    | 124°8               | 92°3                 | 28th "                   | 76°8                | 29th "                  | 89°7                      | 78°7                              | 84°3                            | -                                   | 83°6                      |
|                          | Pubna                     | Serajgunge              | 29°553                          | 29°579                     | -.034                | E                     | 112°1               | 91°6                 | 28th "                   | 77°3                | 23th "                  | 89°9                      | 78°6                              | 84°3                            | +1°1                                | 84°3                      |
|                          | Rajshahye                 | Rampore Beaulah.        | 29°468                          | 29°558                     | -.006                | NE                    | 85°9                | 92°3                 | 24th & 25th July.        | 69°7                | 28th "                  | 90°4                      | 71°5                              | 81°0                            | -3°9                                | 83°9                      |
|                          | Maldah                    | Maldah                  | 29°400                          | -                          | -                    | SE                    | 45°4                | 93°2                 | 28th "                   | 76°9                | 29th "                  | 90°5                      | 79°4                              | 85°0                            | -                                   | 85°5                      |
|                          | Dinapore                  | Dinapore                | 29°468                          | 29°586                     | +°005                | ESE                   | 107°0               | 93°1                 | 28th "                   | 77°6                | 28th & 29th July.       | 90°7                      | 79°2                              | 85°0                            | +0°5                                | 84°8                      |
| NORTH BENGAL.            | Rangpore                  | Rangpore                | 29°472                          | 29°585                     | -.098                | E                     | 80°0                | 93°8                 | 28th "                   | 79°2                | 28th "                  | 88°4                      | 79°5                              | 86°0                            | +1°7                                | 84°7                      |
|                          | Jalpigore                 | Jalpigore               | 29°323                          | 29°608                     | +°042                | NE, SE                | 96°1                | 98°0                 | 28th "                   | 76°8                | 25th "                  | 90°4                      | 77°8                              | 84°1                            | +0°9                                | 84°4                      |
|                          | Cooch Behar               |                         |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|                          | Darjeeling Hill Districts | Darjeeling              | 29°381                          | -                          | +°025                | E                     | 38°0                | 69°6                 | 24th & 28th July.        | 56°6                | 28th "                  | 68°2                      | 57°8                              | 66°0                            | +0°3                                | 64°2                      |
|                          | Furneah                   | Furneah                 | 29°464                          | 29°589                     | -.006                | Calm                  | 23°0                | 93°2                 | 28th "                   | 77°6                | 29th "                  | 90°6                      | 79°2                              | 84°9                            | +0°5                                | 83°6                      |
|                          | North Bhagulpore          |                         |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|                          | Moulterpore               | Moulterpore             |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|                          | Durbhunga                 | Durbhunga               | 29°382                          | 29°567                     | -.025                | Easterly              | 137°0               | 93°4                 | 24th July                | 90°0                | 24th & 25th July.       | 91°5                      | 81°3                              | 86°4                            | +1°9                                | 87°0                      |
|                          | Chumbarun                 | Motihar                 | 29°382                          | 29°546                     | -.029                | SE                    | 206°6               | 96°0                 | 24th, 26th & 29th July.  | 77°9                | 23rd "                  | 94°3                      | 79°6                              | 86°9                            | +2°2                                | 89°0                      |
|                          | Saran                     | Chupra                  | 29°353                          | 29°545                     | -.011                | E                     | 18°6                | 96°0                 | 29th "                   | 77°3                | 29th "                  | 94°0                      | 79°7                              | 86°9                            | +2°4                                | 88°3                      |
| SOUTH BENGAL.            | Shahabad                  | Dhrees                  | 29°183                          | 29°534                     | -.029                | Easterly              | 276°2               | 91°4                 | 28th "                   | 78°9                | 26th & 29th July.       | 88°5                      | 79°9                              | 84°2                            | +2°1                                | 86°5                      |
|                          | Buxar                     | Buxar                   | 29°289                          | 29°528                     | -.024                | E                     | 303°4               | 95°9                 | 23rd "                   | 77°7                | 24th "                  | 92°9                      | 79°0                              | 86°3                            | +2°5                                | 87°9                      |
|                          | Arrah                     | Arrah                   | 29°324                          | 29°519                     | -.040                | E, ESE                | 114°9               | 95°4                 | 23rd & 25th July.        | 78°6                | 29th "                  | 93°1                      | 80°0                              | 86°6                            | +1°7                                | 86°7                      |
|                          | Gya                       | Gya                     | 29°141                          | 29°514                     | -.069                | NE                    | 69°0                | 94°5                 | 26th & 28th July.        | 76°8                | 29th "                  | 92°5                      | 79°2                              | 85°9                            | +1°1                                | 85°1                      |
|                          | Patna                     | Bankipore               | 29°371                          | 29°551                     | -.031                | ESE                   | 123                 | 93°9                 | 24th "                   | 78°2                | 29th "                  | 92°4                      | 80°6                              | 86°5                            | +1°1                                | 87°9                      |
|                          | South Bhagulpore          |                         |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
|                          | Monghyr                   | Bhagulpore              | 29°378                          | 29°541                     | -.016                | E                     | 68°6                | 92°4                 | 23rd, 24th, & 26th July. | 76°0                | 29th "                  | 90°7                      | 79°0                              | 84°8                            | +0°3                                | 84°3                      |
|                          | Bonthal Pergannahs        | Doomka                  | 29°040                          | -                          | -                    | ESE                   | 43°5                | 90°2                 | 27th "                   | 76°3                | 29th "                  | 88°9                      | 78°2                              | 83°5                            | -                                   | 84°6                      |
|                          | Hazribagh                 | Hazribagh               | 27°560                          | 29°546                     | -.023                | E, SW                 | 274°0               | 87°5                 | 28th "                   | 71°7                | 29th "                  | 85°4                      | 72°8                              | 79°1                            | +0°6                                | 79°8                      |
|                          | Lohardugga                |                         |                                 |                            |                      |                       |                     |                      |                          |                     |                         |                           |                                   |                                 |                                     |                           |
| CHOTA NAGPORE.           | Manbhoom                  | Ranchee                 | 27°437                          | 29°528                     | -.053                | Variable              | 205°5               | 86°0                 | 28th "                   | 70°9                | 29th "                  | 83°6                      | 78°0                              | 77°8                            | -0°4                                | 78°4                      |
|                          | Singbhoom                 | Chyabassa               | 28°761                          | -                          | -                    | SSE                   | 55°9                | 89°3                 | 27th "                   | 76°0                | 29th "                  | 87°1                      | 77°0                              | 82°1                            | -                                   | 82°2                      |
|                          | Sitamar                   | Sitamar                 | 29°280                          | 29°661                     | -.006                | NE                    | 62°0                | 96°6                 | 24th "                   | 75°5                | 24th "                  | 92°2                      | 77°8                              | 84°7                            | +0°7                                | 85°5                      |
|                          | Assam                     | Dhabr                   | 29°499                          | 29°615                     | +°016                | Calm, SE              | 141°0               | 92°7                 | 28th "                   | 77°3                | 28th "                  | 89°3                      | 79°4                              | 84°6                            | +0°5                                | 84°3                      |
| ARUNACHAL PRADESH.       | Silchar                   | Silchar                 | 29°350                          | 29°641                     | -.051                | Calm                  | 58°0                | 97°6                 | 28rd "                   | 76°7                | 24th & 29th July.       | 94°3                      | 77°6                              | 83°9                            | +2°6                                | 85°1                      |

Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the readings during the same period for the past ten years. The humidity of the atmosphere is expressed as percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The number of rainy days in the district during the returns is denoted by the sub-divisional station for the period in question during the past ten years. A rainy day is one on which at least hundredth of an inch of rain has fallen.

for the week ending Friday, the 29th of July 1887.

| DISTRICT OBSERVATIONS.      |   |   |                    |                     |                    |              |                      |                    |              |                               |                              |                                 |                         |                          |
|-----------------------------|---|---|--------------------|---------------------|--------------------|--------------|----------------------|--------------------|--------------|-------------------------------|------------------------------|---------------------------------|-------------------------|--------------------------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing stations. | RAINFALL.          |                     |                    |              |                      |                    |              |                               |                              |                                 | Representative station. | DISTRICT.                |
|                             |   |   | Of week.           | Since 1st of month. |                    |              | Since 15th May 1887. |                    |              | Average number of rainy days. | Normal number of rainy days. | Normal number of 15th May 1887. |                         |                          |
|                             |   |   | Mean for district. | Normal mean.        | Mean for district. | Normal mean. | Variation.           | Mean for district. | Normal mean. | Variation.                    |                              |                                 |                         |                          |
| 81                          | 67  | 2.37                                    | —                  | —                   | —                  | —            | —                    | —                  | —            | —                             | —                            | —                               | Gopalpore               | Poorree                  |
| 85                          | 86  | 6.53                                    | 3.10               | 2.94                | 10.85              | 11.69        | -0.84                | 18.82              | 22.06        | -3.24                         | 4.5                          | 4.0                             | False Point             | Cuttack                  |
| 77                          | 96  | 4.25                                    | 4.24               | 3.93                | 11.52              | 12.03        | -0.51                | 25.58              | 23.57        | +2.01                         | 4.2                          | 4.5                             | Cuttack                 | Balasore                 |
| 82                          | 76  | 3.71                                    | 2.71               | 2.55                | 10.76              | 11.41        | -0.65                | 22.96              | 22.25        | +0.71                         | 4.3                          | 4.2                             | Balasore                | South-West Midnapore     |
| 89                          | 90  | 6.97                                    | 5.09               | 3.96                | 16.41              | 14.18        | +2.23                | 27.07              | 26.30        | +0.77                         | 6.0                          | 4.7                             | Saugor Island           | South 24-Pergunnahs      |
| 82                          | 71  | 2.09                                    | 4.07               | 3.02                | 17.89              | 11.48        | +6.41                | 30.09              | 22.92        | -7.17                         | 4.6                          | 4.0                             | Midnapore               | Midnapore                |
| 80                          | 87  | 2.02                                    | 2.14               | 3.47                | 12.61              | 11.36        | +1.25                | 22.20              | 24.02        | -1.82                         | 5.3                          | 5.2                             | Calcutta                | 24-Pergunnahs            |
| 77                          | 91  | 1.61                                    | 2.90               | 2.81                | 11.55              | 9.51         | +2.04                | 26.55              | 20.52        | +6.03                         | 5.0                          | 1.6                             | Bardwan                 | Howrah                   |
| 82                          | 81  | 3.46                                    | 3.14               | 3.97                | 15.81              | 12.21        | +3.60                | 25.62              | 21.91        | -3.71                         | 5.5                          | 4.9                             | Bankura                 | Bankura                  |
| 82                          | 73  | 3.54                                    | 3.35               | 3.77                | 12.54              | 11.94        | +0.60                | 26.51              | 23.88        | +2.63                         | 5.8                          | 4.9                             | Raneegunge              | Beerbhoom                |
| 83                          | 93  | 2.11                                    | 2.50               | 2.51                | 11.78              | 10.50        | +1.28                | 32.62              | 21.62        | +11.00                        | 5.3                          | 4.5                             | Bachampore              | West Bardwan             |
| 80                          | 84  | 3.45                                    | 2.18               | 2.46                | 7.71               | 9.41         | -1.67                | 21.12              | 22.69        | -1.57                         | 4.8                          | 4.5                             | Krishnaghar             | Moorshehabad             |
| 86                          | 90  | 1.57                                    | 3.11               | 2.76                | 8.15               | 10.32        | -2.17                | 19.61              | 26.18        | -6.57                         | 6.1                          | 4.8                             | Jessore                 | Nudda                    |
| 84                          | 91  | 2.77                                    | 6.56               | 8.07                | 21.83              | 28.14        | -6.31                | 47.43              | 63.99        | -16.56                        | 6.0                          | 6.2                             | Chittagong              | Jessore                  |
| 88                          | 90  | 6.02                                    | 7.57               | 4.47                | 16.71              | 16.81        | -0.10                | 27.71              | 40.67        | -12.96                        | 7.0                          | 5.9                             | Dumra                   | Khoolna                  |
| 88                          | 67  | 7.28                                    | 1.83               | 5.02                | 15.47              | 21.77        | -6.30                | 10.18              | 55.01        | -44.83                        | 6.0                          | 5.8                             | Noakhully               | Chittagong Hill Tracts   |
| 88                          | 45  | 1.06                                    | 3.44               | 3.10                | 7.23               | 10.12        | -2.89                | 10.57              | 27.66        | -17.09                        | 4.7                          | 4.9                             | Lurnesspore             | Backergunge              |
| 85                          | 81  | 3.55                                    | 1.45               | 2.86                | 10.25              | 12.17        | -1.92                | 21.36              | 29.39        | -8.03                         | 6.5                          | 4.7                             | Dacca                   | Noakhully                |
| 78                          | 63  | 1.97                                    | 1.91               | 5.21                | 6.86               | 12.84        | -6.00                | 20.65              | 34.62        | -13.97                        | 4.8                          | 5.5                             | Comilla                 | Furriedpore              |
| 81                          | 80  | 1.15                                    | 0.67               | 2.11                | 7.45               | 11.84        | -4.39                | 31.25              | 32.89        | -1.64                         | 1.1                          | 1.9                             | Mymensingh              | Dacca                    |
| 81                          | 87  | 1.31                                    | 2.18               | 2.18                | 8.50               | 11.88        | -3.38                | 36.12              | 28.37        | +7.75                         | 5.5                          | 4.0                             | Bogra                   | Tipperah                 |
| 81                          | 67  | 1.14                                    | 1.21               | 2.01                | 8.11               | 9.28         | -1.17                | 21.15              | 21.15        | 0.00                          | 6.5                          | 4.9                             | Sonjunga                | Mymensingh               |
| 80                          | 97  | 1.65                                    | 2.67               | 2.22                | 8.23               | 11.12        | -2.89                | 21.15              | 21.25        | -0.10                         | 5.9                          | 5.8                             | Rangpur                 | Bogra                    |
| 82                          | 61  | 1.17                                    | 1.39               | 2.12                | 6.68               | 11.10        | -4.42                | 28.31              | 20.51        | +7.80                         | 2.5                          | 4.7                             | Maddah                  | Rajshahya                |
| 81                          | 61  | 2.11                                    | 2.18               | 2.10                | 7.79               | 11.78        | -3.99                | 40.67              | 28.26        | +12.41                        | 5.1                          | 1.9                             | Dumra                   | Maddah                   |
| 80                          | 57  | 0.11                                    | 1.53               | 2.78                | 7.46               | 10.55        | -3.09                | 11.91              | 11.00        | +0.91                         | 2.8                          | 3.5                             | Purnea                  | Dumra                    |
| 81                          | 70  | 0.11                                    | 2.25               | 1.04                | 11.56              | 10.93        | +0.63                | 67.33              | 28.33        | +39.00                        | 5.1                          | 1.9                             | Jalpaiguri              | Purnea                   |
| 92                          | 87  | 1.21                                    | 5.34               | 0.00                | 25.77              | 28.23        | -2.46                | 61.00              | 62.35        | -1.35                         | 5.5                          | 5.8                             | Darjeeling              | Jalpaiguri               |
| 81                          | 54  | 0.35                                    | 0.51               | 2.98                | 6.13               | 15.28        | -9.15                | 55.13              | 26.72        | +28.41                        | 2.1                          | 4.2                             | Purneah                 | Darjeeling Hill District |
| 77                          | 51  | 1.01                                    | 1.16               | 2.54                | 7.72               | 11.11        | -3.39                | 23.60              | 19.37        | +4.23                         | 3.5                          | 3.1                             | Meerutpore              | Purneah                  |
| 69                          | 71  | 0.80                                    | 0.85               | 2.49                | 6.77               | 11.27        | -4.50                | 21.85              | 20.17        | +1.68                         | 2.0                          | 3.0                             | Mothari                 | North Bhawalpur          |
| 74                          | 70  | 1.36                                    | 0.89               | 3.32                | 6.86               | 12.11        | -5.25                | 17.75              | 19.44        | -1.69                         | 3.0                          | 3.9                             | Chupra                  | Chandpur                 |
| 76                          | 69  | 2.05                                    | 2.01               | 3.45                | 6.73               | 11.00        | -4.27                | 16.30              | 16.95        | -0.65                         | 5.0                          | 4.2                             | Guxar                   | Chupra                   |
| 70                          | 66  | 1.81                                    | —                  | —                   | —                  | —            | —                    | —                  | —            | —                             | —                            | —                               | Arum                    | Shahabad                 |
| 70                          | 74  | 0.59                                    | 1.17               | 3.78                | 9.67               | 11.10        | -1.43                | 10.53              | 18.10        | -7.57                         | 1.0                          | 3.8                             | Gya                     | Arum                     |
| 68                          | 89  | 2.74                                    | 2.13               | 5.15                | 7.17               | 11.32        | -4.15                | 20.10              | 18.69        | +1.41                         | 4.0                          | 3.9                             | Bankipore               | Gya                      |
| 81                          | 67  | 3.37                                    | 2.73               | 3.50                | 10.63              | 10.75        | -0.12                | 23.38              | 18.99        | +4.39                         | 4.0                          | 4.4                             | Blumipore               | Patna                    |
| 86                          | 71  | 2.12                                    | 5.15               | 1.48                | 11.30              | 12.01        | -0.71                | 20.40              | 23.08        | -2.68                         | 4.7                          | 4.7                             | Dumka                   | South Rangabore          |
| 81                          | 10.0                                      | 4.88                                    | 4.25               | 5.59                | 11.58              | 12.71        | -1.13                | 22.91              | 22.91        | 0.00                          | 5.2                          | 5.4                             | Hazaribagh              | Moulvypore               |
| 85                          | 99  | 4.25                                    | 2.20               | 3.16                | 11.45              | 11.82        | -0.37                | 24.22              | 20.91        | +3.31                         | 5.3                          | 5.1                             | Ranchee                 | Sonthal Pergunnahs       |
| 88                          | 89  | 3.67                                    | 3.55               | 4.53                | 15.08              | 13.73        | -1.35                | 28.81              | 21.37        | +7.44                         | 7.0                          | 5.4                             | Chyconssa               | Chandpur                 |
| 84                          | 86  | 2.42                                    | —                  | —                   | —                  | —            | —                    | —                  | —            | —                             | —                            | —                               | Sisongar                | Singbhoom                |
| 81                          | 86  | 0.69                                    | —                  | —                   | —                  | —            | —                    | —                  | —            | —                             | —                            | —                               | Phoban                  | Phoban                   |
| 70                          | 86  | 0.81                                    | —                  | —                   | —                  | —            | —                    | —                  | —            | —                             | —                            | —                               | Siehar                  | Asan                     |

ra. The variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.  
 using cloud amount recorded at the foot of the sky observed, the whole sky being assumed by 11. Under the head District observations of rainfall, the normal mean  
 ra. The means of the district are the numerical averages of the rainfall returns received in the district, i.e., from the total rainfall at the several









**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE 29TH OF JULY 1887.**

At the close of the previous week a small barometric depression, accompanied by cyclonic circulation of winds, was situated in the north-west angle of the Bay. This small depression, which had formed on the 19th, had remained almost stationary for some days, except for a slight shifting of the centre from day to day, and on the 22nd the centre of the wind circulation was between Balasore and False Point. On the 23rd pressure had fallen over the whole province, the fall being largest in the north-west angle of the Bay, and the small barometric depression which existed over this area decidedly intensified. The lowest pressure reported on this day was 29·513" at Balasore, and the centre of the depression appeared to be between this station and False Point. A very distinct cyclonic circulation of winds accompanied the very feeble storm, but wind velocities in connection with it were small. On Sunday, the 24th, pressure again fell generally over the province, the fall being very rapid in the north-west angle of the Bay, where at Saugor Island it amounted to 0·151". This was produced by the further intensification of the depression, the centre of which on this day was decidedly nearer to the land and to Saugor Island than it was on the previous day, and on this date the centre appeared to be almost equi-distant between Saugor Island and Balasore. Pressure at Saugor Island at 10 A.M. on the 24th was 29·391", and at Balasore 29·409". Winds again showed a very complete cyclonic circulation round the depression, and practically this circulation affected the wind directions at all the stations in the province. Wind velocities in the neighbourhood of the disturbance, however, continued moderate only, though undoubtedly the weather over the sea area at the head of the Bay was decidedly squally. On this day the depression appears to have commenced to move in a north-westerly direction, and at 10 A.M. of the 25th it was in the extreme west of South-West Bengal, and passing into the south of Chutia Nagpur. On the morning of the 26th it had travelled towards Jubbulpur and Sutna, where on the 27th it rapidly diminished in intensity, and on the morning of the 28th it had practically disappeared. This small storm had therefore a life history of about 8 days, of which for the first five it remained almost stationary, and it was only during the last 2 or 3 days of its existence that it moved in a north-westerly or west-north-westerly direction, gradually decreasing in intensity in its progress over the land.

During the whole period of the existence of the feeble storm, the winds blowing in connection with it were very light. There was, however, the usual indraught towards the storm, and thus the rainfall bearing current was deflected towards the depression, and the greater part of the province received only local showers during the existence of the storm at the head of the Bay, though the area in immediate proximity to the storm received more general and heavier rain. Directly, however, the feeble storm had passed inland, the monsoon current blowing from the Bay of Bengal commenced to increase in strength and to pass over the land, and on the 28th the wind velocity had strengthened at Saugor Island from 15 miles an hour on the 26th and 27th to 20 miles an hour on the 28th, while for the 24 hours ending 10 A.M. of the 29th the velocity had averaged 27 miles an hour. For the last two or three days of the week therefore the monsoon current blowing over the province was decidedly strong, and rainfall became general and in many cases heavy on the 27th, 28th and 29th. The weather conditions at the close of the week were in fact decidedly favourable for the continuance of rainfall in Bengal.

*Pressure.*—The distribution of pressure has again been largely modified by the existence and passage of the depression described above. Pressure has been decidedly below the normal at almost all the stations in the province, but the defect has of course been greatest at the stations affected by the depression. Thus taking into consideration only those stations from which observations have been received for a series of years, and at which therefore accurate average pressures have been obtained, the variations from the normal are from a defect of 0·069 inch at Calcutta and one of 0·059 inch at Saugor Island to one of 0·005 inch at Purneah and 0·007 inch at Sibsaagar.

*Temperature.*—The variations of temperature during the week have to a great extent been dependent on the distribution of the rainfall. For the week, the average temperature has been distinctly in excess of the normal, the excess being largest in Behar. In North Behar the mean temperature for the week has been 1·8° in excess of the normal, and in South Behar the excess has been 1·5°. In North and East Bengal and Orissa temperature has also been in excess of the normal, but by small amounts, while in Chutia Nagpur it has been normal and in South-West Bengal slightly below it. For the whole province, Assam excluded, the mean temperature for the week has been 0·6° in excess of the normal. In Assam temperature has also been in excess of the normal by 1·3°.

*Rainfall.*—The causes affecting the distribution of the rainfall have already been referred to under the meteorology of the week. Rainfall has consequently been fairly heavy in all districts except North Behar and North Bengal. Thus in East Bengal, Orissa and Chutia Nagpur the falls have averaged between three and four inches, and in South-West Bengal and South Behar between two and a half and three inches. In North Bengal an average fall of only two inches has been received, and in South Behar only a fall of an inch. The actual average falls for the week in each of the seven meteorological districts expressed as a

percentage of the normal falls for the period will be:—Orissa 103 per cent., South-West Bengal 93 per cent., East Bengal 93. per cent., North Bengal 74 per cent., North Behar 35 per cent., South Behar 70 per cent. and Chutia Nagpur 85 per cent. Or taking each of these divisions to have an equal value in the calculation, the rainfall of the province for the week has equalled 79 per cent. of the normal.

In Assam rainfall has also been decidedly light and rather deficient during the week : thus Dhubri has received only 0.69 inch, Silchar only 0.81 inch, and Sibsagar, which has received heavier rain, only 2.42 inches.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the Province for the week ending Friday, the 29th of July 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          |                 | RAINFALL.  |                         |                                |            |                     |                |                      |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|----------------|----------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                | Since 15th May 1887. |                 |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Aver g'.            | Normal average | Average.             | Normal average. |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                |                      |                 |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                |                      |                 |
| Oriss.                       | 95.9                          | 75.1                         | 86.8                    | 78.8                   | 82.8                  | +0.1   | 3.30     | 3.21            | +0.09      | 4.2                     | 4.2                            | 0          | 10.46               | 12.09          | 22.88                | 23.04           |
| South-West Bengal            | 92.1                          | 76.8                         | 88.3                    | 79.0                   | 83.6                  | -0.1   | 2.92     | 3.13            | -0.21      | 5.5                     | 4.7                            | +0.8       | 11.75               | 11.00          | 24.80                | 23.37           |
| East Bengal                  | 92.3                          | 74.8                         | 87.5                    | 77.0                   | 82.7                  | +0.0   | 3.80     | 4.08            | -0.28      | 4.5                     | 5.3                            | -0.8       | 11.87               | 15.07          | 27.67                | 38.01           |
| North Bengal                 | 93.8                          | 69.7                         | 90.6                    | 77.8                   | 84.2                  | +0.2   | 2.05     | 2.76            | -0.71      | 3.5                     | 4.7                            | -1.2       | 8.63                | 18.46          | 43.76                | 35.78           |
| North Behar                  | 96.0                          | 77.6                         | 92.6                    | 80.0                   | 86.3                  | +1.8   | 1.00     | 2.80            | -1.80      | 2.8                     | 3.7                            | -0.9       | 6.70                | 11.96          | 26.41                | 21.81           |
| South Behar                  | 95.0                          | 76.0                         | 91.3                    | 79.5                   | 85.4                  | +1.5   | 2.50     | 3.48            | -0.98      | 4.0                     | 4.2                            | -0.2       | 9.06                | 11.35          | 21.76                | 19.47           |
| Chutia Nagpur                | 87.5                          | 70.8                         | 84.5                    | 72.4                   | 78.5                  | 0  | 3.10     | 3.63            | -0.53      | 5.4                     | 5.3                            | +0.1       | 10.75               | 12.46          | 22.76                | 22.07           |
| Assam                        | 97.0                          | 75.5                         | 91.9                    | 78.0                   | 85.0                  | +1.3   |          |                 |            |                         |                                |            |                     |                |                      |                 |

\* Chyemass not included.

METEOROLOGICAL OFFICE, BENGAL :

The 2nd August 1887.

A. PEDLER,

Offg. Meteorological Reporter to the Govt. of Bengal.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 24th to 30th July 1887.

| MONTH. | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|--------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|        |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| -1887. |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| July   | 24th  | 82.2         | 88.0     | 8.4    | 79.6     | 79.3           | .963            | 78.1       | 87        | 0.23    |
| "      | 25th  | 81.2         | 85.4     | 8.0    | 77.4     | 79.8           | .999            | 79.2       | 94        | 0.62    |
| "      | 26th  | 84.0         | 91.0     | 13.0   | 78.0     | 80.3           | .985            | 78.8       | 84        | Nil     |
| "      | 27th  | 83.7         | 87.0     | 6.0    | 81.0     | 80.8           | 1.013           | 79.6       | 87        | 0.02    |
| "      | 28th  | 82.4         | 85.4     | 5.1    | 80.3     | 80.2           | 1.002           | 79.3       | 90        | 0.12    |
| "      | 29th  | 81.3         | 88.0     | 10.0   | 78.0     | 79.1           | .966            | 78.2       | 90        | 0.05    |
| "      | 30th  | 84.6         | 91.5     | 13.2   | 78.3     | 80.2           | .972            | 78.4       | 80        | 0.01    |

The mean temperature of the seven days ... 82.8

The extreme variation of temperature ... 14.1

The maximum temperature ... 91.5

The mean relative humidity ... 87 %

The total fall of rain from 24th to 30th July 1887 ... 1.05 Inch.

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ;

The 1st August 1887.

JOHN ELIOT,

Offg. Meteorological Reporter to the Govt. of India.

**Results of the Meteorological Observations taken at the Alipore Observatory from  
24th to 30th July 1887.**

| Month. | Date. | Maximum in <i>vac.</i> | Number of hours of bright sunshine. | Mean pressure barometer at 55° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                    |                 | Rain.   | WEATHER.                    |
|--------|-------|------------------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|--------------------------|-----------------|---------|-----------------------------|
|        |       |                        |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction.    | Miles recorded. |         |                             |
| 1887.  |       | °                      |                                     | inches.                              | °            | °        | °      | °        | °              | Inches.         | °          | %         |                          |                 | Inches. |                             |
| July   | 24th  | 144.5                  | 2.5                                 | 29.423                               | 82.1         | 86.5     | 6.9    | 79.6     | 79.0           | 0.949           | 77.6       | 86        | E by N and SE by S       | 230             | 0.26    | Cloudy, o, g, d, p.         |
| "      | 25th  | 123.5                  | 2.3                                 | .458                                 | 82.2         | 84.5     | 6.7    | 77.8     | 79.7           | .982            | 78.7       | 89        | ESE, SW and S by E       | 132             | 0.38    | Chiefly cloudy, o, g, d, p. |
| "      | 26th  | 152.3                  | 7.2                                 | .503                                 | 84.3         | 88.3     | 10.3   | 78.0     | 80.5           | .989            | 78.9       | 84        | S by E, SE by S and SSW. | 99              | Nil     | Chiefly cloudy, E.          |
| "      | 27th  | 102.5                  | 0.7                                 | .532                                 | 83.9         | 87.5     | 6.3    | 81.2     | 80.8           | 1.011           | 79.6       | 87        | SW, WNW and SSW          | 80              | 0.05    | Cloudy, o, g, d, t.         |
| "      | 28th  | 118.8                  | Nil                                 | .486                                 | 82.3         | 84.5     | 4.3    | 80.2     | 79.8           | 0.984           | 78.7       | 89        | SSW and WSW ...          | 124             | 0.14    | Cloudy, o, g, d, p.         |
| "      | 29th  | 146.2                  | 0.9                                 | .534                                 | 82.1         | 86.5     | 8.1    | 78.4     | 79.1           | .958            | 77.9       | 88        | WSW and SSW ...          | 139             | 0.07    | Cloudy, o, g, d, p.         |
| "      | 30th  | 152.4                  | 3.3                                 | .567                                 | 84.2         | 88.7     | 10.5   | 78.2     | 78.6           | .905            | 76.2       | 77        | SSW and WSW ...          | 154             | Nil     | Chiefly cloudy, D.          |

The mean pressure of the seven days ... .. Inches.  
The average pressure of the corresponding period for 24 years, S. G.'s Office ... 29.500  
... .. 29.536

The total number of hours of bright sunshine ... ..  
The maximum possible number of hours of sunshine ... .. 16.9  
... .. 92.4

The mean temperature of the seven days ... .. °  
The average temperature of the corresponding period for 24 years, S. G.'s Office ... 83.0  
The extreme variation of temperature ... .. 83.2  
The maximum temperature ... .. 10.9  
... .. 88.7

The highest velocity of the wind in one hour ... .. Miles.  
... .. 15

The highest pressure of wind on one square foot ... .. lbs.  
... .. Not measureable.

The mean relative humidity ... .. %  
The average relative humidity of the corresponding period for 24 years, S. G.'s Office ... 86  
... .. 86

The total fall of rain from 24th to 30th July 1887 ... .. Inches.  
The average fall of the corresponding period for 24 years, S. G.'s Office ... 0.90  
The total fall from 1st January to 30th July 1887 ... 3.06  
The average fall of the corresponding period for 24 years, S. G.'s Office ... 35.11  
... 33.68

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, t thunder, Δ dew.

JOHN ELIOT,

*Offg. Meteorological Reporter to the Govt. of India.*

METEOROLOGICAL OFFICE, INDIA ;  
Calcutta, the 1st August 1887.

## MEMORANDUM.

THE principal results to be gathered from the mortuary statistics of the districts in Bengal for the month of February 1887, as exhibited in the table annexed to this memorandum, are the following :—

1. That the deaths of 101,811 persons were registered out of a population of 66,163,884 in these districts, or at the rate of 18·36 per 1,000 per annum, against 26·88 per 1,000 in the preceding month, and 17·04 per 1,000 in the corresponding month of 1886, indicating, as compared with the latter period, much improvement in the record of the deaths.

2. That the undermentioned districts returned the highest proportions of the events :—

| <i>Districts.</i> | <i>Ratio per mille.</i> | <i>Districts.</i> | <i>Ratio per mille.</i> |
|-------------------|-------------------------|-------------------|-------------------------|
| Puri              | 31·32                   | Rajshahye         | 27·60                   |
| Jalpaiguri        | 30·48                   | Rungpore          | 27·36                   |
| Backergunge       | 30·00                   | Bogra             | 25·32                   |
| Dinajpur          | 28·92                   | Pubna             | 24·96                   |

3. That, in comparison with the casualties of the corresponding month of the past year, the mortality from fever had increased to some extent, the death-rate from injury was stationary, and there were no marked differences in fatal results from the rest of the diseases, *vide* figures given below :—

|                  | <i>Ratio per mille during—</i> |                       |
|------------------|--------------------------------|-----------------------|
|                  | <i>February 1887.</i>          | <i>February 1886.</i> |
| Cholera          | ·96                            | 1·08                  |
| Small-pox        | ·06                            | ·07                   |
| Fever            | 13·44                          | 12·48                 |
| Bowel-complaints | ·72                            | ·60                   |
| Injury           | ·12                            | ·12                   |
| Other causes     | 2·68                           | 2·52                  |

4. That while the following districts exhibited exceptional mortality from cholera and fever, the rest did not display any noticeable severity from the other diseases specified above, excepting Puri, where 20·76 per 1,000 of the population died from the maladies coming under the head of "Other causes" :—

| <i>Cholera.</i> | <i>Ratio per mille.</i> | <i>Fever.</i> | <i>Ratio per mille.</i> |
|-----------------|-------------------------|---------------|-------------------------|
| 24-Pergunnahs   | 4·32                    | Jalpaiguri    | 28·68                   |
| Tipperah        | 4·32                    | Dinajpur      | 27·36                   |
| Backergunge     | 3·60                    | Rajshahye     | 26·28                   |
| Faridpore       | 3·12                    | Rungpore      | 25·20                   |
| Dacca           | 3·00                    | Pubna         | 23·52                   |
| Mymensing       | 2·88                    | Bogra         | 21·96                   |
| Balasore        | 2·64                    |               |                         |
| Khulna          | 2·52                    |               |                         |
| Serampore       | 2·28                    |               |                         |

5. That under the heads of *Sex*, *Class* and *Age* the mortality of the month was distributed as follows :—

| <i>According to Sex.</i>                        |                         | <i>According to Class.</i> |                         | <i>According to Age.</i> |                         |
|---|-------------------------|----------------------------|-------------------------|--------------------------|-------------------------|
|   | <i>Ratio per mille.</i> |                            | <i>Ratio per mille.</i> |                          | <i>Ratio per mille.</i> |
| Males   | 20·16                   | Christians                 | 15·48                   | Under 1 year             | 122·16                  |
| Females   | 16·68                   | Hindus                     | 17·64                   | 1 and under 5 years      | 17·28                   |
| Ratio of male deaths to every 100 female deaths | 118                     | Mahomedans                 | 20·28                   | 5 " " 10 " "             | 7·92                    |
|   |                         | Budhists                   | 12·12                   | 10 " " 15 " "            | 7·44                    |
|   |                         | Other classes              | 14·64                   | 15 " " 20 " "            | 11·04                   |
|   |                         |                            |                         | 20 " " 30 " "            | 12·48                   |
|   |                         |                            |                         | 30 " " 40 " "            | 14·76                   |
|   |                         |                            |                         | 40 " " 50 " "            | 19·32                   |
|   |                         |                            |                         | 50 " " 60 " "            | 20·04                   |
|   |                         |                            |                         | 60 years and upwards     | 49·80                   |

The 1st August 1887.

R. LIDDERDALE, M.D., *Deputy Surgeon-General,*  
*Sanitary Commissioner for Bengal.*







## MEMORANDUM.

THE chief incidents in connection with the vital statistics of the principal Municipalities in Bengal, for the week ending 16th July 1887, are the following:—

1. That births were registered in the above Municipalities at the rate of 16·5 per 1,000 of population as opposed to very nearly the same proportion, viz. 16·9 per 1,000, in the preceding week ending 9th July, and deaths at 28 against 24·5 per 1,000, showing a considerable improvement in the registration of the casualties.

2. That these events were returned in the highest proportions from the following Municipalities:—

| Births.  |    |     |                  | Deaths.             |     |     |                  |
|----------|----|-----|------------------|---------------------|-----|-----|------------------|
|          |    |     | Ratio per mille. |                     |     |     | Ratio per mille. |
| Comillah | ?  | ... | 61·6             | Puri                | ... | ... | 86·0             |
| Arrah    | .. | ... | 29·9             | Gya                 | ... | ... | 77·9             |
|          |    |     |                  | Arrah               | ... | ... | 45·5             |
|          |    |     |                  | Bhagulpore          | ... | ... | 34·4             |
|          |    |     |                  | Suburbs of Calcutta | ... | ... | 32·7             |
|          |    |     |                  | Chupra              | ... | ... | 32·4             |
|          |    |     |                  | Comillah            | ... | ... | 30·8             |
|          |    |     |                  | Patna               | ... | ... | 28·2             |

3. That the specific diseases, as noted below, proved fatal at the rates exhibited opposite them:—

|                  |     |     |     | Ratio per mille during the weeks ending— |                |
|------------------|-----|-----|-----|--|----------------|
|                  |     |     |     | 16th July 1887.                          | 9th July 1887. |
| Cholera          | ... | ... | ... | 7·1                                      | 5·7            |
| Small-pox        | ... | ... | ... | ·2                                       | ·03            |
| Fever            | ... | ... | ... | 8·9                                      | 7·5            |
| Bowel-complaints | ... | ... | ... | 3·3                                      | 3·3            |
| Injury           | ... | ... | ... | ·3                                       | ·6             |
| Other causes     | ... | ... | ... | 8·1                                      | 7·3            |

indicating, chiefly, that the mortality from cholera and fever was much higher during the week under notice than during the preceding week.

4. That the Municipalities noted below were reported to have returned the highest death-rates from cholera and the maladies coming under the head of "Other causes," the rest of the diseases (indicated in the foregoing table) exhibiting no special local severity:—

| Cholera.            |     |     |                  | Other causes. |     |     |                  |
|---------------------|-----|-----|------------------|---------------|-----|-----|------------------|
|                     |     |     | Ratio per mille. |               |     |     | Ratio per mille. |
| Puri                | ... | ... | 48·3             | Gya           | ... | ... | 32·8             |
| Arrah               | ... | ... | 26·3             | Puri          | ... | ... | 16·8             |
| Gya                 | ... | ... | 22·5             | Bhagulpore    | ... | ... | 12·7             |
| Chupra              | ... | ... | 9·8              | Serampore     | ... | ... | 11·8             |
| Midnapore           | ... | ... | 9·3              |               |     |     |                  |
| Patna               | ... | ... | 8·1              |               |     |     |                  |
| Suburbs of Calcutta | ... | ... | 6·8              |               |     |     |                  |
| Bhagulpore          | ... | ... | 6·3              |               |     |     |                  |
| Monghyr             | ... | ... | 5·4              |               |     |     |                  |
| Mozufferpore        | ... | ... | 4·0              |               |     |     |                  |
| Howrah              | ... | ... | 3·1              |               |     |     |                  |

5. That the death-rates in relation to *Sex*, *Class* and *Age*, stood as follows:—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |     |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |     | Ratio per mille. |
| Males   | ... | 28·4             | Christians          | ... | 8·7              | Under 1 year         | ... | 222·9            |
| Females   | ... | 27·6             | Hindus              | ... | 29·7             | 1 and under 5 years  | ... | 57·6             |
| Ratio of male deaths to every 100 female deaths | ... | 116              | Mahomedans          | ... | 24·9             | 5 " " 10 "           | ... | 17·1             |
|   |     |                  |                     |     |                  | 10 " " 15 "          | ... | 14·0             |
|   |     |                  |                     |     |                  | 15 " " 20 "          | ... | 21·4             |
|   |     |                  |                     |     |                  | 20 " " 30 "          | ... | 11·2             |
|   |     |                  |                     |     |                  | 30 " " 40 "          | ... | 18·9             |
|   |     |                  |                     |     |                  | 40 " " 50 "          | ... | 22·1             |
|   |     |                  |                     |     |                  | 50 " " 60 "          | ... | 28·9             |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 49·7             |

R. LIDDERDALE, M.D., *Deputy Surgeon-General,*  
*Sanitary Commissioner for Bengal.*

The 1st August 1887.

STATEMENT SHOWING THE RESULTS OF THE REGISTRATION OF BIRTHS AND DEATHS IN THE PRINCIPAL MUNICIPALITIES IN BENJAL DURING THE WEEK ENDING 16th JULY 1881.

| MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  |  |  | Sex. |  |  |  |  |  |   |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|------|--|--|--|--|--|---|--|--|--|--|--|--|
| Disease.                                 |  |  |  |  |  |  |  |  |  |  |  |      |  | Ratio per 1,000 of population per annum. |  | Deaths.                                  |  | Ratio per 1,000 of population per annum.                                |  | Ratio of male deaths to every 100 female deaths. |  |  |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  |   |  |  |  |  |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  |   |  |  |  |  |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
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| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
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| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  | Ratio of male deaths to every 100 female deaths. |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,000 of population per annum. |  |  |  |  |  |  |  |  |  |  |  |      |  | Deaths.                                  |  | Ratio per 1,000 of population per annum. |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Deaths.  |  | Ratio per 1,000 of population per annum. |  |  |
| Ratio per 1,0                            |  |  |  |  |  |  |  |  |  |  |  |      |  |  |  |  |  |   |  |  |  |  |  |  |



CIRCULAR AND EASTERN CANALS.

*Approximate return of traffic for the week ending Saturday, the 30th July 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.      | WEEK ENDING SATURDAY, THE<br>30th JULY 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>1st JULY 1886. |                     |          |
|-----------------------|--|---------------------|----------|---|---------------------|----------|
|                       | Number of<br>boats.                          | Weight of<br>cargo. | Tollage. | Number of<br>boats.                         | Weight of<br>cargo. | Tollage. |
|                       | No.  | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy ... .. | 482  | 80,830              | 1,292    | 187   | 33,005              | 565      |
| Jute ... ..           | 12   | 5,850               | 95       | 4   | 1,350               | 11       |
| Firewood ... ..       | 161  | 78,125              | 984      | 63  | 84,615              | 487      |
| Other articles ... .. | 693  | 1,80,650            | 2,658    | 604   | 1,27,795            | 1,791    |
| Total ... ..          | 1,348  | 3,40,455            | 5,029    | 858   | 1,96,765            | 2,854    |

## Nalhati State Railway.

Statement showing Increases and Decreases in tonnage of Staples carried over the Nalhati State Railway during the month of June 1887, as compared with the same month of the previous year.

| STAPLES.   | 1886. |       | 1887. |       | 1886.  |        | 1887.  |        | Increase. | Decrease. |
|--|-------|-------|-------|-------|--------|--------|--------|--------|-----------|-----------|
|  | Up.   | Down. | Up.   | Down. | Total. | Total. | Total. | Total. |           |           |
| I.—Coal ... ..                                   | Tons. | Tons. | Tons. | Tons. | Tons.  | Tons.  | Tons.  | Tons.  | Tons.     | Tons.     |
| II.—Cotton, raw ... ..                           | 620   | ..... | 875   | ..... | 620    | 875    | 255    | .....  | .....     | 16        |
| IV.—Cotton piece-goods—                          | 33    | ..... | 17    | ..... | 33     | 17     | .....  | .....  | .....     | .....     |
| a.—In bales and bundles ... ..                   | 33    | ..... | 40    | ..... | 33     | 40     | 7      | .....  | .....     | .....     |
| X.—Jute—   | ..... | ..... | 4     | 2     | .....  | 6      | 6      | .....  | .....     | .....     |
| 2.—Gunny-bags and cloths ... ..                  | ..... | ..... | 4     | 2     | .....  | 6      | 6      | .....  | .....     | .....     |
| VII.—Grains—                                     | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| 2.—Rice ... ..                                   | ..... | ..... | 63    | 141   | .....  | 204    | .....  | .....  | .....     | .....     |
| 4.—Gram ... ..                                   | 246   | 40    | 3     | 1     | 246    | 4      | .....  | .....  | .....     | 59        |
| 5.—Others ... ..                                 | ..... | ..... | 14    | 5     | .....  | 19     | .....  | .....  | .....     | .....     |
| VIII.—Hides and skins—                           | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| 1.—Hides of cattle—                              | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| d.—Dressed ... ..                                | ..... | ..... | 5     | ..... | .....  | 5      | 5      | .....  | .....     | .....     |
| b.—Undressed ... ..                              | ..... | ..... | 1     | ..... | .....  | 1      | 1      | .....  | .....     | .....     |
| 2.—Skins of sheep, goats and small animals—      | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| d.—Dressed ... ..                                | ..... | ..... | 1     | ..... | .....  | 1      | 1      | .....  | .....     | .....     |
| XI.—Lac—   | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| 1.—Stick ... ..                                  | ..... | ..... | 1     | ..... | .....  | 1      | 1      | .....  | .....     | .....     |
| XIV.—Metals—                                     | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| 4.—Iron ... ..                                   | ..... | ..... | 3     | ..... | .....  | 3      | 3      | .....  | .....     | .....     |
| 6.—Others ... ..                                 | 7     | 3     | 4     | 3     | 10     | 7      | .....  | .....  | .....     | .....     |
| XV.—Oils—  | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| 2.—Kerosine ... ..                               | ..... | ..... | 2     | ..... | .....  | 2      | 2      | .....  | .....     | .....     |
| XIX.—Provisions—                                 | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| 1.—Ghee ... ..                                   | ..... | ..... | 2     | ..... | .....  | 2      | 2      | .....  | .....     | .....     |
| 2.—Dried fruits and nuts ... ..                  | ..... | ..... | 1     | ..... | .....  | 1      | 1      | .....  | .....     | .....     |
| 3.—Others ... ..                                 | ..... | ..... | 3     | ..... | .....  | 4      | 4      | .....  | .....     | .....     |
| XX.—Railway plant and rolling-stock              | 4     | 15    | 43    | 7     | 19     | 50     | 31     | .....  | .....     | .....     |
| XXI.—Salt ... ..                                 | 12    | ..... | 40    | ..... | 12     | 40     | 31     | .....  | .....     | .....     |
| XVI.—Oilseeds—                                   | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| 1.—Linsed ... ..                                 | ..... | ..... | 1     | ..... | .....  | 1      | .....  | .....  | .....     | .....     |
| 2.—Mustard and rape ... ..                       | 34    | 35    | 25    | 1     | 69     | 26     | .....  | .....  | .....     | 36        |
| 6.—Others ... ..                                 | ..... | ..... | 6     | ..... | .....  | 6      | .....  | .....  | .....     | .....     |
| XXIII.—Silk, raw—                                | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| 2.—Indian ... ..                                 | 1     | 26    | 1     | 67    | 27     | 68     | 41     | .....  | .....     | .....     |
| XXIV.—Silk piece-goods—                          | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| 2.—Indian ... ..                                 | ..... | ..... | ..... | 4     | .....  | 4      | 4      | .....  | .....     | .....     |
| Sugar—   | ..... | ..... | ..... | ..... | .....  | .....  | .....  | .....  | .....     | .....     |
| 1.—Drained ... ..                                | ..... | ..... | 13    | ..... | .....  | 13     | .....  | .....  | .....     | .....     |
| 2.—Undrained ... ..                              | 19    | ..... | 7     | ..... | 14     | 7      | 1      | .....  | .....     | .....     |
| XXV.—Tobacco ... ..                              | ..... | ..... | 14    | ..... | .....  | 14     | 14     | .....  | .....     | .....     |
| XXVII.—Paper and pasteboard ... ..               | ..... | ..... | 1     | ..... | .....  | 1      | 1      | .....  | .....     | .....     |
| XXXIII.—All other articles of merchandise ... .. | 100   | 32    | 110   | 97    | 132    | 207    | 75     | .....  | .....     | .....     |
| Total ... ..                                     | 1,109 | 151   | 1,304 | 331   | 1,304  | 1,635  | 488    | .....  | .....     | 111       |

## INCREASE.

Tons.

Coal ... .. 255  
 This increase is due to less import during last month.  
 Railway plant and rolling-stock ... .. 31  
 This increase is due to more materials carried during the month.  
 Salt ... .. 34  
 This increase is due to greater demand in the intermediate stations.  
 Silk, raw—  
 (2) Indian ... .. 41  
 This increase is due to fair market at Calcutta.  
 Tobacco ... .. 14  
 This increase is due to greater import.

## DECREASE.

Cotton, raw ... .. 16  
 This decrease is due to less import.  
 Grains ... .. 59  
 This decrease is due to dull market.  
 Oilseeds ... .. 36  
 This decrease is due to dull market.

NALHATI, the 30th July 1887.

R. G. MOOKERJEE, Manager.

Eastern Bengal State Railway.

Abstract of principal commodities carried over the Eastern Bengal State Railway during the month of April 1887 as compared with the same month of the previous year.

| STAPLES.  | 1887.  |        | 1886.  |        | TOTAL. |        | Increase. | Decrease. |
|---|--------|--------|--------|--------|--------|--------|-----------|-----------|
|   | Up.    | Down.  | Up.    | Down.  | 1887.  | 1886.  |           |           |
|   | Tons.  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.     | Tons.     |
| Betelnuts ... ..                                    | 74     | 240    | 30     | 112    | 443    | 148    | 298       | ...       |
| Coal and coke ... ..                                | 4,821  | 72     | 5,170  | 1,831  | 5,627  | 7,011  | ...       | 1,384     |
| Cotton, raw ... ..                                  | 1      | 146    | 1      | 161    | 146    | 161    | ...       | 15        |
| Cotton, manufactured—                               |        |        |        |        |        |        |           |           |
| 1.—Twist and yarn (European) ... ..                 | 1,735  | 187    | 1,473  | 190    | 1,870  | 1,763  | 238       | ...       |
| 2.—Ditto do. (Indian) ... ..                        |        |        |        |        |        |        |           |           |
| 3.—Piece-goods (European) ... ..                    |        |        |        |        |        |        |           |           |
| 4.—Ditto do. (Indian) ... ..                        |        |        |        |        |        |        |           |           |
| Fibrous Products—                                   |        |        |        |        |        |        |           |           |
| 1.—Jute (screwed) ... ..                            | ...    | 264    | ...    | ...    | 264    | ...    | ...       | ...       |
| 2.—Jute (unscrewed) ... ..                          | ...    | ...    | ...    | 1,733  | 2,127  | ...    | 404       | ...       |
| 3.—Jute manufactured (gunny-bags and cloths) ... .. | 270    | 87     | 234    | 957    | 1,127  | ...    | ...       | 97        |
| Grain and Pulse—                                    |        |        |        |        |        |        |           |           |
| 1.—Grain and pulse ... ..                           | 1,25   | 15,221 | 187    | 8,250  | 16,498 | ...    | ...       | ...       |
| 2.—Rice, husked ... ..                              | 1,745  | 1,713  | 1,100  | 5,425  | 3,520  | 6,721  | ...       | 3,196     |
| Hides and Skins—                                    |        |        |        |        |        |        |           |           |
| 1.—Hides of cattle ... ..                           | ...    | 448    | 1      | 373    | 457    | 374    | ...       | ...       |
| 2.—Skins of sheep, goats and small animals ... ..   | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       |
| Metals and manufactures of—                         |        |        |        |        |        |        |           |           |
| 1.—Brass and copper ... ..                          | ...    | 270    | 822    | 75     | 1,077  | ...    | 133       | ...       |
| 2.—Iron ... ..                                      |        |        |        |        |        |        |           |           |
| 3.—Other metals ... ..                              |        |        |        |        |        |        |           |           |
| Oils  | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       |
| Kerosine oil ... ..                                 | 304    | ...    | ...    | ...    | 326    | ...    | 326       | ...       |
| Provisions—   |        |        |        |        |        |        |           |           |
| 1.—Ghee ... ..                                      | 477    | 497    | 253    | 477    | 954    | 520    | ...       | ...       |
| 2.—Other kinds ... ..                               |        |        |        |        |        |        |           |           |
| Railway materials ... ..                            | 1,745  | ...    | 1,607  | ...    | 3,352  | ...    | ...       | ...       |
| Salt ... ..   | 3,576  | 52     | 3,413  | ...    | 3,628  | ...    | ...       | ...       |
| Seeds—  |        |        |        |        |        |        |           |           |
| 1.—Oilseeds—  |        |        |        |        |        |        |           |           |
| a.—Linseed ... ..                                   | 397    | 1,837  | 468    | 2,784  | 2,234  | 3,256  | ...       | 1,022     |
| b.—Mustard and rape ... ..                          |        |        |        |        |        |        |           |           |
| c.—Flax or flaxseed ... ..                          |        |        |        |        |        |        |           |           |
| d.—Other oilseeds ... ..                            |        |        |        |        |        |        |           |           |
| Sugar—  |        |        |        |        |        |        |           |           |
| 1.—Refined ... ..                                   | 336    | 1,431  | 227    | 1,562  | 1,767  | 1,788  | ...       | 21        |
| 2.—Unrefined ... ..                                 |        |        |        |        |        |        |           |           |
| Tee—  |        |        |        |        |        |        |           |           |
| 1.—Indian ... ..                                    | ...    | 23     | ...    | 151    | 234    | 151    | 83        | ...       |
| 2.—Foreign ... ..                                   |        |        |        |        |        |        |           |           |
| Tobacco ... ..                                      | 63     | 1,27   | 18     | 898    | 1,735  | 911    | 421       | ...       |
| Wood—   |        |        |        |        |        |        |           |           |
| 1.—Timber ... ..                                    | 348    | 259    | ...    | ...    | 607    | ...    | 607       | ...       |
| 2.—Firewood ... ..                                  | 1,487  | 60     | 1,681  | 72     | 1,737  | 1,753  | 14        | ...       |
| All other articles of merchandise—                  |        |        |        |        |        |        |           |           |
| 1.—Unmanufactured ... ..                            | 2,690  | 2,117  | 1,605  | 2,367  | 4,807  | 3,977  | 830       | ...       |
| 2.—Manufactured ... ..                              |        |        |        |        |        |        |           |           |
| Hay, straw, woolen (C. & S. E. Section) ... ..      | 609    | ...    | 334    | ...    | 943    | 334    | 235       | ...       |
| Total ... ..  | 22,908 | 30,960 | 19,000 | 28,229 | 53,908 | 47,229 | 12,580    | 5,947     |

Comparative statement of the principal commodities carried over the Eastern Bengal State Railway during the month of April 1887.

INCREASES.

|  |             |
|--|-------------|
| Betelnuts ... ..   | 238 tons.   |
| From B. C. R. and B. C. F. stations principally.         |             |
| Cotton, manufactured ... ..                              | 208 tons.   |
| Despatches to Upper Bengal.                              |             |
| Jute, unscrewed ... ..                                   | 404 tons.   |
| This increase is trifling. It is due to an early season. |             |
| Grain and pulse ... ..                                   | 3,046 tons. |
| Good crops and a favourable market.                      |             |
| Kerosine oil ... ..                                      | 326 tons.   |
| For consumption in Upper Bengal.                         |             |
| Railway materials ... ..                                 | 552 tons.   |
| Completion of repairs and renewals generally.            |             |
| Tobacco ... ..   | 421 tons.   |
| From the Northern Bengal State Railway principally.      |             |
| Timber ... ..  | 607 tons.   |
| Despatches from Calcutta for building purposes.          |             |
| Hay, straw, &c. ... ..                                   | 235 tons.   |
| This traffic is from the southern section only.          |             |

DECREASES.

|   |             |
|---|-------------|
| Coal and coke ... ..                          | 1,384 tons. |
| Due to through coal from East Indian Railway. |             |
| Rice ... ..                                   | 3,196 tons. |
| Stagnation in market.                         |             |
| Seeds ... ..                                  | 1,022 tons. |
| Continued depression of trade in this staple. |             |

CALCUTTA, the 27th July 1887.

G. M. DRURY, Traffic Superintendent.

## Bengal Central Railway.

*Abstract of principal commodities carried over the Bengal Central Railway during the month of April 1887, as compared with the same month of the previous year.*

| STAPLES.  | 1887. |       | 1886. |       | Total. |       | Increase. | Decrease. |
|---|-------|-------|-------|-------|--------|-------|-----------|-----------|
|   | Up.   | Down. | Up.   | Down. | 1887.  | 1886. |           |           |
|   | Tons. | Tons. | Tons. | Tons. | Tons.  | Tons. | Tons.     | Tons.     |
| Betelnuts ... ..                                    | 1     | 410   | ...   | 79    | 411    | 79    | 332       | ...       |
| Coal and coke ... ..                                | 883   | ...   | 1,151 | ...   | 883    | 1,151 | ...       | 268       |
| Cotton, raw ... ..                                  | ...   | 2     | ...   | 7     | 2      | 7     | ...       | 5         |
| Cotton, manufactured—                               |       |       |       |       |        |       |           |           |
| 1.—Twist and yarn (European) ... ..                 | 128   | 2     | 107   | 1     | 130    | 108   | 22        | ...       |
| 2.—Ditto do. (Indian) ... ..                        |       |       |       |       |        |       |           |           |
| 3.—Piece-goods (European) ... ..                    |       |       |       |       |        |       |           |           |
| 4.—Ditto do. (Indian) ... ..                        |       |       |       |       |        |       |           |           |
| Fibrous products—                                   |       |       |       |       |        |       |           |           |
| 1.—Jute (unscrewed) ... ..                          | ...   | 89    | ...   | 11    | 89     | 11    | 78        | ...       |
| 2.—Jute manufactured (gunny-bags and cloths) ... .. | 9     | 7     | 11    | 2     | 16     | 13    | 3         | ...       |
| Grain and Pulse—                                    |       |       |       |       |        |       |           |           |
| 2.—Grain and pulse ... ..                           | 9     | 2,277 | 27    | 974   | 2,286  | 1,001 | 1,285     | ...       |
| 4.—Rice, husked ... ..                              | 5     | 50    | 9     | 18    | 55     | 27    | 28        | ...       |
| Hides and skins—                                    |       |       |       |       |        |       |           |           |
| 1.—Hides of cattle ... ..                           | ...   | 28    | ...   | 12    | 23     | 12    | 10        | ...       |
| 2.—Skins of sheep, goats, and small animals ... ..  |       |       |       |       |        |       |           |           |
| Metals and manufactures of—                         |       |       |       |       |        |       |           |           |
| 1.—Brass and copper ... ..                          | 53    | 14    | 33    | 19    | 67     | 52    | 15        | ...       |
| 2.—Iron ... ..                                      |       |       |       |       |        |       |           |           |
| 3.—Other metals ... ..                              |       |       |       |       |        |       |           |           |
| Oils ... ..   | 81    | ...   | 67    | ...   | 81     | 67    | 14        | ...       |
| Kerosine oil ... ..                                 | 87    | ...   | ...   | ...   | 87     | ...   | 87        | ...       |
| Provisions—   |       |       |       |       |        |       |           |           |
| 1.—Wheat ... ..                                     | 130   | 103   | 99    | 70    | 242    | 175   | 67        | ...       |
| 2.—Other kinds ... ..                               |       |       |       |       |        |       |           |           |
| Railway materials ... ..                            | 500   | 124   | 1,062 | 37    | 624    | 1,119 | ...       | 495       |
| Salt ... ..   | 246   | ...   | 135   | ...   | 246    | 155   | 91        | ...       |
| Seeds—  |       |       |       |       |        |       |           |           |
| 1.—Oilseeds—  |       |       |       |       |        |       |           |           |
| a.—Linseed ... ..                                   | 297   | 287   | 350   | 100   | 564    | 430   | 114       | ...       |
| b.—Mustard and rape ... ..                          |       |       |       |       |        |       |           |           |
| c.—Til or gingelly ... ..                           |       |       |       |       |        |       |           |           |
| d.—Other oilseeds ... ..                            |       |       |       |       |        |       |           |           |
| Sugar—  |       |       |       |       |        |       |           |           |
| 1.—Refined ... ..                                   | 61    | 1,001 | 51    | 1,054 | 1,065  | 1,105 | ...       | 40        |
| 2.—Unrefined ... ..                                 |       |       |       |       |        |       |           |           |
| Tobacco ... ..                                      | 36    | 8     | 11    | 11    | 44     | 22    | 22        | ...       |
| Wood—   |       |       |       |       |        |       |           |           |
| 1.—Timber ... ..                                    | 22    | 9     | 17    | 11    | 31     | 28    | 3         | ...       |
| 2.—Firewood ... ..                                  |       |       |       |       |        |       |           |           |
| All other articles of merchandise—                  |       |       |       |       |        |       |           |           |
| 1.—Unmanufactured ... ..                            | 479   | 216   | 149   | 210   | 605    | 359   | 246       | ...       |
| 2.—Manufactured ... ..                              |       |       |       |       |        |       |           |           |
| Total ... ..  | 3,039 | 4,607 | 3,319 | 2,022 | 7,646  | 5,041 | 2,613     | 948       |

*Comparative statement of the principal commodities carried over the Bengal Central Railway for the month of April 1887.*

## INCREASES.

|   |     |     |     |     |             |
|---|-----|-----|-----|-----|-------------|
| Betelnuts ... ..  | ... | ... | ... | ... | 332 tons.   |
| From Khoolna, Nalchiti, and Barisal, principally for British Burmah. ... .. | ... | ... | ... | ... | ...         |
| Grain and Pulse ... ..  | ... | ... | ... | ... | 1,285 tons. |
| Good crops and a favourable market. ... ..                                  | ... | ... | ... | ... | ...         |
| Seeds ... ..  | ... | ... | ... | ... | 114 tons.   |
| Improvement in market. ... ..   | ... | ... | ... | ... | ...         |

## DECREASES.

|  |     |     |     |     |           |
|--|-----|-----|-----|-----|-----------|
| Coal and coke ... ..   | ... | ... | ... | ... | 268 tons. |
| Sufficiency of stock for Railway and Flotilla purposes. ... .. | ... | ... | ... | ... | ...       |
| Railway materials ... ..                                       | ... | ... | ... | ... | ...       |
| Completion of renewals and works generally. ... ..             | ... | ... | ... | ... | ...       |

G. M. DRURY, Traffic Superintendent.

E. B. S. RY. TRAFFIC SUPDT.'S OFFICE; CALCUTTA, the 29th July 1887.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 23rd July 1887, on 1,519 miles open.

|   | COACHING TRAFFIC.     |                | MERCHANDISE AND MINERAL TRAFFIC. |                | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN |              |      |
|---|-----------------------|----------------|----------------------------------|----------------|-----------------------------|-----------------|-------------------------|--------------|------|
|   | Number of passengers. | Receipts.      | Weight carried.                  | Receipts.      |                             |                 | Coaching.               | Merchandise. | To   |
|   |                       | Rs. A. P.      | Mds. S.                          | Rs. A. P.      | Rs. A. P.                   | Rs. A. P.       |                         |              |      |
| Total traffic for the week ...                              | 233,568*              | 2,51,691 11 0* | 22,63,140 20                     | 4,93,374 15 0  | 20,770 7 0                  | 7,65,843 1 0    | 65,929                  | 88,370½      | 254. |
| Or per mile of railway ...                                  | 163 11 2              | 163 11 2       | .....                            | 324 12 10      | 13 10 10                    | 504 2 10        | .....                   | .....        | ...  |
| For previous 2 weeks of half-year ...                       | 273,823               | 5,44,086 3 0   | 52,20,820 0                      | 11,51,013 0 0  | 46,032 9 0                  | 17,42,060 13 3  | 147,044½                | 206,771      | 354. |
| Total for 3 weeks ...                                       | 507,391               | 7,95,777 14 0  | 74,73,960 20                     | 16,44,416 15 0 | 67,709 0 9                  | 25,08,803 14 3  | 213,873½                | 295,147½     | 509. |
| COMPARISON.   |                       |                |                                  |                |                             |                 |                         |              |      |
| Total for corresponding week of previous year ...           | 215,946½              | 2,23,785 14 5  | 23,46,039 0                      | 5,44,178 0 0   | 19,322 5 9                  | 7,87,293 4 1    | 66,483                  | 97,087       | 103. |
| Per mile of railway corresponding week of previous year ... | .....                 | 147 11 5       | .....                            | 350 3 1        | 12 12 1                     | 510 10 7        | .....                   | .....        | ...  |
| Total to corresponding date of previous year ...            | 534,743½              | 7,73,320 11 8  | 79,80,505 0                      | 17,90,784 13 0 | 58,509 5 0                  | 26,27,704 14 2  | 227,454                 | 336,336      | 563. |

\* The increase in coaching traffic is principally due to a treasure special run from Gwalior to Arrah on 22nd July.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 1,515                                    | 7,87,293  | 520              | 1,519                                    | 7,65,843  | 504              | 1,515   | 1,54,11,287     | 10,172           | 1,519   | 1,99,07,276     | 9,853            | .....                   | 4,441                   |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 23rd July 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN |              |       |
|---|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|-------------------------|--------------|-------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.               | Merchandise. | Total |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                         |              |       |
| Total traffic for the week ...                              | 11,438                | 5,532 4 0   | 47,804 0                         | 2,850 2 0   | 27 10 0                     | 8,410 7 0       | 1,008                   | 786          | 2,3   |
| Or per mile of railway ...                                  | 200                   | 96 11 0     | 835 30                           | 40 13 4     | 0 7 9                       | 147 0 7         | .....                   | .....        | ..... |
| For previous 2 weeks of half-year ...                       | 25,002                | 11,722 9 0  | 98,661 20                        | 6,086 2 0   | 61 2 0                      | 17,469 13 0     | 3,727½                  | 1,744½       | 5,4   |
| Total for 3 weeks ...                                       | 36,440                | 17,254 13 0 | 1,46,465 20                      | 8,936 11 0  | 88 12 0                     | 26,280 4 0      | 5,835½                  | 2,530½       | 7,8   |
| COMPARISON.   |                       |             |                                  |             |                             |                 |                         |              |       |
| Total for corresponding week of previous year ...           | 10,735½               | 5,336 7 1   | 48,134 0                         | 3,214 6 0   | 28 14 0                     | 8,579 11 1      | 1,447                   | 979          | 2,4   |
| Per mile of railway corresponding week of previous year ... | 189                   | 93 4 9      | 841 20                           | 66 3 1      | 0 8 1                       | 149 15 11       | .....                   | .....        | ..... |
| Total to corresponding date of previous year ...            | 35,568                | 17,141 3 4  | 1,57,494 0                       | 10,088 13 0 | 127 10 6                    | 27,357 10 10    | 5,272                   | 3,113        | 8,3   |

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 57½                                      | 8,580     | 150              | 57½                                      | 8,410     | 147              | 57½   | 1,54,015        | 2,693            | 57½   | 1,94,432        | 2,560            | .....                   | 7,013                   |



## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

*Approximate Return of Traffic for week ended 23rd July 1887, on 12 miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 3,225                 | 531 5 0     | 11,163 20                        | 294 5 0    | 9 0 0                       | 834 10 0        | 381½                     | 112          | 493½   |
| Or per mile of railway ...                                  | .....                 | 44 4 5      | .....                            | 24 8 5     | 0 12 0                      | 69 8 10         | .....                    | .....        | .....  |
| For previous 2 weeks of half-year                           | 7,038                 | 1,251 13 0  | 19,460 30                        | 451 0 0    | 20 14 0                     | 1,723 11 0      | 776                      | 352          | 1,128  |
| Total for 3 weeks ...                                       | 11,164                | 1,783 2 0   | 30,630 10                        | 745 5 0    | 29 14 0                     | 2,558 5 0       | 1,157½                   | 464          | 1,621½ |
| COMPARISON.   |                       |             |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,820                 | 470 9 11    | 18,215 30                        | 372 14 0   | 8 10 3                      | 852 2 2         | 311                      | 302          | 613    |
| Per mile of railway corresponding week of previous year ... | .....                 | 39 3 6      | .....                            | 31 1 2     | 0 11 6                      | 71 0 2          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 6,949½                | 1,563 11 11 | 52,598 0                         | 1,010 14 0 | 45 3 0                      | 2,619 12 11     | 1,222                    | 780          | 1,961  |

*Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 12                                       | 852       | 71               | 12                                       | 835       | 70               | 12  | 19,802          | 1,658            | 12  | 16,887          | 1,407            | .....                   | 3,006                   |

## SINDIA STATE RAILWAY.

*Approximate Return of Traffic for week ended 23rd July 1887, on 74½ miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 1,917                 | 4,048 6 0   | 83,149 20                        | 2,384 0 0  | 59 9 0                      | 7,331 15 0      | 696½                     | 1,168½       | 1,867  |
| Or per mile of railway ...                                  | .....                 | 66 2 6      | .....                            | 31 13 11   | 0 12 9                      | 98 13 2         | .....                    | .....        | .....  |
| For previous 2 weeks of half-year                           | 11,994                | 9,171 4 0   | 2,02,771 10                      | 6,243 12 0 | 152 2 0                     | 15,567 2 0      | 1,504                    | 3,025½       | 4,529½ |
| Total for 3 weeks ...                                       | 16,915                | 14,119 10 0 | 2,85,920 30                      | 8,627 12 0 | 211 11 0                    | 22,959 1 0      | 2,204½                   | 4,194½       | 6,458½ |
| COMPARISON.   |                       |             |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 4,252                 | 3,154 10 1  | 61,607 30                        | 2,919 13 0 | 53 13 3                     | 6,128 4 4       | 674                      | 506          | 1,244  |
| Per mile of railway corresponding week of previous year ... | .....                 | 42 2 9      | .....                            | 39 0 7     | 0 11 6                      | 81 14 10        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 16,404½               | 12,048 9 1  | 1,93,805 20                      | 8,089 11 0 | 333 8 0                     | 21,071 12 7     | 2,423                    | 2,446        | 4,869  |

*Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 74½                                      | 6,128     | 82               | 74½                                      | 7,302     | 98               | 74½   | 1,17,447        | 1,570            | 74½   | 1,37,749        | 1,842            | 20,302                  | .....                   |

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 23rd July 1887, on 22½ miles open.*

|   | COACHING TRAFFIC.     |                      | MERCHANDISE AND MINERAL TRAFFIC. |                    | Other earnings (estimated). | Total earnings.      | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|----------------------|----------------------------------|--------------------|-----------------------------|----------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.            | Weight carried.                  | Receipts.          |                             |                      | Coaching.                | Merchandise. | Total. |
| Total traffic for the week ...                              | 14,313                | Rs. A. P. 3,829 11 6 | Mds. c. 3,579 10                 | Rs. A. P. 129 11 0 | Rs. A. P. 5 7 0             | Rs. A. P. 3,994 13 0 | 902                      | 66           | 968    |
| Or per mile of railway ...                                  | .....                 | 173 7 6              | .....                            | 5 13 3             | 0 3 11                      | 179 8 8              | .....                    | .....        | .....  |
| For previous 2 weeks of half-year ...                       | 40,791                | 11,261 1 0           | 8,966 10                         | 293 11 0           | 16 14 0                     | 11,573 10 0          | 2,140½                   | 169½         | 2,310  |
| Total for 3 weeks ...                                       | 55,034                | 15,123 12 0          | 12,545 20                        | 423 6 0            | 22 5 0                      | 12,608 7 0           | 3,042½                   | 225½         | 3,268  |
| COMPARISON.   |                       |                      |                                  |                    |                             |                      |                          |              |        |
| Total for corresponding week of previous year ...           | 14,890                | 3,754 15 0           | 4,077 0                          | 138 11 0           | 13 12 6                     | 3,907 6 4            | 980                      | 18           | 998    |
| Per mile of railway corresponding week of previous year ... | .....                 | 168 12 2             | .....                            | 6 3 9              | 0 9 11                      | 175 9 10             | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 67,117½               | 16,124 7 9           | 11,931 30                        | 442 14 0           | 19 14 0                     | 16,587 3 9           | 3,340                    | 70           | 3,410  |

*Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½                                      | 3,907     | 176              | 22½                                      | 3,995     | 180              | 22½   | 89,310          | 4,014            | 22½   | 90,301          | 4,058            | 983                     | .....                   |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 23rd July 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |                   | MERCHANDISE AND MINERAL TRAFFIC. |                   | Other earnings (estimated). | Total earnings.     | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------------|----------------------------------|-------------------|-----------------------------|---------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.         | Weight carried.                  | Receipts.         |                             |                     | Coaching.                | Merchandise. | Total. |
| Total traffic for the week ...                              | 2,268                 | Rs. A. P. 920 5 9 | Mds. c. 10,682 20                | Rs. A. P. 842 0 0 | Rs. A. P. 28 11 0           | Rs. A. P. 1,961 0 9 | 236                      | 353          | 589    |
| Or per mile of railway ...                                  | .....                 | 23 9 4            | .....                            | 20 0 9            | 0 10 11                     | 44 5 0              | .....                    | .....        | .....  |
| For previous 2 weeks of half-year ...                       | 4,949                 | 2,273 15 3        | 19,878 0                         | 3,963 11 0        | 57 6 0                      | 4,906 0 3           | 530                      | 824          | 1,354  |
| Total for 3 weeks ...                                       | 7,237                 | 3,294 5 0         | 30,560 20                        | 3,505 11 0        | 86 1 0                      | 6,856 1 0           | 766                      | 1,176        | 1,942  |
| COMPARISON.   |                       |                   |                                  |                   |                             |                     |                          |              |        |
| Total for corresponding week of previous year ...           | 2,591½                | 1,102 14 0        | 5,913 0                          | 485 12 0          | 20 7 0                      | 1,609 1 0           | 284                      | 204          | 488    |
| Per mile of railway corresponding week of previous year ... | .....                 | 26 4 2            | .....                            | 11 9 1            | 0 7 9                       | 38 5 0              | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 9,364½                | 3,980 9 7         | 12,817 0                         | 1,021 15 0        | 61 15 0                     | 5,074 7 7           | 1,468                    | 551          | 2,019  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 42                                       | 1,909     | 38               | 42                                       | 1,861     | 44               | 42  | 31,187          | 743              | 42  | 59,405          | 1,416            | 28,278                  | .....                   |

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 16th July 1887, on 615 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|--------------|---|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |   |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.    | Rs. A. P.   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 121,000               | 53,800 0 0         | 4,34,300 0                       | 57,700 0 0   | 10,400 0 0  | 1,21,900 0 0    | 19,433                   | 14,381       | 33,813 |
| Or per mile of railway ...                                    | 180                   | 83 0 0             | 673 0                            | 80 0 0       | 1 0 0†  | 173 0 0         | .....                    | .....        | .....  |
| For previous 1 week of half-year ...                          | 158,500               | 65,500 0 0         | 4,14,500 0                       | 65,300 0 0   | 14,300 0 0  | 1,45,100 0 0    | 25,094                   | 18,439       | 43,533 |
| Total for 2 weeks ...   | 279,500               | 1,19,300 0 0       | 8,49,000 0                       | 1,23,000 0 0 | 24,700 0 0  | 2,67,000 0 0    | 44,527                   | 32,820       | 77,347 |
| COMPARISON.   |                       |                    |                                  |              |   |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 155,240*              | 61,841 0 0         | 3,41,405 0                       | 56,787 0 0   | 9,103 0 0   | 1,17,791 0 0    | 16,803                   | 14,804       | 31,607 |
| Per mile of railway corresponding period of previous year ... | 256                   | 85 0 0             | 563 0                            | 94 0 0       | .....   | 179 0 0         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 304,528               | 1,11,797 0 0       | 7,43,746 0                       | 1,10,372 0 0 | 21,556 0 0  | 2,55,725 0 0    | 41,290                   | 35,553       | 76,843 |

\* Includes monthly tickets.

† Steam-boat earnings Rs. 10 000 have been excluded from the calculation.

NOTE.—Dacca and Assam-Bihar sections are also published separately.

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 606                                      | 1,17,791  | 194              | 615                                      | 1,21,900  | 189              | 606   | 20,99,180       | 231              | 615   | 20,45,008       | 211              | .....                   | 56,068                  |

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 23rd July 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 20,000                | 7,500 0 0          | 37,000 0                         | 2,500 0 0 | 120 0 0                     | 10,120 0 0      | 3,501                    | 1,709        | 5,210  |
| Or per mile of railway ...                                    | 160                   | 60 0 0             | 296 0                            | 20 0 0    | 1 0 0                       | 81 0 0          | .....                    | .....        | .....  |
| For previous 2 week of half-year ...                          | 57,200                | 18,600 0 0         | 85,000 0                         | 6,100 0 0 | 170 0 0                     | 25,170 0 0      | 8,040                    | * 3,920      | 11,960 |
| Total for 3 weeks ...   | 77,200                | 26,100 0 0         | 1,22,000 0                       | 8,600 0 0 | 290 0 0                     | 35,290 0 0      | 11,541                   | 5,629        | 17,170 |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 23,208                | 8,779 0 0          | 15,848 0                         | 970 0 0   | 20 0 0                      | 9,778 0 0       | 3,545                    | 1,365        | 5,210  |
| Per mile of railway corresponding period of previous year ... | 186                   | 70 0 0             | 127 0                            | 8 0 0     | .....                       | 78 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 85,307                | 28,277 0 0         | 52,573 0                         | 3,542 0 0 | 101 0 0                     | 31,920 0 0      | 13,224                   | 4,716        | 17,940 |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 125                                      | 9,778     | 78               | 125                                      | 10,120    | 81               | 125   | 2,07,478        | 104              | 125   | 1,90,445*       | 100              | .....                   | 7,993                   |

\* Audited up to week ending 7th May 1887.

## DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 16th July 1887, on 86 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |       |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|-------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | To    |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |       |
| Total traffic for the week ...                                | 12,000                | 3,800 0 0          | 4,800 0                          | 450 0 0   | 50 0 0                      | 4,300 0 0       | 2,161                    | 803          | 2     |
| Or per mile of railway ...                                    | 140                   | 44 0 0             | 56 0                             | 5 0 0     | 1 0 0                       | 50 0 0          | .....                    | .....        | ...   |
| For previous 1 week of half-year ...                          | 13,000                | 4,000 0 0          | 6,500 0                          | 550 0 0   | 60 0 0                      | 4,610 0 0       | 2,788                    | 1,000        | 3     |
| Total for 2 weeks ...   | 25,000                | 7,800 0 0          | 11,300 0                         | 1,000 0 0 | 110 0 0                     | 8,910 0 0       | 4,949                    | 1,803        | 6     |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |       |
| Total for corresponding week of previous year ...             | 9,318                 | 2,740 0 0          | 3,006 0                          | 313 0 0   | 58 0 0                      | 3,341 0 0       | 1,101                    | 434          | 1     |
| Per mile of railway corresponding period of previous year ... | 108                   | 32 0 0             | 36 0                             | 6 0 0     | .....                       | 38 0 0          | .....                    | .....        | ..... |
| Total to corresponding date of previous year ...              | 22,120                | 6,921 0 0          | 5,084 0                          | 821 0 0   | 152 0 0                     | 7,904 0 0       | 2,503                    | 932          | 3     |

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Dacca State Railway.

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
| 86                                       | Rs. 3,341 | Rs. 39           | 86                                       | Rs. 4,300 | Rs. 50           | 86  | Rs. 74,294      | Rs. 58           | 86  | Rs. 70,985      | Rs. 55           | .....                   | Rs. 3,299               |

## ASSAM-BEHAR STATE RAILWAY.

## PURNEAH SECTION.

Approximate Return of Traffic for week ended 16th July 1887, on 39 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,600                 | 800 0 0            | 21,000 0                         | 2,050 0 0 | 50 0 0                      | 3,000 0 0       | 668                      | 410          | 1,078  |
| Or per mile of railway ...                                    | 67                    | 23 0 0             | 538 0                            | 53 0 0    | 1 0 0                       | 77 0 0          | .....                    | .....        | .....  |
| For previous 1 week of half-year ...                          | 3,500                 | 1,100 0 0          | 35,000 0                         | 3,500 0 0 | 50 0 0                      | 4,050 0 0       | 806                      | 520          | 1,326  |
| Total for 2 weeks ...   | 6,100                 | 2,000 0 0          | 56,000 0                         | 5,550 0 0 | 100 0 0                     | 7,050 0 0       | 1,534                    | 930          | 2,464  |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |

\* Audited up to week ending

1887.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Assam-Bihar State Railway.

| RECEIPTS FOR WEEK ENDING 17TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 16TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 17TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 16TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
| .....                                    | .....     | .....            | 39                                       | Rs. 3,000 | Rs. 77           | .....   | .....           | .....            | 39  | Rs. 48,166      | Rs. 82           | Rs. 48,166              | .....                   |

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 23rd July 1887, on 240 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week on 240 miles open                    | 38,524                | 12,650 0 0         | 1,47,417 0                       | 12,587 0 0  | 2,418 0 0                   | 27,801 0 0      | 6,425                    | 5,422        | 11,847 |
| Or per mile of railway  | 156                   | 50 13 0            | 592 0                            | 50 9 0      | 2 14 0                      | 105 4 0*        | .....                    | .....        | .....  |
| For previous 2 week of half-year                                | 81,436                | 26,004 9 0         | 3,55,900 0                       | 30,119 0 0  | 5,960 0 0                   | 62,683 0 0      | 15,540                   | 13,343       | 28,883 |
| Total for 3 weeks   | 119,960               | 39,253 0 0         | 5,03,347 0                       | 42,706 0 0  | 8,378 0 0                   | 90,347 0 0      | 21,965                   | 18,765       | 40,730 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year on 240 miles open | 29,417½               | 9,185 13 6         | 1,25,909 10                      | 14,331 10 0 | 5,140 10 0                  | 28,678 1 8      | 4,729                    | 5,156        | 9,885  |
| Per mile of railway corresponding week of previous year         | 120                   | 37 6 0             | 512 0                            | 58 5 0      | 11 5 0                      | 107 0 0*        | .....                    | .....        | .....  |
| Total to corresponding date of previous year                    | 115,632               | 39,146 11 2        | 4,36,793 20                      | 47,280 1 0  | 13,025 13 11                | 98,461 10 1     | 16,840                   | 15,325       | 32,165 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 240                                      | 28,678    | 117              | 240                                      | 27,064    | 111              | 246   | 5,46,590        | 2,222            | 24,337  | 5,64,038        | 2,371            | 17,448                  | .....                   |

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 23rd July 1887, on 27½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week                              | 3,937                 | 1,327 0 0          | 6,802 0                          | 462 0 0    | 5 0 0                       | 1,791 0 0       | 509                      | 254          | 763    |
| Or per mile of railway                                  | 120                   | 48 11 0            | 240 0                            | 16 15 0    | 0 3 0                       | 63 13 0         | .....                    | .....        | .....  |
| For previous 2 week of half-year                        | 7,049                 | 2,685 0 0          | 18,283 0                         | 1,260 0 0  | 44 0 0                      | 3,989 0 0       | 1,163½                   | 590½         | 1,754  |
| Total for 3 weeks                                       | 10,236                | 4,012 0 0          | 24,085 0                         | 1,722 0 0  | 49 0 0                      | 5,783 0 0       | 1,672½                   | 844½         | 2,567  |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year           | 2,768                 | 1,131 9 0          | 9,307 20                         | 680 1 0    | 1 12 0                      | 1,812 6 0       | 509                      | 254          | 763    |
| Per mile of railway corresponding week of previous year | 102                   | 41 10 0            | 341 0                            | 25 5 0     | 0 3 0                       | 67 2 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year            | 7,909                 | 2,205 0 7          | 23,637 0                         | 1,921 10 0 | 38 0 0                      | 5,067 10 7      | 1,715                    | 925½         | 2,670½ |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 27½                                      | 1,829     | 67               | 27½                                      | 1,794     | 66               | 27½   | 22,403          | 1,079½           | 27½   | 31,716          | 1,128            | 1,343                   | .....                   |

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|   |  |  |  |  |  |  |           |
|---|--|--|--|--|--|--|-----------|
|   |  |  |  |  |  |  | Rs.       |
| Approximate earnings for week ending 16th July 1887 |  |  |  |  |  |  | 8,533     |
| Corresponding week last year                        |  |  |  |  |  |  | 9,530     |
| Decrease  |  |  |  |  |  |  | 997       |
| Receipts from 1st to 16th July 1887                 |  |  |  |  |  |  | 17,947    |
| From 1st to 17th July 1886                          |  |  |  |  |  |  | 19,034    |
| Decrease  |  |  |  |  |  |  | 1,087     |
|   |  |  |  |  |  |  | Miles.    |
| Miles open week ending 16th July 1887               |  |  |  |  |  |  | 51        |
| Corresponding week last year                        |  |  |  |  |  |  | 51        |
|   |  |  |  |  |  |  | Rs. A. P. |
| Receipts per mile open week ending 16th July 1887   |  |  |  |  |  |  | 167 5 0   |
| Corresponding week last year                        |  |  |  |  |  |  | 186 5 11  |
| Decrease  |  |  |  |  |  |  | 19 0 11   |

CHIEF OFFICE, D. H. RAILWAY, DARJEELING, the 23rd July 1887.

W. STEVENSON, Acting Manager.



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, AUGUST 10, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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### MELBOURNE CENTENNIAL EXHIBITION OF 1888.

The following is published for general information.

W. C. MACPHERSON,  
*Offg. Secy. to the Govt of Bengal.*

Circular No.  $\frac{12 \text{ Ex.}}{7 \text{ B.}-12}$ .

*Extract from the Proceedings of the Government of India in the Revenue and Agricultural Department, dated Calcutta, the 22nd July 1887.*

#### MUSEUMS AND EXHIBITIONS.

#### RESOLUTION.

READ the following

\* No. 64, (S. & C.), dated the 16th June 1887.

Despatch,\* with enclosures, received from Her Majesty's Secretary of State for India, regarding the proposed Melbourne Centennial Exhibition of 1888:—

No. 64 (Stats. & Comce.), dated India Office, London, the 16th June 1887.

From—The RIGHT HONOURABLE VISCOUNT CROSS, G.C.B., Her Majesty's Secretary of State for India,

To—The Government of India.

I FORWARD herewith a copy of correspondence with the Colonial Office, relative to the proposed Melbourne Centennial Exhibition of 1888, for such action in the matter as you may deem advisable.

Dated Colonial Office, London, the 19th May 1887.

From—SIR R. H. MEADE, Under-Secretary of State for the Colonies,  
To—The Under-Secretary of State for India.

I AM directed by the Secretary of State for the Colonies to transmit to you 50 copies, received from the Agent General for Victoria, of the Prospectus of the Melbourne Centennial Exhibition, 1888.

I am to request you will move Viscount Cross to take the necessary steps, as soon as practicable, to invite the representation of the Indian Government at this Exhibition.

Dated Colonial Office, London, the 21st May 1887.

From—SIR R. H. MEADE, Under-Secretary of State for the Colonies,  
To—The Under-Secretary of State for India.

WITH reference to the letter from this Department of the 19th instant, I am directed by Secretary Sir H. Holland to acquaint you, for the information of Viscount Cross, that Her Majesty has decided to issue a Royal Commission for the Melbourne Centennial Exhibition, 1888. I am to suggest, for His Lordship's consideration, that in bringing the proposed Exhibition to the notice of the Indian Government, the appointment of the Commission should be mentioned.

Dated India Office, London, the 16th June 1887.

From—J. A. GODLEY, Esq., Under-Secretary of State for India,  
To—The Under-Secretary of State for the Colonies.

I AM directed by the Secretary of State for India in Council to acknowledge the receipt of your letters of the 19th and 21st ultimo, forwarding 50 copies of the Prospectus of the proposed Melbourne Centennial Exhibition of 1888, for transmission to the Government of India, and informing Viscount Cross that a Royal Commission will be issued for the Exhibition, and I am to inform you in reply that a copy of your letters and enclosures has been forwarded to the Government of India for such action in the matter as they may deem advisable.

## CENTENNIAL INTERNATIONAL EXHIBITION, MELBOURNE, 1888.

### EXECUTIVE COMMISSIONERS.

#### *President :*

His Honour George Higinbotham, Chief Justice of the Supreme Court of the Colony of Victoria.

#### *Vice-Presidents :*

The Honourable Sir James MacBain, Knight, President of the Legislative Council.

„ Peter Lalor, M.P., Speaker of the Legislative Assembly.

„ Sir William John Clarke, Baronet, M.L.C.

Colonel The Honourable Frederick Thomas Sargood, O.M.G., M.L.C., President of the Melbourne Chamber of Commerce.

#### *Members :*

The Honourable James Munro, M.P.

„ William Mountford Kinsey Vale, Treasurer to the Commissioners.

Joseph Bosisto, Esq., O.M.G., M.P.

Robert Murray Smith, Esq., C.M.G.

William Cain, Esq., J. P., Mayor of the City of Melbourne.

Thomas Houlden Thompson, Esq., J. P., Mayor of the City of Ballarat.

Patrick Hayes, Esq., J. P., Mayor of the City of Sandhurst.

Lambton L. Mount, Esq., President of the Victorian Chamber of Manufactures.

William Arthur Trenwith, Esq., President of the Melbourne Trades Hall Council.

John Blyth, Esq., J.P.

Henry Byron Moore, Esq.

#### *Secretary :*

George T. A. Lavater, Esq.,



*Commission By—His Excellency SIR HENRY BROUGHAM LOCH, Knight Commander of the Most Honourable Order of the Bath, Governor and Commander-in-Chief in and over the Colony of Victoria and its Dependencies, &c., &c., &c.*

*To—The, Honourable GEORGE HIGINBOTHAM, Chief Justice of the Colony of Victoria; the Honourable SIR JAMES MACBAIN, Knight, President of the Legislative Council of the said Colony; the Honourable PETER LALOR, Speaker of the Legislative Assembly of the said Colony; the Honourable SIR WILLIAM JOHN CLARKE, Baronet, M.L.C.; Colonel the Honourable FREDERICK THOMAS SARGOOD, C.M.G., M.L.C., President of the Melbourne Chamber of Commerce; the Honourable JAMES MUNRO, M.L.A.; the Honourable WILLIAM MOUNTFORD KINSEY VALE; JOSEPH BOSISTO, Esq., C.M.G., M.L.A.; ROBERT MURRAY SMITH, Esq., C.M.G.; WILLIAM CAIN, Esq., J.P., Mayor of the City of Melbourne; THOMAS HOULDEN THOMPSON, Esq., J.P., Mayor of the City of Ballarat; PATRICK HAYES, Esq., J.P., Mayor of the City of Sandhurst; LAMBTON L. MOUNT, Esq., President of the Victorian Chamber of Manufactures; WILLIAM TRENWITH, Esq., President of the Melbourne Trades Hall Council; JOHN BLYTH, Esq., J.P.; and HENRY BYRON MOORE, Esq.*

**GREETING :**

Whereas it is deemed advisable to hold an International Exhibition of Works of Industry and Art at Melbourne, in the year of our Lord One thousand eight hundred and eighty-eight, in commemoration of the Centenary of the founding of the first Colony of Australia, to be called "The Centennial International Exhibition, Melbourne, 1888:" Know ye that by the power and authority vested in me by the Act numbered Four hundred and twenty-two, I, the Governor of the said Colony, with the advice of the Executive Council thereof, relying on your loyalty, integrity, learning, and ability, have constituted and appointed, and by these presents do constitute and appoint, you the said George Higinbotham, Sir James MacBain, Peter Lalor, Sir William John Clarke, Frederick Thomas Sargood, James Munro, William Mountford Kinsey Vale, Joseph Bosisto, Robert Murray Smith, William Cain, Thomas Houlden Thompson, Patrick Hayes, Lambton L. Mount, William Trenwith, John Blyth, and Henry Byron Moore, to be Commissioners to take measures for the holding of such International Exhibition, and to carry out and superintend such Exhibition; and for the erecting, altering, and maintaining of suitable grounds and buildings for the purposes of such Exhibition; you keeping the entire control and management thereof until otherwise determined, and for appointing and regulating the charges for admission to such buildings, premises, or grounds, or the rent or hire of any part thereof or otherwise, and the application of the proceeds towards the objects and the expenses of the said Exhibition; and for appointing the purposes of public enjoyment and entertainment for which such buildings, premises, and grounds, or any part thereof, may be used and applied; and for obtaining such exhibits as may, in your judgment, be necessary to illustrate the progress of industry and art elsewhere; and for securing the most effective display of all articles sent for public exhibition, their safe custody, their due return to their owners, or their disposal otherwise, as may be arranged; and for determining as to the nature, number, and value of the prizes to be awarded to the exhibitors and the impartial distribution thereof; and generally to do and execute all other matters and things whatsoever deemed necessary by you for the full accomplishment of the duties entrusted to you by this Commission: And further I do hereby, with the advice aforesaid, constitute and appoint you the said George Higinbotham to be President, and you the said Sir James MacBain, Peter Lalor, Sir William John Clarke, and Frederick Thomas Sargood, to be the Vice-Presidents of the Commission: And do further constitute and appoint you the said Commissioners to be also the Executive Commissioners for the said Exhibition: And for your assistance in the due execution of this Commission, I do hereby appoint George Theodore Adams Lavater, Esquire, to be Secretary to this Commission: And lastly, with the advice aforesaid, I do, by these presents, ordain that this Commission shall continue in full force and virtue until otherwise determined; and that you, the said Commissioners, or any five or more of you, shall and may from time to time, and at any place or places, proceed in the execution thereof, and of every matter and thing therein contained, although your proceedings may not be continued from time to time by adjournment.

Given under my Hand and the Seal of the Colony, at Melbourne, in the said Colony, this sixth day of January, in the year of our Lord One thousand eight hundred and eighty-seven, and in the fiftieth year of Her Majesty's reign.

HENRY B. LOCH.

*By His Excellency's Command,*

ALFRED DEAKIN,

*Chief Secretary.*

(L. S.)

**COMMITTEES.**

The President, Vice-Presidents, and Treasurer are *ex-officio* Members of all Committees.

**1. FINANCE.**

*The President, Chairman.*

*Hon. W. M. K. Vale, Treasurer.*

*Hon. J. Munro, M.P.*

*John Blyth, Esq., J.P.*

2. BUILDING.

W. Cain, Esq., J.P., *Chairman.*

L. L. Mount, Esq.  
Hon. J. Munro, M.P.

John Blyth, Esq., J.P.  
T. H. Thompson, Esq. J.P.

3 ADVERTISING AND PRINTING.

Hon. J. Munro, M.P., *Chairman.*

W. A. Trenwith, Esq.

L. L. Mount, Esq.

John Blyth, Esq., J.P.

The Government of Victoria having determined to hold an Exhibition of Arts, Manufactures, Agricultural and Industrial Processes and Products of all nations during the year 1888, to celebrate the Centenary of the founding of New South Wales, the first Australian Colony, His Excellency Sir Henry Brougham Loch, Knight Commander of the Most Honourable Order of the Bath, Governor and Commander-in-Chief in and over the Colony of Victoria and its Dependencies, &c., &c., did, on the sixth day of January 1887, by and with advice of the Executive Council, issue under the Seal of the Colony of Victoria a Commission authorising measures to be taken for the holding of such Exhibition, and for the carrying out and superintending of the same.

In accordance with the powers vested in them by the aforesaid Commission, the Executive Commissioners have decided to open the

CENTENNIAL INTERNATIONAL EXHIBITION, MELBOURNE, 1888.

on the first day of August 1888, the said Exhibition to be kept open for six months, and closed on the thirty-first day of January 1889.

The Exhibition will be held in buildings which have been specially erected for Exhibition purposes, situated in the Carlton Gardens, in the City of Melbourne, and in such other buildings and grounds attached thereto as may be found to be required; and it is intended that the Exhibition shall be open in the evening as well as during the day.

Acting under the powers conferred upon them, the Commissioners desire to invite the British, Foreign, and Colonial Governments to take part in this Exhibition, and they trust that steps will be at once taken for the display of complete and thoroughly representative exhibits from every country and colony.

During the year 1885, Australasia, with a population of 3,500,000, imported from Great Britain goods to the amount of £32,000,000. The United States, France, and Germany, whose combined populations number 133,000,000, imported during the same period, from Great Britain to the amount of £53,000,000. Calculated at per head of the population, Australasia therefore imported nearly 23 times as much as the above-named countries combined, and this in addition to a large and increasing trade with other countries.

The mileage length of railways opened for traffic in the Australasian colonies amounts to 7,700 miles, and when the lines further authorized and now in course of construction are completed, they will reach a total length of 10,000 miles.

Already the capital cities of South Australia, New South Wales, and Victoria are connected by railway, the distance from Adelaide to Sydney, *via* Melbourne, being 1,100 miles. Between Sydney and Brisbane, the capital city of Queensland, a further distance of 710 miles, there remain only about 100 miles of railway to be constructed to connect the capitals of the four principal colonies, and as the construction of this portion is now being rapidly proceeded with, there will soon be uninterrupted communication between Adelaide, Melbourne, Sydney and Brisbane, a distance of 1,800 miles.

In view of the remarkable growth of Australasia in all things relating to population, production, and general distribution of wealth amongst all classes, the facilities for rapid, economical, and easy transit, and its many other advantages, the Commissioners confidently invite all desirous of extending their commercial relations with these rapidly-extending communities to exhibit the fullest and most complete representations of their Raw Products, Skilled Industries and Arts, at the Centennial International Exhibition, Melbourne, 1888.

APPLICATIONS FOR SPACE.

1. Governments intending to take part in this Exhibition are requested to forward an intimation to that effect not later than the 31st August 1887.

2. Applications for space, with full particulars, are invited as early as possible. Copies of the official form of entry can be obtained upon application to the Secretary to the Commissioners, through the representatives of the country or colony to which the applicants belong. In the event of no representatives being appointed by the country or colony to which an intending exhibitor belongs, he can communicate direct with the Secretary. Applications for space should be made not later than the 31st August 1887. Space assigned to countries and colonies, and not occupied on the 30th June 1888, will revert to the Executive Commissioners, and will be subject to re-arrangement. Space will not be charged for, but power will be reserved by the Executive Commissioners to reduce the space allotted to any Government or any exhibitor should they deem fit, at any time.

3. British, Foreign, and Colonial Governments, or Commissioners appointed by them, are requested to inform the Executive Commissioners, Melbourne, not later than the 31st December 1887, whether they require any increase or diminution of the space offered them, and the quantity. They are also requested to state whether there will be any exhibits for which special space should be provided, together with a description showing their nature and bulk.

4. Before the 31st May 1888, the representatives of countries or colonies should furnish for the approval of the Executive Commissioners, approximate plans, showing the manner in which they propose to allot the space assigned to them, together with lists of their exhibitors, and any other information necessary for the compilation of the official Catalogue. (*Vide* No. 13.)

#### SHIPMENT OF EXHIBITS.

5. Commissioners representing countries or colonies, and private exhibitors whose countries are not officially represented, but to whom space has been allotted, may adopt one of two courses, viz.—

- (a) They can ship their exhibits direct to Melbourne, and make their own arrangements for their shipment, reception, and exhibition ;
- (b) Or consign their exhibits, freight and expenses prepaid, to

*The Secretary,*

*Centennial International Exhibition, 1888,*

*Melbourne, Australia,*

with specific instructions as to what is desired. Where it is found necessary to incur expenses on exhibits consigned to the Secretary, such expenses will be a first charge on such exhibits.

#### MARKS AND ADDRESS ON PACKAGES.

6. Packages forwarded from countries and colonies represented at the Exhibition should be addressed

*To the Commissioner for*

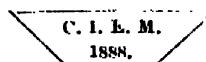
*Centennial International Exhibition, 1888,*

*Melbourne, Victoria :*

*Australia ;*

and the following information must be written on the outside of each package:—(1) The country from which the package comes. (2) Name or firm of exhibitor. (3) Address of the exhibitor. (4) Group and class to which exhibits belong. (5) Total number of packages sent by same exhibitor. (6) Serial number of that particular package. Each package must contain a list of contents.

Packages containing goods intended for the Exhibition must likewise have painted on them, as a distinctive mark, the following letters and figures within a triangle, thus—



Packages from foreign countries must also be marked with the colours and devices of their national flag. Foreign Commissioners are particularly requested to send to the Executive Commissioners, Melbourne, as soon as possible, a specification of the packages forwarded, with their distinguishing marks.

#### CUSTOMS DUTIES, ENTRIES, &c.

7. Exhibits will be admitted free of duty for the purpose of exhibition. Customs entries, transportation, receiving, unpacking, and arranging the products for exhibition must be undertaken by the exhibitor at his own expense.

#### TRANSPORT.

8. No charge will be made for carriage of goods intended for exhibition over the railway lines.

Arrangements will be made by which all goods intended for exhibition can be carted from the wharves, or the several railway stations, to the Exhibition Grounds at a fixed scale of charges.

#### REMOVAL OF GOODS.

9. The removal of goods, except under special circumstances, will not be permitted during the period the Exhibition is open. Delivery of exhibits sold will not be allowed until after the close of the Exhibition. Special permits for the sale and delivery of goods and articles manufactured in and during the progress of the exhibition may be given by the Executive Commissioners, should they deem fit.

## PROTECTION TO INVENTORS AND OTHERS.

10. The protection of inventions capable of being patented, and of designs, is secured by the patent laws of Victoria. No work of art, nor any article whatever, exhibited in the buildings, parks, or gardens may be drawn, copied, or reproduced in any manner whatsoever, without the permission of the exhibitor. The Executive Commissioners reserve to themselves the right of authorizing the production of general views.

Sketches, drawings, photographs or other reproductions of articles exhibited\* will only be allowed upon the consent of the exhibitor and the approval of the Executive Commissioners; but views of portions of the building may be taken upon the sanction of the Executive Commissioners alone.

## GOODS REQUIRING SPECIAL WORK OR ACCOMMODATION.

11. The placing and fixing of heavy articles, requiring extra foundations or adjustment, should begin by special arrangement as soon as the progress of the work upon the Exhibition Buildings will permit. The general reception of articles in the Exhibition Buildings will commence on the 1st May 1888, and no articles will be admitted after the 15th July 1888. The plans for the display and accommodation of objects that require either special arrangements or exceptional works for their display must receive the approval of the Executive Commissioners before work is commenced, and all such works must be carried out under the supervision of their officers. The works of general fitting-up must be commenced not later than the 1st June 1888, and the Courts must be ready to receive goods before the 1st May 1888.

The Executive Commissioners, if they deem fit, will grant permission for the erection of approved special constructions in the buildings or grounds, at the cost of the exhibitor.

## EXHIBITS NOT FOR COMPETITION.

12. If exhibits are not intended for competition, it must be so stated by the exhibitor, and they will be excluded from examination by the Jurors.

## OFFICIAL CATALOGUE.

13. An Official Catalogue will be published in English by the Executive Commissioners, by whom the sale of Catalogues is reserved. Anything beyond the ordinary description of the exhibit, together with the name of the exhibitor, must be paid for at the rate of five shillings per line. Exhibitors desiring to utilize the Catalogue for advertising purposes should communicate as early as possible on the subject with the Secretary. Each country and colony will, however, have the right of producing at its own expense, but in its own language only, a special Catalogue of the objects exhibited in its section. Such Catalogue, however, must not be offered for sale in this Colony, or be used as a medium for advertising.

## GROUPING EXHIBITS.

14. The representatives of countries and colonies will be allowed to group their exhibits as they may think fit in that portion of the Exhibition Buildings allotted to the country or colony which they represent. The Executive Commissioners desire, however, that, where International Courts can be formed, special classes of exhibitions of all nations, and of the same character, shall be exhibited together: Victorian exhibits will be grouped in classes, irrespective of districts.

15. Exhibits from any country or colony whose Government is not represented must be classified according to the following groups. The same direction will be followed in the Catalogue:—

1. Works of art.
2. Education and instruction—Apparatus and processes of the liberal arts.
3. Furniture and accessories.
4. Fictile manufactures, glass, pottery, &c.
5. Textile fabrics, clothing, and accessories.
6. Raw and manufactured processes and products.
7. Machinery—Apparatus and processes used in the mechanical industries.
8. Alimentary products.
9. Sanitation, medicine, hygiene and public relief.
10. Agriculture and associated industries.
11. Horticulture.
12. Mining industries—Machinery, processes, and products.

Any expenses incurred by the Executive Commissioners in the display and exhibition of these goods will be made a first charge upon such goods.

Each of these groups is divided into classes, according to the system of general classification annexed to these regulations, in an Appendix, which includes for each class an enumeration of the nature of the objects which it will comprise.

## MOTIVE POWER FOR EXHIBITS.

16. Motive power will be supplied to suitable exhibits free on application to the Executive Commissioners, but the latter reserve to themselves the power to reduce the amount asked for, or to make a charge for a certain portion of the motive power supplied,

if they consider necessary. The Executive Commissioners desire to encourage the display of machinery in motion, and of all descriptions of manufactures, &c., in progress, and they will endeavour to provide adequate power to meet all reasonable demands. By the introduction of steam power, it is proposed to afford facilities for presenting not only the machinery for any given manufactures, but also the processes of manufacture. Requests for motive power must be made to the Executive Commissioners prior to 31st March 1888.

17. All shafting, pulleys, belting, connections, &c., for the transmission of power from the main shafting must be provided by, and at the cost of, the exhibitor.

18. It is further intended that space shall be afforded for the production of interesting objects by manual labour.

#### FITTINGS, &c.

19. Exhibitors must provide at their own cost all show-cases, shelving, counters, fittings, &c., which they may require.

#### RIGHT TO REJECT EXHIBITS.

20. The Executive Commissioners reserve the right of rejecting or returning any proposed exhibit. Articles that are in any way dangerous, or offensive or injurious to public decency and morality, will not be admitted into, or allowed to be exhibited in the Exhibition.

#### WORKS OF ART.

21. The following special regulations are framed for the reception and admission of works of art. The works admissible include the five classes mentioned below :—

1. Paintings.
2. Drawings, water-colours, crayon drawings, miniatures, enamels, porcelain, designs in glass and clay, designs for stained-glass windows, and mosaic work.
3. Sculpture and die-sinking, and engraving on precious stones.
4. Architectural and engineering drawings and models.
5. Engraving and lithography.

The following are excluded :—

1. Unframed pictures or drawings.
2. Sculpture in unbaked clay.

The duty of deciding upon the admission of works of art will devolve upon a special committee. Suitable space, which will be lighted by electricity, will be reserved for the exhibition of paintings. Other regulations will give information as to the despatch and reception of works of art.

#### FIRE, ACCIDENTS, &c.

22. The Executive Commissioners will take precautions for the safe preservation of all objects in the Exhibition, but will be in no way responsible for damage or loss of any kind, or accidents by fire or otherwise, however caused. In order, however, to reduce the danger of fire to a minimum, a special fire-brigade will be formed, and be available, in connection with the Exhibition, from the time of the reception of exhibits to its close.

#### INSURANCE, &c.

23. Facilities will be afforded the representatives of countries and colonies, and private exhibitors, for insuring their goods; and they may also employ watchmen, at their own expense, to guard their goods during the hours the Exhibition is open to the public. The appointment of such watchmen will be subject to the approval of the Executive Commissioners. These persons must wear a special dress or distinctive badge.

#### AWARDS.

24. The following is the system under which the awards will be made :—

The awards will be based upon written reports adopted by the Jurors.

The Jurors will be selected for their qualifications and character, and shall be experts in the departments to which they are especially assigned; the British, Foreign, and Colonial Jurors shall be nominated by the representatives of each country or colony exhibiting, and, if approved of, will be appointed by the Executive Commissioners who will appoint those for Victoria.

Jurors will be reimbursed such personal expenses as may be allowed by the Executive Commissioners.

The Jurors' reports and the Executive Commissioners' awards will be based upon the inherent and comparative merits of the individual exhibits, the elements of merit being held to include considerations relating to originality, invention, discovery, utility, quality, skill, workmanship, fitness for the purposes intended, adaptation to public wants, economy, cost, and importance of interests involved.

Each report must be delivered to the Secretary to the Executive Commissioners as soon as completed.

Awards will consist of gold, silver, and bronze medals, and certificates of honourable mention, together with a special report of the Jurors on the subject of the award. A certificate will accompany each medal.

Each exhibitor shall have the right to produce and publish the report awarded to him, but the Executive Commissioners reserve the right to publish and dispose of all reports in any manner they may think best for public information.

25. Immediately after the close of the Exhibition, exhibitors or their duly-appointed agents shall remove their effects, and complete such removal by the 31st March 1889. Goods then remaining will be removed by the orders of the Executive Commissioners, and sold by auction, or otherwise disposed of under the direction of the Executive Commissioners, and the net proceeds handed to the exhibitors or their duly-appointed agents.

26. Every person who becomes an exhibitor thereby acknowledges and undertakes to observe the rules and regulations established from time to time for the government of the Exhibition.

27. The Executive Commissioners reserve the right to alter, explain, amend, or add to these regulations, at any time, whatever may be deemed necessary.

Information upon any question of details can be obtained upon application to

THE AGENT-GENERAL FOR VICTORIA,  
8 Victoria Chambers,  
Victoria Street,  
Westminster,  
London, S.W.:

or to

THE EXECUTIVE COMMISSIONERS,  
Centennial International Exhibition, 1888,  
Melbourne, Australia.

### REGULATIONS

*Concerning the Despatch, Reception, Arrangement, and Return of the Goods Exhibited, and Disposal of Space.*

1. Every person admitted as an exhibitor will receive in Melbourne, and with the least possible delay, an exhibitor's ticket showing his rotation number and the dimensions of the space allotted to him.

He will receive at the same time printed labels to be affixed to the packages he may send to the Exhibition.

2. The labels supplied to exhibitors will be printed on paper of different colours, according to the group to which the products to be exhibited may belong.

The conventional colours adopted are as follows:—

|          |  |     |     |     |                |
|----------|--|-----|-----|-----|----------------|
| Group 1. | (Works of art)   | ... | ... | ... | Pink.          |
| „ 2.     | (Education and instruction, apparatus and processes of the liberal arts) | ... | ... | ... | White.         |
| „ 3.     | (Furniture and accessories)  | ... | ... | ... | Blue.          |
| 4.       | (Fictile manufactures, glass, pottery, etc.)                             | ... | ... | ... | Buff.          |
| 5.       | (Textile fabrics, clothing and accessories)                              | ... | ... | ... | Bright-yellow. |
| 6.       | (Raw and manufactured processes and products)                            | ... | ... | ... | Brown.         |
| 7.       | (Apparatus and processes used in the mechanical industries)              | ... | ... | ... | Red.           |
| 8.       | (Alimentary products)  | ... | ... | ... | Violet.        |
| 9.       | (Sanitation, medicine, hygiene, and public relief)                       | ... | ... | ... | Black.         |
| 10.      | (Agriculture and associated industries)                                  | ... | ... | ... | Dark-green.    |
| 11.      | (Horticulture)   | ... | ... | ... | Light-green.   |
| „ 12.    | (Mining industries—Machinery, processes, and products)                   | ... | ... | ... | Grey.          |

3. The Commissioners place at the disposal of countries and colonies all information and plans which may be useful for their arrangements.

4. Exchanges of space cannot be made without the consent of the Executive Commissioners.

5. Exhibitors will not have to pay rent for the space occupied by them in the Exhibition. The flooring will be provided in sound condition and ready for use within the whole of the main building; but the flooring must not be altered, removed, or strengthened, for the exhibition of machinery, convenience of arrangement, or any other purpose, except with the consent of the Executive Commissioners, and at the expense of the exhibitors.

6. The spaces reserved outside the exhibition allotments being strictly calculated with a view to the necessities of circulation, packages and empty cases will not be allowed to remain there.

Cases must, therefore, be unpacked as early as possible after their reception, and the empty cases at once taken away by the exhibitors or their agents.

Should the exhibitors neglect to carry out in the manner thus indicated the unpacking of the goods and the removal of the empty cases, the work will be undertaken by the Executive Commissioners, but in no case will the Commissioners incur any responsibility whatsoever in

the execution of this duty. The Commissioners will have nothing to do with the warehousing and preservation of the empty cases; neither have any arrangements been made, nor any space reserved, for the purpose. Exhibitors who may be unable to provide for the removal and preservation of their empty cases are advised to communicate with the Secretary.

GENERAL ARRANGEMENTS.

7. Certain products, which it may be found impossible to display in the main buildings, will, in some exceptional cases, be exhibited in the surrounding parks and gardens, in buildings erected for the purpose.

8. With regard to the Victorian section, the Commissioners will place themselves in communication with the Committees established in each locality. The duties of these Committees will be—

- (1) to make known the rules concerning the Exhibition, and to distribute the forms of application for space, as well as all other documents relating to the Exhibition;
- (2) to point out as soon as possible the principal artists, agriculturists, and manufacturers whose exhibits would appear to be particularly calculated to promote the success of the undertaking;
- (3) to encourage the exhibition of the manufactures, and of the mineral, pastoral, agricultural, and horticultural products of the district, and to accredit to the Commissioners the delegate charged with their representation.

9. Spirits or alcohol, oils and essences, corrosive substances and generally all substances which might spoil other articles or inconvenience the public, can only be received in solid and suitable vessels of small size.

Percussion caps, fireworks, chemical matches, and similar articles, can only be received when made in imitation, and deprived of all inflammable ingredients.

10. Exhibitors of objects of a disagreeable nature, or such as may be prejudicial to health, will be bound at all times to conform to such precautionary measures as may be considered necessary.

11. The Commissioners reserve the absolute right to cause the removal of any article whatever, if, on account of its nature or appearance, they deem it advisable to do so.

12. All goods must be exhibited under the name of the person who has signed the application for admission.

13. Exhibitors are entitled to insert after their name, or that of their firm, the names of their assistants of every class and grade who may have taken part in the production of the goods exhibited.

14. Exhibitors are particularly requested to mark the trade price of the articles exhibited, so as to facilitate the judgment of the Jury as well as for the information of visitors.

15. Persons desirous of exhibiting articles not mentioned in the General Classification may apply to the Executive Commissioners.

ADMINISTRATION.

16. A general supervision will be established for the prevention of robbery and embezzlement.

17. It must be distinctly understood that the Commissioners decline all responsibility for any theft or embezzlements which may be committed.

18. In the Victorian section, the exhibitors of each class must arrange among themselves as to the organization of a staff of attendants independent of the general supervision established by the Commissioners. Private agents of this description must be approved by the Commissioners, and must wear badges bearing the number of the class to which they will be attached.

19. All communications relating to the Exhibition must be addressed—

*The Executive Commissioners,*

*Centennial International Exhibition, 1888,*

*Melbourne, Australia.*

Government of Madras.  
Bombay.  
Bengal.  
North-Western Provinces and Oudh.  
Punjab.  
Chief Commissioner, Central Provinces.  
Burma.  
Assam.  
Coorg.  
Resident at Hyderabad.

published in the Local Gazette.

ORDER.—Ordered that the papers read above be published in the Supplement to the *Gazette of India* for general information, and that a copy be sent to the Local Governments and Administrations noted on the margin, with a request that the papers be

True Extract

E. C. BUCK,

*Secretary to the Government of India.*

# RULES FOR THE RECEIPT OF TESTIMONIALS AND ADDRESSES BY SERVANTS OF GOVERNMENT.

No. 29—1629-45, dated Simla, the 22nd July 1887.

RESOLUTION—By the Government of India, Home Department.

READ—

Home Department Resolution No. 19—746-62, dated 11th May 1885, prescribing rules for the receipt of testimonials and addresses by servants of Government.

In re-issuing the rules contained in Home Department Resolution of the 11th May 1885 with certain necessary additions, the Governor-General in Council desires to invite the renewed attention of Local Governments and Administrations to the subject with which they deal, and to impress on all concerned by them the duty of exact obedience to these regulations.

2. The rules do not apply to the receipt of addresses by the Head of any Government or Administration.

## RULES.

1. Save as in these Rules otherwise provided, all servants of Government, covenanted or uncovenanted, are forbidden to receive complimentary or valedictory addresses in any form, or to accept testimonials of any kind, or to attend public meetings or complimentary entertainments of a formal and public character held in their honour.

2. The Government views with disfavour all similar manifestations in the case of retired officers, when following immediately upon their retirement from active service, and designed as an acknowledgment of acts done by them while in the service of Government.

3. It is not intended to prohibit such an expression of regard for the private or official character of an officer retiring from service, or leaving his station or district, as is involved in a farewell entertainment supported by his personal friends, even though some of these may be his official subordinates. But it is expected that the proceedings on such occasions will be substantially of a private and informal character.

4. Local Governments and Administrations are authorised to forward to an officer who has left a station or district the resolution of any local public body recording a vote of thanks to him for help and advice afforded during his official connection with the station or district.

5. Medical officers are not prohibited from receiving pecuniary recognition of their services from a community or body of persons which may desire to acknowledge these; but the previous sanction of the Local Government or Administration must be obtained by medical officers before receiving any public complimentary address.

6. Nothing in the above rules is meant to prohibit compliance with the request of a public body that a Government officer should sit for his portrait, bust or statue in recognition of his public services: provided that the portrait, bust or statue is not intended for presentation to the officer concerned.

7. The participation of Government officers in the raising of funds for the foundation of scholarships, or for procuring a portrait, bust or statue, as a spontaneous recognition of the services of a Government officer is not forbidden; but it should be clearly understood that any solicitation on the part of officers of Government for subscriptions from any person who does not voluntarily come forward to contribute is disapproved by the Government of India.

8. The previous sanction of the Government of India must be obtained to the relaxation of these rules in any special case in which the Local Government or Administration may think this desirable.

|                    |                    |
|--------------------|--------------------|
| Madras             | Punjab.            |
| Bombay.            | Central Provinces. |
| Bengal.            | Burma.             |
| North-Western Pro- | Assam.             |
| vinces and Oudh.   | Cooch.             |
| Hyderabad.         |                    |

ORDER.—Ordered that a copy of this Resolution be forwarded to Local Governments and Administrations marginally\* noted for information and guidance;

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| † Department of Finance and Commerce. | Public Works Department.             |
| Foreign Department.                   | Revenue and Agricultural Department. |
| Military Department.                  | Legislative Department.              |

that a copy be communicated to all Departments† of the Government of India for information; and

that the Resolution be published in the *Supplement to the Gazette of India* for general information.



**RESOLUTION ON THE PREPARATION AND PRINTING OF ANNUAL DEPARTMENTAL REPORTS SUBMITTED TO THE GOVERNMENT OF INDIA, IN THE HOME DEPARTMENT.**

*The 8th August 1887.*—The following Resolution of the Government of India is republished from the *Gazette of India*.

W. C. MACPHERSON,

*Offg. Secretary to the Govt. of Bengal.*

No. 28—1579-95.

*Extract from the Proceedings of the Government of India, in the Home Department (Public),—under date Simla, the 15th July 1887.*

READ the undermentioned papers—

Home Department Resolution No. <sup>37A</sup><sub>1392 306</sub>, dated 12th August 1885.

From the Government of Madras, No. 482C., dated 14th June 1886, and enclosures.

From the Government of Madras, No. 1456, dated 12th July 1886, and enclosures.

From the Government of Bombay, No. 991, dated 13th March 1886, and enclosures.

From the Government of Bombay, No. 1060, dated 22nd March 1886, and enclosures.

From the Government of Bengal, No. 634—20Mis., dated 19th February 1886, and enclosures.

From the Government of Bengal, No. 1529TR., dated 3rd November 1886, and enclosure.

From the Government of Bengal, No. 3593, dated 30th December 1886.

From the Government of Bengal, No. 12J., dated 3rd January 1887.

From the Government of the North-Western Provinces and Oudh, No. <sup>158</sup><sub>III-785</sub>, dated 11th February 1886, and enclosure.

From the Chief Commissioner of the Central Provinces, No. <sup>3681</sup><sub>161</sub>, dated 19th September 1885, and enclosures.

From the Chief Commissioner of Burma, No. 533—148N., dated 25th September 1885, and enclosure.

From the Chief Commissioner of Assam, No. 5283, dated 27th August 1885.

From the Chief Commissioner of Coorg, No. <sup>1107</sup><sub>144</sub>, dated 19th September 1885.

From the Resident at Hyderabad, No. 18G., dated 22nd January 1886, and enclosures.

**RESOLUTION.**

THE subject of discussion in the papers cited in the preamble is the preparation and printing of annual departmental reports submitted to the Government of India in the Home Department. In a letter No. 392S., dated the 22nd June 1885, the Government of the Punjab solicited a reconsideration of the whole question of the preparation and treatment of annual reports, so far as that Province was concerned. The alterations suggested by Sir Charles Aitchison and the views provisionally held by the Government of India on the question are summarised in Home Department Resolution of the 12th August 1885. But as the subject was not one of merely local importance, the Governor-General in Council desired, before coming to a final decision, to have a full expression of the opinions of Local Governments and Administrations upon the proposals of the Punjab Government, so far as they affected the reports which are submitted to the Home Department. The replies from Local Governments and Administrations, read in the preamble, contain their opinions on the matter.

2. The proposals of the Punjab Government were made with the double object (1) of removing the burden thrown upon district officers, heads of departments, and Secretariat establishments in connection with the preparation and reviewing of annual reports; and (2) of reducing the cost of printing the reports. These proposals have not been accepted in full by any Local Government or Administration, except by the Chief Commissioner of Burma; and Mr. Crosthwaite, the present Chief Commissioner of that Province, holds, as his reply from the Central Provinces shows, different views from those held by Sir Charles Bernard. The Governments of Madras, Bombay, and Bengal have, to some extent, accepted the proposals in question, and the Chief Commissioner of Coorg has expressed his opinion generally in favour of having statistical tables, accompanied by notes, for two years, and in the third year a set of comprehensive departmental reports.

3. The most adverse criticism of the proposals made by the Punjab Government proceeds from the Government of the North-Western Provinces and Oudh, from the Administrations of the Central Provinces and of Assam, and from the Resident at Hyderabad. The Lieutenant-Governor of the North-Western Provinces and Chief Commissioner of Oudh is of opinion that the presentation of evidence of departmental efficiency and the collection, in a convenient form, of information useful for administrative and other purposes, cannot be secured under a system of triennial reporting with intermediate statistical tables and brief explanatory notes. He considers that, as was suggested in paragraph 7 of Home Department Resolution of 12th August 1885, the brief notes would probably be of little practical value, while the triennial report would necessarily be prolix and involve much labour in its preparation. The latter, moreover, would be four years old

before the orders of Government could be passed or any subsequent action taken upon it. Sir A. Lyall observes that the labour of scrutinizing statistics is little augmented by that of writing a report on them, and that a careful scrutiny and comparison of past and present returns is a necessary part of the duty of the heads of departments in administering. But, while opposed to the general adoption of the proposals of the Punjab Government, Sir A. Lyall would meet them to some extent by doing away with reports on certain subjects and by substituting for them statistical tables accompanied every year by a brief commentary in the form of notes, such as is now supplied by the Local High Courts of judicature in reviewing the Criminal and Civil Justice returns.

4. Mr. Crosthwaite, at the time Chief Commissioner of the Central Provinces, concurs in the views of the Government of the North-Western Provinces and Oudh in regard to the small amount of labour required to write a report, when once the relevant statistics have been systematically studied. He remarks that the system of writing reports is useful, inasmuch as it ensures that statistics have been scrutinised, and that it enables the Government to see how much care and intelligence have been devoted to this scrutiny. Reports, moreover, in Mr. Crosthwaite's opinion, enable administrative officers to periodically survey the whole of their work and to judge of the effects of it, while they assist Government in seeing how far the recognised principles of administration have been applied and how far errors require to be corrected. If for annual reports triennial reports were substituted, there is, he thinks, likely to be the disadvantage that the officer who had done the work would not ordinarily write the report, or, if he did, that his recollection of the facts regarding which he was writing would have grown dim with time. Under such a system, too, errors of administration could not be corrected at once. Mr. Crosthwaite admits that reports and reviews are often unnecessarily prolix, and should be curtailed, and he suggests that the extended distribution of reports which at present prevails is unnecessary and expensive. He also deprecates the style of review which merely repeats, in other and perhaps fewer words, what is stated in the report.

The Officiating Chief Commissioner of Assam considers that the proposals of the Punjab Government are unsuitable to that Province, and would lead to serious practical inconvenience. Mr. Ward is of opinion that the value of reports to departmental officers would be lost by triennial reports, while the labour of compiling the latter would be very great, particularly to officers who had held their charges only for a small portion of the three years.

The Resident at Hyderabad doubts if the proposed reform would have an useful effect, and argues that the review of the year's transactions by the head of the Government affords an incentive to work. Praise or blame, in the Resident's opinion, loses its effect if it relates to a time long passed away. The officer concerned may have left the locality, and it does not always happen that an officer remains at his post for the whole three years for which he would have to write the report.

5. The opinions briefly summarized above confirm the view taken by the Government of India in the Home Department, as expressed in the Resolution of the 12th August 1885, that it was not possible to go as far as was proposed by the Punjab Government in the direction of curtailing the preparation and submission of annual reports. After giving the subject full consideration, the Government of India agrees in the main with the remarks made by the Government of the North-Western Provinces and Oudh and the present Chief Commissioner of Burma regarding the usefulness of annual reports as a means of testing departmental efficiency and the judgment and energy of officers, and also of checking and correcting administrative mistakes. Applying this principle, the Governor-General in Council is of opinion that annual reports must be maintained in the two following cases:—

- (a) Where the reports deal with the application of administrative principles still open to modification or the concrete working of which has to be watched.
- (b) Where the reports contain statistics which for administrative purposes must be compiled and examined annually.

These two heads comprise so many of the reports now falling under the cognizance of the Home Department that the conclusion to which His Excellency in Council has come is that, beyond insisting on brevity and methodical arrangement in the reports themselves, and on curtailment of reviews of them, it is impossible to afford much relief to Local Governments in the direction contemplated by this enquiry. The Government of India therefore desires that the reports dealt with in the Home Department should from 1887 onwards be treated in the following manner:—

- (i) To be submitted annually as heretofore—

Report on General Administration.  
 „ Municipal Administration.  
 „ Local Boards' Administration.  
 „ Education.  
 „ Sanitation.  
 „ Civil and Criminal Justice.  
 „ Jail Administration.  
 „ Police Administration.  
 „ Lunatic Asylums.

(ii) To be submitted in full every third year, statistical returns and brief commentaries in the shape of notes being submitted in the intermediate years—

Report on Registration.

„ Dispensaries.

„ Lock-hospitals.

„ Vaccination.

„ Destruction of wild beasts and snakes.

The notes to be submitted with the statistical returns in the years intermediate between the submission of the reports should give a clear, though brief, indication of the supervising or controlling officer's opinion as to the significance of the statistics.

6. The following special reports should continue to be submitted as before :—

Chemical Examiner's Report.

Report on Calcutta Medical Institutions.

Report of the Port Health Officer, Calcutta.

Report of the Commissioners of the Town of Calcutta.

Report on Publications under Act XXV of 1867.

The Review of Publications.

The Report on Vernacular Newspapers.

The Government of India leaves to Local Governments, who submit reports on Legal Affairs and Criminal Tribes, discretion to determine whether these reports shall be annually prepared as at present or prepared every third year, with brief notes in the intermediate years.

7. The Governor-General in Council would desire to express his earnest hope that Local Governments and Administrations will insist on curtailment of reports to the utmost extent which is consistent with a proper examination of the facts and figures presented in them. A reduction in the size of the reports on Jails, Police, Education, and Sanitation is especially necessary. In most provinces these reports have become far too discursive.

Compression of reviews is not less called for than curtailment of reports: a review should contain only what is necessary to communicate the judgment of the reviewing authority regarding the salient features of the report. The Governor-General in Council attaches no value to reviews which merely repeat in abridged form what is set forth in the report reviewed.

8. While thus recognising the need which exists for compression in the reports and reviews which reach the Government of India, His Excellency in Council is no less desirous that the same principles should be carefully followed as regards reports received by Local Governments and Administrations, but not forwarded to the Government of India. He fears that the time of administrative and executive officers is unnecessarily occupied as much by the preparation of reports and returns submitted for the information of the local authorities as by the preparation of those which reach the Government of India. He has therefore observed with satisfaction that the Government of Bengal has recently, in connection with the report of the Salaries Commission, directed its attention to this aspect of the case; and he trusts that all other Local Governments and Administrations will exercise a vigorous discretion not only in reducing the bulk of the reports and returns which are retained, but also in abolishing those that are not really required.

ORDER.—Ordered that a copy of this Resolution be forwarded to all Local Governments and Administrations for information and guidance; and that a copy be forwarded to the other Departments of the Government of India for information and further necessary action, and that it be published in the Supplement to the *Gazette of India*.

[ True extract ]

A. P. MACDONNELL,

*Secretary to the Government of India.*

## RESOLUTION ON THE ANNUAL REPORT OF THE ROYAL BOTANIC GARDEN FOR THE YEAR 1886-87.

MUNICIPAL DEPARTMENT—MEDICAL.

*Calcutta, the 6th August 1887.*

### RESOLUTION.

READ—

The Annual Report of the Royal Botanic Garden, Calcutta, for the year 1886-87.

This being the report for the hundredth year, Dr. King has rightly taken the opportunity of giving a sketch of the history of the institution. The following extract contains an interesting account of the garden since its formation :—

The suggestion to form a Botanic Garden here was first made to the Government in Calcutta in June 1767, by Colonel Robert Kyd, then Superintendent of the Hon'ble Company's Dockyard at Kidderpore. The proposal was favourably entertained by the Governor-General, and its adoption was recommended to the Supreme Board in London during the same month, practical effect being given to it during the following year by the selection, as a site, of a large piece of land immediately below Colonel Kyd's private garden at Shalimar. This piece of land, besides the Botanic Garden as it is now limited, included about fifty acres, which form part of the grounds of the present Engineering College. Colonel Kyd was himself an ardent horticulturist, and he had brought together in his private garden at Shalimar a large collection of exotic plants, chiefly from the Straits. He was therefore very appropriately appointed the first Superintendent of the Botanic Garden which had been founded at his suggestion. Colonel Kyd continued to perform the duties of Superintendent until his death in 1793. On Colonel Kyd's death, Government decided to put the garden under the charge of a special officer who should have no other duty. Dr. William Roxburgh, the Company's Botanist in Madras, was therefore transferred from that Presidency, and was installed at Seebpore in November 1793. No better selection than that of Dr. Roxburgh could have been made. Dr. Roxburgh, for many years prior to his transfer, had been engaged in studying the then little known Flora of the Northern Circars in the Madras Presidency. He was a most ardent and enthusiastic botanist, and a good gardener. Dr. Roxburgh continued to be Superintendent until 1814, when he was obliged to proceed to the Cape on account of his health. From the Cape he went on to St. Helena, and from thence to England, where he died during the following year. Dr. Roxburgh was the first botanist who attempted to draw up a systematic account of the plants of India. During his busy life in this country he prepared a *Flora Indica*, which contained systematic descriptions of all the indigenous plants known to him, as well as of many exotics then in cultivation in the neighbourhood of Calcutta. The manuscript of this work he took with him when he left India, intending to publish it during his residence in England. His death prevented the execution of this plan; and, with the exception of the first volume, which was printed with some additions and interpolations by Drs. Wallich and Carey in 1820, the book remained unpublished until 1832. In the latter year it was printed, exactly as the author had left it, by the piety of his sons, Captains James and Bruce Roxburgh, neither of whom was a botanist. This book is the basis of all subsequent Indian botanical works. It is an admirable production, the descriptions are accurate and graphic, and its authorship justly entitles Roxburgh to his title of the Father of Indian Botany. Until the year 1872, when the publication of the "Flora of British India" was begun by the distinguished botanist Sir Joseph Hooker, Roxburgh's was the only single book through which a knowledge of Indian plants could be acquired. A second edition of this excellent manual was issued by Mr. C. B. Clarke in 1874 at a merely nominal price, Mr. Clarke's desire being to put the book within the reach of the poorest student. Besides the *Flora Indica*, Roxburgh published, at the expense of the Hon'ble Company, in three large folio volumes, his *Plantæ Coromandelianæ*, being descriptions with figures of three hundred of the most striking plants of the Coromandel Coast. Dr. Roxburgh was immediately succeeded in the Superintendentship of the Garden by Dr. Francis Buchanan (afterwards Hamilton), who at the time was on special duty in connection with an extended enquiry into the agriculture of India and in the collection of materials for a Gazetteer. Dr. Hamilton, who was an accomplished botanist and zoologist, collected a vast mass of material, part of which was published in his own name, but the bulk of which, after many years' suppression, was published under the title of Montgomery Martin's History, Topography and Statistics of Eastern India. Dr. Buchanan Hamilton held charge of the garden for only a short time, and he was succeeded in 1817 by Dr. Nathaniel Wallich, lately Surgeon to the Danish Settlement at Serampore. Dr. Wallich was an able and most energetic botanist, and during the earlier part of his term of office he organised collecting expeditions into the remote and then little known regions of Kumaon, Nepal, Silet, Tenasserim, Penang, and Singapore. Dr. Wallich in fact undertook a botanical survey of a large part of the Indian Empire. The materials (in the shape of dried specimens of plants) thus accumulated were taken by Dr. Wallich to London, and, after being named there by himself and by other botanists, they were distributed in numbered collections to the leading botanical institutions in Europe. In this great distribution, Dr. Wallich included the collections of several other botanists which had been made over to him for the purpose. The

liberality with which these specimens was given away was so extreme that, in the garden report for the year 1843, we find Dr. Griffith (who had been appointed to officiate for Dr. Wallich during his absence in England) complaining that the herbarium had been completely denuded of every specimen collected during the first fifty years of the existence of the garden. Besides distributing these enormous collections, Dr. Wallich was enabled, through the munificence of the Hon'ble Company, to publish, under the title *Plantæ Asiaticæ Rariores*, three superb volumes illustrated by coloured figures of a high degree of excellence. Dr. Wallich retired in 1846 and died in 1854. During the lengthened absences of Dr. Wallich in Europe, his place at the garden was filled by Dr. W. Griffith, whose premature death deprived Botanical Science of one of its ablest and most industrious votaries. Dr. Griffith's extensive notes and numerous drawings were, after his death, published by Government in nine volumes. Dr. Wallich was succeeded by Dr. Hugh Falconer. Dr. Falconer was a Palæontologist, well known by his researches on the Sivalik Fossil Mammalia. In 1855 he left the country on account of ill-health, and was succeeded as Superintendent by Dr. Thomas Thomson, a traveller and botanist of much ability, the coadjutor of Sir Joseph Hooker in the collection and distribution of an extensive and well-known herbarium of East Indian plants, and the joint author of the first volume of a new *Flora Indica*. Dr. Thomson retired in 1861, and was succeeded by Dr. Thomas Anderson, whose untimely death in 1870 was caused by disease contracted during his efforts for the introduction of the quinine-yielding *Cinchonas* into the Sikkim Himalaya. For the two years subsequent to Dr. Anderson's departure from India, Mr. C. B. Clarke acted as Superintendent, and during his incumbency he began the series of botanical publications which has earned for him so high a scientific reputation.

2. From the first foundation of the garden, it was understood that it was to be made a source of botanical information for the possessions of the Company, and at the same time a centre to which exotic plants of economic interest could be imported for experimental cultivation, and from which, in turn, they could be issued for distribution in the Company's possessions. It was also intended to assist in introducing indigenous Indian products to new markets. It was intended that it should not only be a botanical, but also a horticultural and agricultural garden. The preceding paragraph shows how the botanical work laid out for the garden has been accomplished. But the economic side has by no means been neglected. At first great hopes were entertained that the spices which rendered the trade of the Company with the Moluccas and other of the Malayan Islands so valuable, might be cultivated in Bengal. The earliest efforts of Colonel Kyd were therefore directed to the introduction of the trees which yield nutmegs, cloves and cinnamon, and of the pepper vines. It was, however, speedily proved that the climate of Northern India is quite unsuited to these equatorial species. The equatorial fruits, such as mango-steen, lamsat, dukko and bread-fruit, were also tried with a similar result; and so were the temperate fruits of Europe. In fact, no small part of the benefits conferred on the country by the garden in its early days was the demonstration by practical experiment that certain natural products, many of them of a most desirable kind, cannot be grown in Bengal; much money and bootless effort being thus saved to the country. The introduction of exotic timber trees also received early attention; and in the garden there still remain a few of the original mahogany trees introduced in these early years. The introduction of tea was one of the items put down in Colonel Kyd's original programme; and in the final establishment of what has now become one of the most important industries in Northern India, the garden bore a most important part. Potato-growing was introduced through its agency, and the cultivation of the quinine-yielding *Cinchonas* of the Andes was initiated and carried to a successful issue under the direction of Superintendents of this garden. In the improvement of Indian cotton, and in the introduction both of that and of jute to the markets of Europe, the garden authorities worked cordially hand in hand with the Agri-Horticultural Society of India, with what success it is unnecessary to point out. By the introduction of some of the best kinds of sugarcane from the West Indies, and the dissemination of these to all parts of the country, a considerable improvement was effected both on the quality and quantity of the sugar crop of the country. In this matter also the Agri-Horticultural Society worked hand in hand with the garden authorities. Very soon after the establishment of the Society just mentioned, a considerable piece of land in the garden was made over to it rent-free, and on this land the Society conducted the greater part of its operations for forty years. In fact, it was not until the year 1872 that the Society's garden was transferred to its present site in Alipore. It is unnecessary to discuss in detail the numerous experiments in the cultivation of economic plants which have been conducted in the garden since its beginning. A few of the products tried may simply be mentioned. Chief among these are flax, hemp, tobacco, henbane, vanilla, coffee (Arabian and Liberian), cocoa, ipecacuanha, aloes, sarsaparilla, jalap, india-rubber, cardamoms, tapioca, and coca. As regards horticulture, it may suffice to say that a large proportion of the kinds of exotic plants now found in private gardens in India has been introduced to the country through the agency of this garden, and that the improved methods of cultivation which now obtain were to a great extent initiated here.

3. In 1820 about fifty acres of land belonging to the garden were made over by Government to the Society for the Propagation of Christian Knowledge, and on this land the Society founded the institution so long known as Bishop's College, but since 1880 (owing to its retransfer to Government) as the Government Engineering College. In the year 1864 the garden was devastated by a cyclonic storm of extraordinary violence, which either uprooted or broke to pieces the majority of the trees in it, and, by blowing down all the plant-houses, hopelessly crushed their contents. The few trees which escaped on that occasion were sadly

reduced in number by a second cyclone which passed over the garden in 1867; and, at the present time, almost the only trees dating from before 1867 are the great banyan and a smaller tree of the same sort, some peepuls and country almonds, about twenty mahogany trees, and some palms. It is almost a pity that the occasion of its destruction by these cyclones was not taken to remove the garden to a site on the Calcutta side of the Hooghly. For, although there are certain advantages in the garden being so remote from the town, there can be little doubt that the balance is in favour of a site more easily accessible to the residents of Calcutta. The destruction of all shade, which resulted from the removal of the trees, allowed the inveterate weed known popularly as ooloo grass, and botanically as *Imperata cylindrica*, to take possession of the whole of the ground not occupied by roads or flower borders; so that when I took charge of the garden in 1871 it presented rather a sorry appearance. The liberality of the local Government, under whose control it soon thereafter passed, has made it possible for me to lay out the garden entirely anew. The whole of its area has since that date been treated for landscape effects, sheets of ornamental water having been formed, and, with the earth so obtained, undulations having been thrown up. New roads and footpaths have also been made; a building for the Herbarium and three handsome conservatories for the more delicate kinds of living plants have been erected; nursery buildings have been put up; and the garden staff have been furnished with comfortable houses.

4. Botanically the most important feature in the garden is its Herbarium, or collection of dried plants. As has already been explained, all the collections prior to Dr. Wallich's visit to England in 1828 were distributed by him to scientific institutions abroad. The commencement of the present collection dates, therefore, from his return to India in 1832. It consists of plants contributed by almost every worker at Botany in India since that date, and of considerable contributions from Botanists in Europe. It is first and foremost an Indian Herbarium, but the plants of South-Eastern Asia, of Japan, of Persia and of Asia Minor are fairly well represented. Those of Europe are also excellently represented; but in African and American plants the collection is comparatively poor. Constant communication and interchange of specimens have been kept up for the last fifty years with the great national collection at Kew; and to the distinguished Directors of that institution, Sir William Hooker and his son and successor Sir Joseph, the Calcutta Herbarium is indebted for invaluable contributions. Interchanges have also been kept up with other European Botanic Institutions, such as the Herbarium of the British Museum, of the *Jardin des Plantes*, Paris, the Imperial Gardens at St. Petersburg and Berlin, the Royal Botanic Gardens at Buitenzorg in Java, at Peradeniya in Ceylon, and at Saharanpore; and with many other institutions. Amongst the private contributors in past times from whom the Herbarium has received the most valuable collections must be mentioned Vicary, Edgeworth, Griffith, Wight, Simons, Law, Gibson, Stocks, Dulzell, Kurz, Miquel, and Maingay. The most important contributions received during recent years have been duly mentioned in my annual report.

The transformation which has taken place in the aspect of the garden has been the work of Dr. King himself, whose skill, taste and assiduity were fully recognized by Sir Ashley Eden and supported by him with liberal grants of money. The garden is now in its scientific capacity admittedly the first of all botanical institutions in Asia, and has been designated by high authority the Kew of the East.

2. Valuable additions were made to the collection of dried plants in the herbarium during the year. The chief contributors were Dr. Aitchison, of the Afghan Boundary Commission; Mr. Thisleton Dyer, Director of the Botanical Garden at Kew; Dr. Gills; Dr. G. Watt; Dr. Rigol, of the Imperial Garden at St. Petersburg; Mr. Medley Wood, of the Botanic Garden, Durban; Mr. Pringle; Mr. H. O. Forbes; Dr. Prain, Curator of the Herbarium, Royal Botanic Garden, Seebpore; Mr. Gustav Mann; Mr. J. F. Duthee; Colonel H. Collett, c.b., of Saharanpore; Reverend J. Campbell, of Manbhoom; and Mr. J. S. Gamble, Conservator of Forests. Four hundred named species were received from Mexico, and three excellent named collections were sent by Mr. Medley Wood from Natal.

3. During the year 8,064 plants were received and 46,104 were issued. Nine hundred and three packets of seeds were received and 2,534 packets were distributed. The plants and seeds were distributed chiefly to Botanical Gardens, Forest Officers, District Officers, and Officers of the Public Works Department. A large quantity was also supplied to private individuals. The principal contributors were the Superintendents of the several Botanical Gardens.

4. Dr. King was engaged for some time in preparing a Monograph on "The species of *Ficus* of the Indo-Malayan and Chinese Countries." The first part of this valuable work has evoked strong approbation from scientific men and bodies, and the Lieutenant-Governor has had pleasure in directing that copies of it be supplied to the great Botanical Institutions of the world.

5. The Lloyd Botanic Garden at Darjeeling was under the charge of Mr. Kennedy. A lease has been obtained of the plot of land between the Botanic Garden and the Eden Sanitarium. This land is being used as a vegetable garden, and is under the charge of the Superintendent of the Botanic Garden. The acclimatised English potatoes have proved a failure, and the experiment made by private growers has also been unsuccessful.

6. A sum of Rs. 1,373 was realized by the sale of surplus plants at the Calcutta garden, and Rs. 1,180 by the sale of produce of the Darjeeling garden.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

*Secretary to the Government of Bengal.*

**REPORT ON THE WORKING OF THE FIRE-BRIGADE IN THE TOWN  
AND SUBURBS OF CALCUTTA AND IN HOWRAH DURING THE  
YEAR 1886-87.**

No. 3970, dated Calcutta, the 21st July 1887.

From—H. J. S. COTTON, Esq., c.s., Officiating Commissioner of Police, Calcutta,  
To—The Secretary to the Government of Bengal, Municipal Department.

I HAVE the honour to submit, under section 30 of Bengal Act IV of 1883, the following report on the working of the Fire-Brigade in the Town and Suburbs of Calcutta and in Howrah for the year 1886-87.

2. The Brigade was in attendance at thirty-six fires during the year—twelve in the Town, six in the Suburbs, and eighteen in Howrah. The loss of property was estimated at Rs. 64,375. It will be seen that the fires were much less serious than in the previous year. The only important fires were one on board the S.S. *Mira*, in which a portion of the cargo of tea and wheat, to the value of Rs. 20,000, was destroyed, and another on board the ship *Glendarnel*, laden with jute, which sustained damage to the extent of Rs. 10,000. In the Suburbs the fires were mostly confined to thatched and tiled houses. Of the fires in Howrah, only two call for remark—one on the Grand Trunk Road, in which property of the value of Rs. 2,100 was destroyed, and the other at the Ghosery Cotton Mills, in which 6,000lbs. of cotton, valued at about Rs. 1,000, was burnt.

3. There was no loss of life in any of these fires, and the destruction of property was less than that caused in previous years. No fire occurred in any jute warehouse.

4. A memorandum of the fires is enclosed.

5. A statement of the receipts and expenditure of the Fire-Brigade is also enclosed.

6. Under section 23 of the Act, nineteen prosecutions were instituted during the year, and convictions were obtained in twelve cases.

7. Only one license, granted to a dealer in Bhowanipore for the sale of fireworks, was withdrawn in October last under section 24 of the Act.



## Statement showing the actual Receipts and Disbursements of the Fire-Brigade Fund for the year ending 31st March 1887.

| RECEIPTS.  | Budget estimate for 1886-87. | Actual receipts for 1886-87. | Excess over budget estimate. | Less than budget estimate. |
|--|------------------------------|------------------------------|------------------------------|----------------------------|
|  | Rs. A. P.                    | Rs. A. P.                    | Rs. A. P.                    | Rs. A. P.                  |
| Balance on 31st March 1886   | 1,848 0 0                    | 10,108 0 0                   | 8,260 6 0                    |                            |
| Contribution of 80 per cent. fees from Town Corporation  | 18,500 0 0                   | 17,030 8 5                   |                              | 1,469 9 7                  |
| Ditto ditto from Suburban Municipality   | 16,000 0 0                   | 27,130 4 0                   | 11,130 4 0                   |                            |
| Ditto ditto from Howrah  | 5,250 0 0                    | 4,320 0 0                    |                              | 830 0 0                    |
| Fines under Jute Warehouse Act   | 100 0 0                      | 52 0 0                       |                              | 48 0 0                     |
| Fees for licenses for fireworks, Town  | 250 0 0                      | 310 0 0                      | 20 0 0                       |                            |
| Ditto ditto, Suburbs   | 270 0 0                      | 200 0 0                      |                              | 70 0 0                     |
| Hire of fire-engine  | 100 0 0                      | 250 0 0                      | 150 0 0                      |                            |
| Fees for licenses under Petroleum Act  |                              | 5,540 0 0                    | 5,540 0 0                    |                            |
| Total  | 42,358 0 0                   | 64,941 0 5                   | 22,583 10 0                  | 2,517 9 7                  |
| PAYMENTS.  |                              |                              |                              |                            |
| Establishment at Lall Bazar.   |                              |                              |                              |                            |
| 1 Superintendent, at Rs. 200   | 2,400 0 0                    | 2,400 0 0                    |                              |                            |
| 1 Engineer, at Rs. 150   | 1,800 0 0                    | 1,800 0 0                    |                              |                            |
| 1 Driver, at Rs. 120   | 1,440 0 0                    | 1,440 0 0                    |                              |                            |
| 1 Fireman, at Rs. 10   | 120 0 0                      | 120 0 0                      |                              |                            |
| 3 Tindals, at Rs. 10 each  | 360 0 0                      | 370 0 0                      | 10 0 0                       |                            |
| 18 Khatasees, at Rs. 7 each  | 1,260 0 0                    | 1,512 0 0                    |                              |                            |
| 11 Syces, at Rs. 7 each  | 770 0 0                      | 924 0 0                      |                              |                            |
| Personal allowances to tindals   | 72 0 0                       | 72 0 0                       |                              |                            |
| Total  | 8,628 0 0                    | 8,638 0 0                    | 10 0 0                       |                            |
| Contingencies.   |                              |                              |                              |                            |
| Feed and keep of 11 horses at Rs. 20 each, including shoeing, veterinary attendance, repairs of harness, &c. | 3,200 0 0                    | 3,347 18 0                   | 147 18 0                     |                            |
| Lighting engineer's and driver's quarters and fire-brigade stables   | 360 0 0                      | 300 0 0                      |                              |                            |
| Accoutrements for the European members of the fire-brigade supplied every year                               | 520 0 0                      | 510 1 0                      |                              | 9 15 0                     |
| Petty contingencies, including coal, wood, &c.   | 2,000 0 0                    | 1,075 5 7                    |                              | 324 10 5                   |
| Extra pay of European members of fire-brigade at Rs. 5 for each attendance at fire                           | 1,400 0 0                    | 940 0 0                      |                              | 460 0 0                    |
| Rent   | 564 0 0                      | 730 8 0                      | 166 8 0                      |                            |
| Pension  | 602 0 0                      | 609 11 2                     | 7 11 2                       |                            |
| Gratuities to persons giving notice of fires   | 200 0 0                      |                              |                              | 200 0 0                    |
| Canvas   | 4,000 0 0                    | 3,401 4 0                    |                              | 598 12 0                   |
| Purchase of two horses   | 1,200 0 0                    | 1,210 0 0                    | 10 0 0                       |                            |
| Harness for ditto  | 500 0 0                      | 308 8 0                      |                              | 191 8 0                    |
| Repairs of buildings   | 1,500 0 0                    | 340 15 6                     |                              | 1,159 8 4                  |
| Implements   | 1,000 0 0                    | 1,189 5 9                    | 189 5 9                      |                            |
| Repairs of engines and brake-vans  | 2,000 0 0                    | 1,786 3 6                    |                              | 213 13 6                   |
| Maintenance of telegraph and telephone lines   | 2,436 0 0                    |                              |                              |                            |
| Rent for Jail line sanctioned by Government order No. 467P, dated 14th June 1886                             | 372 0 0                      | 2,778 0 1                    |                              | 28 9 11                    |
| Total  | 21,863 0 0                   | 19,292 1 7                   | 597 5 11                     | 3,048 4 4                  |
| Howrah Establishment.  |                              |                              |                              |                            |
| 1 Superintendent, at Rs. 20  | 240 0 0                      | 240 0 0                      |                              |                            |
| 1 Engineer, at Rs. 120   | 1,440 0 0                    | 1,440 0 0                    |                              |                            |
| 1 Tindal, at Rs. 10  | 120 0 0                      | 120 0 0                      |                              |                            |
| 1 Fireman, at Rs. 10   | 120 0 0                      | 120 0 0                      |                              |                            |
| 3 Tindals, at Rs. 8 each   | 288 0 0                      | 288 0 0                      |                              |                            |
| 18 Khatasees, at Rs. 7 each  | 1,260 0 0                    | 1,008 0 0                    |                              |                            |
| 6 Ditto, at Rs. 6 each   | 432 0 0                      | 415 4 6                      |                              |                            |
| 1 Engine-driver, at Rs. 10   | 120 0 0                      | 120 0 0                      |                              | 16 11 6                    |
| 3 Syces, at Rs. 7 each   | 252 0 0                      | 252 0 0                      |                              |                            |
| Total  | 4,020 0 0                    | 4,003 4 6                    |                              | 16 11 6                    |
| Contingencies.   |                              |                              |                              |                            |
| Food and keep of horses including shoeing, veterinary attendance, repairs of harness, &c.                    | 750 0 0                      | 700 8 0                      |                              | 49 8 0                     |
| Rewards to informers giving notice of fires  | 50 0 0                       |                              |                              | 50 0 0                     |
| Repairs of engines and brake-vans  | 500 0 0                      | 147 0 6                      |                              | 352 15 6                   |
| Steam-engine, hose and gear  | 1,000 0 0                    | 500 0 0                      |                              | 275 6 0                    |
| Purchase of horses   | 600 0 0                      | 352 4 8                      |                              | 100 0 0                    |
| Repairs of building and look-out   | 300 0 0                      | 300 7 6                      |                              |                            |
| Contingencies, oil, soap, cotton, waste, &c.   | 300 0 0                      |                              |                              |                            |
| Total  | 3,500 0 0                    | 2,770 14 3                   | 98 11 9                      | 827 13 6                   |
| Bhowanipore.   |                              |                              |                              |                            |
| 2 Tindals, at Rs. 10 each  | 240 0 0                      | 240 0 0                      |                              |                            |
| 12 Khatasees, at Rs. 7 each  | 1,008 0 0                    | 1,008 0 0                    |                              |                            |
| Total  | 1,248 0 0                    | 1,248 0 0                    |                              |                            |
| Walgunge.  |                              |                              |                              |                            |
| 2 Tindals, at Rs. 10 each  | 240 0 0                      | 240 0 0                      |                              |                            |
| 12 Khatasees, at Rs. 7 each  | 1,008 0 0                    | 1,008 0 0                    |                              |                            |
| Total  | 1,248 0 0                    | 1,248 0 0                    |                              |                            |
| Palmer's Bridge.   |                              |                              |                              |                            |
| 2 Tindals, at Rs. 10 each  | 240 0 0                      | 240 0 0                      |                              |                            |
| 12 Khatasees, at Rs. 7 each  | 1,008 0 0                    | 1,008 0 0                    |                              |                            |
| Total  | 1,248 0 0                    | 1,248 0 0                    |                              |                            |
| Petroleum establishment and allowances   | 41,745 0 0                   | 38,448 4 4                   | 646 1 8                      | 3,048 13 4                 |
| Ditto contingencies  |                              | 1,380 0 0                    |                              |                            |
|  |                              | 137 0 11                     |                              |                            |
| Total  | 41,745 0 0                   | 39,965 5 3                   | 646 1 8                      | 3,048 13 4                 |
| Balance on 31st March 1887   | 613 0 0                      | 24,975 11 2                  |                              |                            |
| Total Rupees   | 42,358 0 0                   | 64,941 0 5                   | 646 1 8                      | 3,048 13 4                 |

CALCUTTA POLICE OFFICE,  
The 21st July 1887.

H. J. S. COTTON  
Officiating Commissioner of Police.



*Memorandum of Fires in Town, Suburbs, and Howrah from 1st April 1886 to 31st March 1887.*

| Number.         | Date.               | Locality with section letter.                    | Duration of fire.        | Approximate value of property destroyed. | Remarks showing nature of damage done, &c.   |
|-----------------|---------------------|--|--------------------------|--|--|
| <b>Town.</b>    |                     |  |                          |  |  |
| 1               | 11th April 1886     | F. Jorasanko, Chitpore Road                      | Two hours ... ..         | 3,530                                    | Three large two-storied tiled houses, with shops on ground floor containing country produce.   |
| 2               | 30th .. ..          | L. Waterloo, Hastings Street..                   | 50 minutes ... ..        | 1,000                                    | A brick building containing oil paint and oilman's stores.   |
| 3               | 6th June .. ..      | E. Jorabagan, Cotton Street...                   | Two hours and 50 minutes | 7,000                                    | A two-storied brick built house used as a cloth shop.  |
| 4               | 20th August .. ..   | Second Division River, No. 4 Jetty.              | 26 hours ... ..          | 20,000                                   | Star line S. S. <i>Mitra</i> containing cargo of chests of tea and bags of wheat.  |
| 5               | 26th October .. ..  | J. Mochuparah, Mirzapore Street.                 | Two hours ... ..         | 1,500                                    | A tiled house containing glass and crockery ware.  |
| 6               | 16th December 1887  | G. Burra Bazar, Chitpore Road.                   | 1 hour and 40 minutes    | 400                                      | A row of tiled huts.   |
| 7               | 11th January .. ..  | H. Calcutollah, Choonagully                      | 1 hour and 30 minutes    | 2,000                                    | Twelve tiled houses.   |
| 8               | 23rd .. ..          | E. Jorabagan .. ..                               | 4 hours .. ..            | 5,000                                    | A range of brick houses.   |
| 9               | 18th February .. .. | 3rd Division Port Police ..                      | 23 hours and 30 minutes  | 10,000                                   | Ship <i>Glondarnet</i> laden with jute.  |
| 10              | 15th .. ..          | F. Jorasanko, Chitpore Road                      | 3 hours ... ..           | 1,000                                    | Five large tiled huts.   |
| 11              | 17th .. ..          | L. Waterloo Street, Strand Road.                 | 1 hour ... ..            | 100                                      | Time ball staff of the Port Commissioners.   |
| 12              | 25th March .. ..    | B. Coomertoollee, Upper Chitpore Road.           | 1 hour and 30 minutes    | 150                                      | A tiled house containing 9 rooms used as a shop for sale of peas.  |
| 12              | Total fires.        |  |                          | 51,680                                   |  |
| <b>Suburbs.</b> |                     |  |                          |  |  |
| 1               | 24th April 1886     | G. Banispecker .. ..                             | 2 hours and 30 minutes   | 200                                      | A tiled house of 7 rooms.  |
| 2               | 13th June .. ..     | B. Chitpore, Shambazar ..                        | 1 hour .. ..             | 100                                      | Six mud huts.  |
| 3               | 23rd October .. ..  | L. Bhowanipore, Kussa Road                       | 1 hour and 45 minutes    | 70                                       | One tiled hut.   |
| 4               | 18th December .. .. | F. Entally .. ..                                 | 2 hours .. ..            | 1,000                                    | Twelve tiled huts.   |
| 5               | 26th January 1887   | B. Chitpore, Shambazar ..                        | 1 hour and 45 minutes    | 70                                       | Four thatched huts.  |
| 6               | 31st February .. .. | B. Bellaghatta, Choonaputty                      | 4 hours and 30 minutes   | 6,000                                    | Ten tiled sheds and a large quantity of lime.  |
| 6               | Total fires.        |  |                          | 7,440                                    |  |
| <b>Howrah.</b>  |                     |  |                          |  |  |
| 1               | 12th April 1886     | Kally Chowdry's Lane, Seebpore.                  | 2 hours .. ..            | 40                                       | One thatched house and cow shed and one cow.   |
| 2               | 10th .. ..          | Teekinparah, Howrah ..                           | 45 minutes .. ..         | 100                                      | Two tiled stables. One was entirely burnt down and the other partly; also a horse.   |
| 3               | 18th .. ..          | Chaddra Bazar Road, Seebpore.                    | 1 hour and 45 minutes    | 115                                      | Three thatched huts.   |
| 4               | 18th .. ..          | Ghoseery Cotton Mills ..                         | 35 minutes .. ..         | 1,000                                    | About 6,000 lbs. of cotton.  |
| 5               | 9th May .. ..       | Teekinparah, Howrah ..                           | 45 minutes .. ..         | 10                                       | Part of the roof of a tiled hut.   |
| 6               | 26th July .. ..     | Howrah Section, P. W. S. Y. East Indian Railway. | 25 minutes .. ..         | 50                                       | One thatched hut and about 30 gallons of creosote and tar.   |
| 7               | 26th October .. ..  | Ninkorah Lane, Sulkea ..                         | 1 hour .. ..             | 60                                       | One thatched hut, tacklappose and bedding.   |
| 8               | 26th November .. .. | Seebpore, Batoo .. ..                            | 1 hour and 45 minutes    | 500                                      | Five thatched huts, bedding, copper cooking utensils, &c.  |
| 9               | 5th January 1887    | Chowra Busty, Seebpore ..                        | 30 minutes .. ..         | 10                                       | Part of the roof of a thatched hut.  |
| 10              | 12th .. ..          | Rajo Seebpore .. ..                              | 3 hours and 30 minutes   | 200                                      | Two thatched huts and part of a third.   |
| 11              | 13th .. ..          | Darogah Bagan, Sulkea ..                         | 1 hour and 30 minutes    | 700                                      | A thatched hut, an oil mill, a furniture shop and two cows.  |
| 12              | 2nd February .. ..  | Howrah Grand Trunk Road...                       | 6 hours and 30 minutes   | 2,100                                    | Two tiled houses and a pucca house containing 1,000 barrels of asphalt, 300 of resin, 200 of Portland cement, and 200 cases of whitening, part of which was damaged. |
| 13              | 10th .. ..          | Jungleparah, Seebpore ..                         | 1 hour and 30 minutes    | 75                                       | Two huts and a thatched shed.  |
| 14              | 17th .. ..          | Parrah Bana, Seebpore ..                         | 1 hour and 30 minutes    | 10                                       | Part of a house.   |
| 15              | 28th .. ..          | Baroch Barrah, Seebpore ..                       | 45 minutes .. ..         | 25                                       | One thatched house.  |
| 16              | 9th March .. ..     | Khooorah Road, Seebpore ..                       | 1 hour and 30 minutes    | 10                                       | Ditto ditto.   |
| 17              | 16th .. ..          | South Bally, Teekinparah, Howrah.                | 25 minutes .. ..         | 50                                       | Ditto ditto.   |
| 18              | 23rd .. ..          | Satra Ghat, Seebpore ..                          | 1 hour and 45 minutes    | 200                                      | Four thatched huts.  |
| 18              | Total fires.        |  |                          | 5,255                                    |  |
| 36              |                     |  | GRAND TOTAL              | 64,375                                   |  |

CALCUTTA,  
The 21st July 1887.

H. J. S. COTTON,  
Offg. Commissioner of Police.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government during the week ending the 6th August 1887.

| No.                       | District and date of return.      | Rainfall at Sudder station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|---------------------------|-----------------------------------|---------------------------------------|--|
| <b>BENGAL.</b>            |                                   |                                       |  |
| <i>Western Districts.</i> |                                   |                                       |  |
| <b>BURDWAN DIV.</b>       | 1 Burdwan, Aug. 6, '87            | 4.69                                  | Weather—seasonable. Prospects favourable except in Culna, where the rainfall is short. Rice still about 20 seers per rupee. An outbreak of cholera in Burdwan.   |
|                           | Culna                     ...     | 1.32                                  |  |
|                           | Cutwa                   ...       | 7.14                                  |  |
|                           | Ranoeungo             ...         | 6.65                                  |  |
|                           | 2 Bankoora               " 6, '87 | 9.81                                  | Weather—seasonable. Heavy showers all over the district. Transplantation of <i>aman</i> rice is still proceeding. Prospects of sugarcane and other standing crops good. Prices continue unaltered. Public health good.   |
|                           | Bishenpore            ...         | 12.07                                 |  |
|                           | 3 Beerbhoom             " 6, "    | 3.11                                  | Weather—cool and cloudy with high winds and frequent showers. Young <i>aman</i> rice is coming up well. <i>Aus</i> is also reported as flourishing in the limited tract where it is grown. Prices show a downward tendency. Cattle-pox has nearly disappeared. Public health is indifferent, as there is a good deal of fever reported on the lowlands.  |
|                           | Rampore Haut         ...          | 2.48                                  |  |
|                           | 4 Midnapore             " 6, '87  | 4.26                                  | Weather—sultry when not raining. Crops in the south are good; in the north they are excellent if they survive the floods. The Cossye and Silai rivers have burst the embankments in places. Many miles of country including the town of Ghatal and the whole of Chetboa pergunnah submerged. Rivers, however, rapidly subsided. Extent of permanent damage not yet known.                        |
|                           | "                        ...      | ...                                   |  |
| <b>PRESIDENCY DIV.</b>    | 5 Hooghly                " 6, "   | 2.69                                  | Weather—seasonable. Good rain has fallen in the west of Jehanabad and prospects are now generally favourable. Public health good.  |
|                           | Serampur             ...          | 3.12                                  |  |
|                           | Jehanabad            ...          | 6.49                                  |  |
|                           | Howrah                 " 6, "     | 2.63                                  | Weather—seasonable. Transplanting of <i>aman</i> seedlings in progress. <i>Aus</i> , sugarcane and jute promising.   |
|                           | Oolooberiah         ...           | 3.37                                  |  |
|                           | <i>Central Districts.</i>         |                                       |  |
|                           | 6 24-Perghu., Aug. 6, '87         | 3.33                                  | Weather—seasonable, with occasional showers. Prospects of crops satisfactory. Transplantation continues. Health of people generally good, but stray cases of cholera reported.   |
|                           | 7 Nudda                 " 6, "    | 1.25                                  |  |
|                           | Kushtea             ...           | 2.73                                  | Weather—cool; frequent showers and cloudy sky. <i>Aus</i> on churs has been reaped. Transplanting of <i>aman</i> behind hand for want of rain. Sugarcane and jute doing well. Indigo manufacture coming to an end; poor outturn from high lands and fair outturn from chur lands. Public health good. Rivers risen rapidly.  |
|                           | Mcherpur            ...           | 2.90                                  |  |
|                           | Chudanga            ...           | 1.90                                  |  |
|                           | Ranaghat            ...           | 3.05                                  | Weather—cloudy and showery. Prospects of <i>aman</i> and <i>aus</i> paddy favourable. Public health good.  |
|                           | 8 Khoosla               " 6, '87  | 1.87                                  |  |
|                           | 9 Jessore               " 6, "    | 1.03                                  | Weather—extremely hot with a very scanty rainfall. Rain that fell during the week has done good to the paddy crops, the prospects of which continue to be good, but still more rain is wanted for transplanting <i>aman</i> paddy. Untimely subsidence of flood has caused some injury to the paddy crops in the jurisdiction of Saikupa police-station. Public health fair.                     |
|                           | Jhenidah            ...           | 0.87                                  |  |
|                           | Magurah             ...           | 1.95                                  |  |
|                           | Narail               ...          | 2.00                                  |  |
| <b>RAJSHAHY DIV.</b>      | 10 Moorshedabad       " 6, '87    | 3.56                                  | Weather—very hot; rain at intervals. Transplanting of <i>aman</i> still going on. <i>24</i> , sugarcane and jute progressing. Public health good.  |
|                           | Lalbagh             ...           | 2.90                                  |  |
|                           | Kandi                ...          | 2.07                                  |  |
|                           | Juagipur            ...           | 5.59                                  | Weather—heavy rain. Harvesting of <i>bhadoi</i> has begun. Rain has been very desirable for transplanting of <i>haimanti</i> crop.   |
|                           | 11 Dinagepore         " 6, '87    | 11.33                                 |  |
|                           | 12 Rajshahye           " 6, '87   | 3.85                                  | Weather—rainy. Cutting of <i>aus</i> paddy continues. Prospects of <i>aman</i> , jute and sugarcane generally good. Public health fair.  |
|                           | Nattore             ...           | 2.87                                  |  |
|                           | Nowgong            ...            | 7.13                                  |  |
|                           | 13 Rangpur             " 6, "     | 8.80                                  | Weather—cool. The heavy rain which has fallen recently will enable the planting out of <i>aman</i> to be completed. Prices rising. Public health fair.   |
|                           | Nilpamari           ...           | 1.17                                  |  |
| <b>DACCA DIVISION.</b>    | 14 Bogra                " 6, '87  | 6.76                                  | Weather—seasonable. Transplanting of <i>aman</i> still going on. Prospects of standing crops fair. Public health fair.   |
|                           | Sherpur             ...           | 3.48                                  |  |
|                           | Nowkhilla           ...           | 3.47                                  | Weather—seasonable. Prospects of crops good, but more rain wanted. Public health good.   |
|                           | 15 Pubna                " 6, '87  | 2.69                                  |  |
|                           | Serajunge           ...           | 4.65                                  | Weather—close, with occasional heavy showers. State and prospects of crops good.   |
|                           | 16 Darjeeling           " 6, '87  | 9.28                                  |  |
| <b>DACCA DIVISION.</b>    | 17 Julpigoree           " 6, "    | 4.73                                  | Weather—cool and cloudy. Soft rain varied with occasional heavy showers. <i>Bhadoi</i> and jute are reported of as indifferent crops. <i>Haimanti</i> transplantation, which had been much checked for want of water, is now proceeding actively, and, under favourable circumstances, a fair crop may yet be reaped. The unusually dry weather for July has done much harm. Public health fair. |
|                           | "                        ...      | ...                                   |  |
|                           | <i>Eastern Districts.</i>         |                                       |  |
|                           | 18 Dacca, Aug. 6, '87             | 3.12                                  | Weather—seasonable. Jute and <i>aus</i> paddy are being harvested. Prospects of <i>aman</i> favourable. Rivers gradually falling. Damage to some extent is anticipated to paddy crops in parts of the district owing to subsidence of water. Public health good.   |
|                           | Manickgunge         ...           | 3.13                                  |  |
|                           | Munshigunge        ...            | 3.82                                  |  |
|                           | Narsingunge         ...           | 2.67                                  |  |
|                           | 19 Furraddipore        " 6, '87   | 1.50                                  | Weather—seasonable. Prospects of crops continue fair. Rivers again rising. Public health generally good.   |
|                           | Madaripore          ...           | 1.58                                  |  |
|                           | 20 Backergunge         " 5, '87   | 5.09                                  | Weather—hot and rainy. Cultivation of <i>aman</i> still going on. Prospects good. <i>Aus</i> and sugarcane improving except in one or two places. General health good.   |
|                           | "                        ...      | ...                                   |  |
|                           | 21 Mymensingh          " 5, '87   | 6.40                                  | Weather—hot. Occasional showers. River continues falling. State and prospects of crops good.   |
|                           | Jamalpur            ...           | 6.33                                  |  |
|                           | Kishoregunge        ...           | 2.83                                  |  |
|                           | Attea                ...          | 6.14                                  |  |
|                           | Netrokona           ...           | 7.50                                  |  |

| No.                                | District and date of return.        | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|------------------------------------|-------------------------------------|---------------------------------------|--|
| <b>BENGAL—contd.</b>               |                                     |                                       |  |
| <i>Eastern Districts—contd.</i>    |                                     |                                       |  |
| CHITTAGONG DIV.                    | 22 Chittagong. Aug. 9, '87          | 15.00                                 | Weather—seasonable. Transplanting of <i>aman</i> continues. Prospects of crops good. Prices stationary. Cholera still reported; general health good.   |
|                                    | 23 Noakhally Aug. 5, "              | 10.44                                 | Weather—seasonable. <i>Aus</i> crop is being harvested. Transplantations of <i>aman</i> continues. Prospects much improved. Public health fair.  |
|                                    | 24 Fenny " 4, '87                   | 7.84                                  | Weather—seasonable. Prospects excellent in every way. <i>Aus</i> and jute are being gathered with excellent outturn. Rain of 2nd instant, nearly four inches in the station, has enabled agricultural operations with respect to <i>aman</i> to be vigorously taken in hand.   |
|                                    | 24 Brahmanbariah " 4, '87           | 6.16                                  | Weather—seasonable. Prospects excellent in every way. <i>Aus</i> and jute are being gathered with excellent outturn. Rain of 2nd instant, nearly four inches in the station, has enabled agricultural operations with respect to <i>aman</i> to be vigorously taken in hand.   |
|                                    | 24 Chandpur " 4, '87                | 2.69                                  | Weather—seasonable. Prospects excellent in every way. <i>Aus</i> and jute are being gathered with excellent outturn. Rain of 2nd instant, nearly four inches in the station, has enabled agricultural operations with respect to <i>aman</i> to be vigorously taken in hand.   |
| CHITTAGONG DIV.                    | 25 Chittagong Hill Tracts. " 2, '87 | 4.74                                  | Weather—rainy throughout the week with occasional sunshine. <i>Joom</i> paddy doing well. Transplanting in low lands continues. More rain wanted.  |
|                                    | 25 Hill Tipperah " 4, "             | 3.54                                  | Weather—rainy. Transplantation of <i>aman</i> paddy still continues. Sugarcane doing well. Prospects of <i>joom</i> crops fair. Several cases of fever reported.   |
| <b>BEHAR.</b>                      |                                     |                                       |  |
| PATNA DIV.                         | 26 Patna Aug. 6, '87                | 4.98                                  | Weather—at first dry and hot, latterly rainy. Rain will benefit <i>bhadoi</i> crops and sugarcane which are coming up well. Transplantation of paddy is going on, but more rain is wanted in parts of the district. Cholera is prevalent in the Behar sub-division; sporadic cases are also reported in the other sub-divisions.                               |
|                                    | 26 Barh " "                         | 3.05                                  | Weather—at first dry and hot, latterly rainy. Rain will benefit <i>bhadoi</i> crops and sugarcane which are coming up well. Transplantation of paddy is going on, but more rain is wanted in parts of the district. Cholera is prevalent in the Behar sub-division; sporadic cases are also reported in the other sub-divisions.                               |
|                                    | 26 Behar " "                        | 8.57                                  | Weather—at first dry and hot, latterly rainy. Rain will benefit <i>bhadoi</i> crops and sugarcane which are coming up well. Transplantation of paddy is going on, but more rain is wanted in parts of the district. Cholera is prevalent in the Behar sub-division; sporadic cases are also reported in the other sub-divisions.                               |
|                                    | 27 Gya " 6 "                        | 1.86                                  | Weather—cloudy. Paddy transplantation going on. Prospects good. Cholera still raging in the interior. Fever and small-pox also reported.   |
|                                    | 28 Shahabad " 6 "                   | 3.59                                  | Weather—cloudy and rainy. Transplanting of rice is in progress. <i>Bhadoi</i> crops are in good condition. Cholera is abating, but has not completely disappeared. Prices continue stationary.   |
|                                    | 28 Juxar " "                        | 4.83                                  | Weather—cloudy and rainy. Transplanting of rice is in progress. <i>Bhadoi</i> crops are in good condition. Cholera is abating, but has not completely disappeared. Prices continue stationary.   |
|                                    | 28 Sasaram " "                      | 4.70                                  | Weather—cloudy and rainy. Transplanting of rice is in progress. <i>Bhadoi</i> crops are in good condition. Cholera is abating, but has not completely disappeared. Prices continue stationary.   |
|                                    | 28 Bhabua " "                       | 11.70                                 | Weather—cloudy and rainy. Transplanting of rice is in progress. <i>Bhadoi</i> crops are in good condition. Cholera is abating, but has not completely disappeared. Prices continue stationary.   |
|                                    | 29 Darbhanga " 6 "                  | 3.83                                  | Weather—rainy. There has now been plenty of rain, and though the Tajpur figures are low, it was raining there when the report left. Injury to indigo in the north from excessive rain. Other crops doing well. Price of rice averages 18 seers per rupee. Public health generally good.  |
|                                    | 29 Madhubani " "                    | 3.90                                  | Weather—rainy. There has now been plenty of rain, and though the Tajpur figures are low, it was raining there when the report left. Injury to indigo in the north from excessive rain. Other crops doing well. Price of rice averages 18 seers per rupee. Public health generally good.  |
|                                    | 29 Tajpur " "                       | 1.04                                  | Weather—rainy. There has now been plenty of rain, and though the Tajpur figures are low, it was raining there when the report left. Injury to indigo in the north from excessive rain. Other crops doing well. Price of rice averages 18 seers per rupee. Public health generally good.  |
|                                    | 30 Mozufferpore " 6, '87            | 4.99                                  | Weather—sky densely overcast with continuous rain. Condition of all crops good. Transplantation of rice still in progress. Much cholera still reported.  |
| BAGHUPUR DIV.                      | 30 Hajipur " "                      | 6.0                                   | Weather—sky densely overcast with continuous rain. Condition of all crops good. Transplantation of rice still in progress. Much cholera still reported.  |
|                                    | 30 Sitamarhi " "                    | 1.46                                  | Weather—sky densely overcast with continuous rain. Condition of all crops good. Transplantation of rice still in progress. Much cholera still reported.  |
|                                    | 31 Saran " 6 "                      | 5.07                                  | Weather—cloudy and rainy. More rain wanted for rice crops. Transplantation going on on low lands. Prospects of <i>bhadoi</i> crops improved by recent rain. Cholera still reported.  |
|                                    | 31 Sewan " "                        | 3.22                                  | Weather—cloudy and rainy. More rain wanted for rice crops. Transplantation going on on low lands. Prospects of <i>bhadoi</i> crops improved by recent rain. Cholera still reported.  |
|                                    | 31 Gopalgunge " "                   | 2.79                                  | Weather—cloudy and rainy. More rain wanted for rice crops. Transplantation going on on low lands. Prospects of <i>bhadoi</i> crops improved by recent rain. Cholera still reported.  |
|                                    | 32 Chhapra " 6 "                    | 1.55                                  | Weather—wet and rainy. Rainfall of the week has been decidedly beneficial to both the <i>bhadoi</i> and paddy crops, though more rain is wanted for the latter. It is copiously raining to-day (6th), and shows signs of heavy downpour. Prices rising in the Bettiah sub-division. Public health not very good; cholera and fever prevailing in the district. |
|                                    | 32 Bettiah " "                      | 1.70                                  | Weather—wet and rainy. Rainfall of the week has been decidedly beneficial to both the <i>bhadoi</i> and paddy crops, though more rain is wanted for the latter. It is copiously raining to-day (6th), and shows signs of heavy downpour. Prices rising in the Bettiah sub-division. Public health not very good; cholera and fever prevailing in the district. |
|                                    | 33 Monghyr. Aug. 6, '87             | 3.95                                  | Weather—cloudy and rainy. Transplantation of winter rice in progress. More rain wanted. <i>Bhadoi</i> crops doing well where not damaged by the rising of the Ganges. Cholera still prevailing in places.  |
|                                    | 33 Begusarai " "                    | 2.74                                  | Weather—cloudy and rainy. Transplantation of winter rice in progress. More rain wanted. <i>Bhadoi</i> crops doing well where not damaged by the rising of the Ganges. Cholera still prevailing in places.  |
|                                    | 33 Jamui " "                        | 6.31                                  | Weather—cloudy and rainy. Transplantation of winter rice in progress. More rain wanted. <i>Bhadoi</i> crops doing well where not damaged by the rising of the Ganges. Cholera still prevailing in places.  |
|                                    | 34 Bhagalpore " 6 "                 | 3.16                                  | Weather—seasonable. Rain has much benefited all crops. Transplantation can now be completed. Early rice and <i>marua</i> good. The dears will have a further loss in <i>makai</i> from floods. Outturn of this crop will be very poor.   |
| BAGHUPUR DIV.                      | 35 Purneah " 6 "                    | 2.10                                  | Weather—fair with heavy showers. Crops doing well.   |
|                                    | 35 Kishengunge " "                  | 1.65                                  | Weather—fair with heavy showers. Crops doing well.   |
|                                    | 35 Arrareah " "                     | 1.40                                  | Weather—fair with heavy showers. Crops doing well.   |
|                                    | 36 Maldah " 6 "                     | 2.22                                  | Weather—seasonable. Rivers fall again. <i>Bhadoi</i> crops are ripening with very fair prospects except in the northern tracts, where they have been partially damaged by early floods. Transplantation of winter paddy is going on. Common rice 20 seers per rupee. Public health generally good.   |
|                                    | 36 Chanchal " "                     | 1.69                                  | Weather—seasonable. Rivers fall again. <i>Bhadoi</i> crops are ripening with very fair prospects except in the northern tracts, where they have been partially damaged by early floods. Transplantation of winter paddy is going on. Common rice 20 seers per rupee. Public health generally good.   |
|                                    | 36 Shibgunge " "                    | 7.11                                  | Weather—seasonable. Rivers fall again. <i>Bhadoi</i> crops are ripening with very fair prospects except in the northern tracts, where they have been partially damaged by early floods. Transplantation of winter paddy is going on. Common rice 20 seers per rupee. Public health generally good.   |
|                                    | 36 Gajole " "                       | 5.80                                  | Weather—seasonable. Rivers fall again. <i>Bhadoi</i> crops are ripening with very fair prospects except in the northern tracts, where they have been partially damaged by early floods. Transplantation of winter paddy is going on. Common rice 20 seers per rupee. Public health generally good.   |
|                                    | 37 Southal Pergah. " 6 "            | 2.62                                  | Weather—cloudy. Heavy rain during the week. Transplanting of winter paddy more than half finished. Prospects of <i>bhadoi</i> crops fair.  |
|                                    | 37 Deoghur " "                      | 10.58                                 | Weather—cloudy. Heavy rain during the week. Transplanting of winter paddy more than half finished. Prospects of <i>bhadoi</i> crops fair.  |
|                                    | 37 Godda " "                        | 3.83                                  | Weather—cloudy. Heavy rain during the week. Transplanting of winter paddy more than half finished. Prospects of <i>bhadoi</i> crops fair.  |
|                                    | 37 Juntara " "                      | 6.63                                  | Weather—cloudy. Heavy rain during the week. Transplanting of winter paddy more than half finished. Prospects of <i>bhadoi</i> crops fair.  |
|                                    | 37 Pakour " "                       | 4.88                                  | Weather—cloudy. Heavy rain during the week. Transplanting of winter paddy more than half finished. Prospects of <i>bhadoi</i> crops fair.  |
| BAGHUPUR DIV.                      | 37 Rajmehal " "                     | 7.86                                  | Weather—cloudy. Heavy rain during the week. Transplanting of winter paddy more than half finished. Prospects of <i>bhadoi</i> crops fair.  |
|                                    | 37 Southal Pergah. " 6 "            | 2.62                                  | Weather—cloudy. Heavy rain during the week. Transplanting of winter paddy more than half finished. Prospects of <i>bhadoi</i> crops fair.  |
| <b>ORISSA.</b>                     |                                     |                                       |  |
| ORISSA DIV.                        | 38 Cuttack " "                      | ...                                   | Report not received.   |
|                                    | 39 Pooree " 4 "                     | 0.84                                  | Little cloud or rain. Transplantation of <i>sarad</i> rice in progress. Rivers have gone down. Rain very much wanted. Common rice 24 seers 12 chittacks per rupee in the Sudder sub-division, and 21 seers 2 chittacks in the Khoorda sub-division. Cases of cholera reported.   |
|                                    | 40 Balasore Aug. 5, "               | 5.05                                  | Weather—cloudy and seasonable. Weeding and transplanting of paddy going on. Public health good, except that a few cases of cholera are reported from the north. Cattle-disease is prevalent in parts of Balasore thana.  |
| <b>CHOTA NAGPORE.</b>              |                                     |                                       |  |
| <i>South-West Frontier Agency.</i> |                                     |                                       |  |
| 41                                 | Bazaribagh. Aug. 5, '87             | 5.68                                  | Weather—seasonable. Heavy rain all over the district. All crops doing well. Transplanting of rice still in progress. Cholera reported from several thanas.   |
| 42                                 | Lohardugga " 6 "                    | 5.40                                  | Weather—seasonable. Rain throughout the week. Prospects of crops excellent. No change in prices. Cholera still continues. Public health otherwise good.  |
| 42                                 | Palanow " "                         | 8.54                                  | Weather—seasonable. Rain throughout the week. Prospects of crops excellent. No change in prices. Cholera still continues. Public health otherwise good.  |
| 43                                 | Singbhoom " 5 "                     | 2.86                                  | Constant showers during week till 3rd. Weather cool and seasonable. Prospects of crops good. General health good.  |
| 44                                 | Manbhoom " 6 "                      | 6.51                                  | Rain alternating with sunshine. Transplanting of paddy going on. Maize, millet, and sugarcane doing well. Prospects good. Common rice selling from 24 to 27 seers per rupee. Public health good.   |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 9th August 1887.

W. C. MACPHERSON,  
Off. Secy. to the Govt. of Bengal.

# PRICES-CURRENT (retail) of Food-grains, *Processed and Salt in the*

| Number.  | DISTRICTS.        | WHEAT.          |                        |                                       | BARLEY.         |                        |                                       | RICE, BEST SORT. |                        |                                       | F.     | KANGNI OR KAKRA<br>ITALIAN MILLET.<br>( <i>Setaria italica</i> .) |                        |                                       | GRAM, CHANA,<br>MOHRI, KADALAY,<br>OR SURAGI.<br>( <i>Cicer arietinum</i> .) |                        |                                       |
|--|-------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|------------------|------------------------|---------------------------------------|--------|---|------------------------|---------------------------------------|--|------------------------|---------------------------------------|
|  |                   | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return.  | Next preceding return. | Corresponding return<br>of last year. |        | Present return.   | Next preceding return. | Corresponding return<br>of last year. | Present return.  | Next preceding return. | Corresponding return<br>of last year. |
|  |                   |                 |                        |                                       |                 |                        |                                       |                  |                        |                                       |        |   |                        |                                       |  |                        |                                       |
| BENGAL.  |                   |                 |                        |                                       |                 |                        |                                       |                  |                        |                                       |        |   |                        |                                       |  |                        |                                       |
| Western Districts.   |                   |                 |                        |                                       |                 |                        |                                       |                  |                        |                                       |        |   |                        |                                       |  |                        |                                       |
|  |                   | S. Ch.          | S. Ch.                 | S. Ch.                                | S. Ch.          | S. Ch.                 | S. Ch.                                | S. Ch.           | S. Ch.                 | S. Ch.                                | S. Ch. | S. Ch.  | S. Ch.                 | S. Ch.                                | S. Ch.   | S. Ch.                 | S. Ch.                                |
| 1  | Burdwan ...       | 13 8            | 12 12                  | 14 12                                 | Not sold.       |                        | 31 4                                  | 15 6             | 16 8                   | 14 4                                  | 20 1   |   |                        |                                       |  |                        |                                       |
| 2  | Bankura ...       | 15 8            | 16 8                   | 17 0                                  | 20 0            | 20 0                   | 23 0                                  | 16 8             | 17 8                   | 18 8                                  | 21 1   |   |                        |                                       | 25 8   | 26 0                   | 21 0                                  |
| 3  | Beerbhoom ...     | 18 0            | 18 0                   | 20 0                                  | 18 0            |                        |                                       | 18 0             | 19 0                   | 16 0                                  | 22     |   |                        |                                       | 19 8   | 19 8                   | 21 0                                  |
| 4  | Midnapore ...     | 13 0            | 16 0                   | 18 0                                  |                 |                        |                                       | 18 0             | 21 0                   | 16 0                                  | 23     |   |                        |                                       | 26 8   | 26 8                   | 22 0                                  |
| 5  | Hooghly ...       | 14 0            | 15 0                   | 16 0                                  |                 |                        |                                       | 10 0             | 10 0                   | 10 0                                  | 17     |   |                        |                                       | 20 0   | 22 0                   | 17 0                                  |
|  | Howrah ...        | Not available.  |                        |                                       |                 |                        |                                       | 13 8             | 13 12                  | 11 8                                  | 17 1   |   |                        |                                       | 21 0   | 20 0                   | 16 0                                  |
| Central Districts.   |                   |                 |                        |                                       |                 |                        |                                       |                  |                        |                                       |        |   |                        |                                       |  |                        |                                       |
|  | Calcutta ...      | 13 4            | 14 4                   | 15 0                                  | 20 14           | 20 0                   | 21 0                                  | 8 12             | 9 6                    | 8 8                                   | 16     |   |                        |                                       |  |                        |                                       |
| 6  | 24-Pargunnahs ... | 14 0            | 14 0                   | 14 0                                  | 25 0            | 25 0                   | 30 0                                  | 8 0              | 8 0                    | 8 0                                   | 16     | 15 8  | 16 4                   | 18 4                                  | 19 12  | 19 12                  | 19 8                                  |
| 7  | Nudda ...         | 16 0            | 16 0                   | 17 0                                  | 32 0            | 32 0                   | 23 0                                  | 15 4             | 15 4                   | 13 5                                  | 19     | 20 0  | 20 0                   |                                       | 23 0   | 22 8                   | 18 12                                 |
| 8  | Khoulna ...       |                 |                        |                                       |                 |                        |                                       | 8 0              | 18 0                   | 14 0                                  | 21     |   |                        |                                       | 29 0   | 29 0                   | 22 14                                 |
| 9  | Jessore ...       | 16 0            | 16 0                   | 16 0                                  |                 |                        |                                       | 16 0             | 17 0                   | 13 0                                  | 21     |   |                        |                                       | 16 0   | 16 0                   | 16 0                                  |
| 10   | Moorshedabad ...  | 15 0            | 15 0                   | 16 0                                  |                 |                        |                                       | 15 0             | 15 0                   | 13 4                                  | 22     |   |                        |                                       | 26 8   | 26 8                   | 20 0                                  |
| 11   | Dinapore ...      | 12 0            | 12 0                   | 16 0                                  | 23 0            | 22 0                   | 17 8                                  | 16 3             | 17 0                   | 16 8                                  | 20     |   |                        |                                       | 30 0   | 30 0                   | 26 0                                  |
| 12   | Rajshahye ...     | 17 4            | 16 8                   | 20                                    | 45 0            | 45 0                   | 33 12                                 | 15 2             | 16 14                  | 15 12                                 | 18     |   |                        |                                       | 24 0   | 24 0                   | 19 0                                  |
| 13   | Rungpore ...      | 19 12           | 14 12                  | 16 0                                  |                 |                        |                                       | 15 3             | 15 3                   | 11 8                                  | 17     |   |                        |                                       | 28 2   | 28 2                   | 22 0                                  |
| 14   | Bogra ...         | 17 4            | 17 4                   | 10 8                                  |                 |                        |                                       | 13 8             | 13 8                   | 13 8                                  | 21     |   |                        |                                       | 20 0   | 20 0                   | 16 0                                  |
| 15   | Pahna ...         | 19 0            | 18 12                  | 21 4                                  |                 |                        |                                       | 8 0              | 8 0                    | 8 0                                   | 24     |   |                        |                                       | 19 8   | 20 4                   | 10 8                                  |
| 16   | Darjeeling ...    | 9 0             | 9 0                    | 9 0                                   | 13 0            | 11 0                   | 10 0                                  | 5 0              | 5 0                    | 5 0                                   | 13     |   |                        |                                       | 30 0   | 32 0                   | 21 0                                  |
| 17   | Jalpigore ...     | 12 0            | 13 0                   | 13 4                                  | 20 0            | 20 0                   | 20 0                                  | 13 0             | 13 0                   | 13 0                                  | 20     |   |                        |                                       | 11 0   | 11 0                   | 10 0                                  |
| Eastern Districts.   |                   |                 |                        |                                       |                 |                        |                                       |                  |                        |                                       |        |   |                        |                                       |  |                        |                                       |
| 18   | Dacca ...         | 14 8            | 14 8                   | 14 8                                  | 26 0            | 26 0                   | 26 0                                  | 17 0             | 16 0                   | 17 0                                  | 20     |   |                        |                                       |  |                        |                                       |
| 19   | Furzedpore ...    | 20 0            | 22 0                   | 24 0                                  | 26 0            | 26 0                   | 25 0                                  | 17 0             | 17 0                   | 16 0                                  | 21     |   |                        |                                       | 20 0   | 20 0                   | 18 0                                  |
| 20   | Backergunge ...   |                 |                        |                                       |                 |                        |                                       | 15 0             | 16 8                   | 15 0                                  | 18     |   |                        |                                       | 22 0   | 24 0                   | 16 0                                  |
| 21   | Mymensingh ...    | 12 4            | 12 0                   | 13 0                                  |                 |                        |                                       | 14 0             | 12 0                   | 14 8                                  | 18     |   |                        |                                       | 16 0   | 16 0                   | 16 0                                  |
|  |                   |                 |                        |                                       |                 |                        |                                       |                  |                        |                                       |        |   |                        |                                       | 17 8   | 16 0                   | 16 0                                  |
| A In sub-divisions retail prices of salt per rupee were:—Culna 12 seers, Cutwa 13 seers, and Bar |                   |                 |                        |                                       |                 |                        |                                       |                  |                        |                                       |        |   |                        |                                       |  |                        |                                       |

- A In sub-divisions retail prices of salt per rupee were:—Culina 12 seers, Cutwa 13 seers, and Itai  
 B In Bishenpore sub-division retail price of salt 12 seers per rupee.  
 C In Ranpore Haut sub-division retail price of salt 12½ seers per rupee.  
 D In sub-divisions retail prices of salt per rupee were:—Chattal 13½ seers, Tumlook 11 seers.  
 E In sub-divisions retail prices of salt per rupee were:—Sampaure 13 seers and Jenuabad 13  
 F In sub-divisions retail prices of salt per rupee were:—Baraset 12 seers, Basirhat 13 seers  
 G In sub-divisions retail prices of salt per rupee were:—Koothes, Meherpore and Chooadanga  
 H In sub-divisions retail prices of salt per rupee were:—Jhenida and Narail 12 seers, Magoora

*Districts of Bengal during the Fortnight ending the 31st July 1887.*

|  |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |     |       |     |       |          | DISTRICT |    |    |    |    |    |    |    |             |   |               |             |                |
|--|------------------------|---------------------------------------|---|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|---|-----|-------|-----|-------|----------|----------|----|----|----|----|----|----|----|-------------|---|---------------|-------------|----------------|
| INDIAN-CORN OR<br>MAIZE<br>(Zea Mays.) |                        |                                       | ARHAR OR THUR.<br>CAJIAN PFA.<br>(Cajanus indicus.) |                        |                                       | FIREWOOD.       |                        |                                       | SALT.           |                        |                                       | SALT.           |                        |                                       |   |     |       |     |       |          |          |    |    |    |    |    |    |    |             |   |               |             |                |
| Present return.                        | Next preceding return. | Corresponding return<br>of last year. | Present return.                                     | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. |   |     |       |     |       |          |          |    |    |    |    |    |    |    |             |   |               |             |                |
| BENGAL.                                |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |     |       |     |       |          |          |    |    |    |    |    |    |    |             |   |               |             |                |
| Western Districts.                     |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |     |       |     |       |          |          |    |    |    |    |    |    |    |             |   |               |             |                |
| S.                                     | Ch.                    | S.                                    | Ch.   | S.                     | Ch.                                   | S.              | Ch.                    | S.                                    | Ch.             | S.                     | Ch.                                   | S.              | Ch.                    | Rs.                                   | A. P.   | Rs. | A. P. | Rs. | A. P. | Burdwan. |          |    |    |    |    |    |    |    |             |   |               |             |                |
| Not sold                               |                        |                                       | 29  | 8                      | 27                                    | 0               | 25                     | 0                                     | 120             | 0                      | 120                                   | 0               | 13                     | 7                                     | 13  | 5   | 12    | 12  | 2     |          | 14       | 0  | 2  | 14 | 6  | 3  | 1  | 9  |             |   |               |             |                |
| 32                                     | 0                      | 30                                    | 0   | 31                     | 0                                     | 30              | 0                      | 20                                    | 0               | 20                     | 0                                     | 290             | 0                      | 280                                   | 0   | 240 | 0     | 12  | 0     |          | 12       | 8  | 11 | 8  | 3  | 3  | 0  | 3  | 3           | 0 | 3             | 6           | 0              |
| ...                                    | ...                    | ...                                   | ...   | 15                     | 0                                     | 15              | 0                      | 20                                    | 0               | 160                    | 0                                     | 160             | 0                      | 12                                    | 12  | 12  | 12    | 12  | 12    |          | 3        | 0  | 0  | 3  | 0  | 0  | 3  | 0  | 0           | 3 | 0             | 0           |                |
| ...                                    | ...                    | ...                                   | ...   | 13                     | 0                                     | 13              | 0                      | 14                                    | 0               | 155                    | 0                                     | 155             | 0                      | 13                                    | 0   | 13  | 0     | 12  | 8     |          | 3        | 1  | 0  | 3  | 1  | 0  | 3  | 0  | 0           | 3 | 0             | 0           |                |
| ...                                    | ...                    | ...                                   | ...   | 13                     | 0                                     | 14              | 0                      | 14                                    | 0               | 120                    | 0                                     | 120             | 0                      | 13                                    | 8   | 13  | 8     | 13  | 0     |          | 2        | 14 | 0  | 2  | 14 | 0  | 3  | 0  | 0           | 3 | 0             | 0           |                |
| ...                                    | ...                    | ...                                   | ...   | 13                     | 4                                     | 13              | 4                      | 15                                    | 0               | 95                     | 0                                     | 95              | 0                      | 90                                    | 0   | 12  | 8     | 12  | 0     |          | 13       | 0  | 2  | 15 | 0  | 2  | 14 | 6  | 3           | 0 | 0             |             |                |
| Central Districts.                     |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |     |       |     |       |          |          |    |    |    |    |    |    |    |             |   |               |             |                |
| 19                                     | 0                      | 19                                    | 0   | 19                     | 15                                    | 18              | 4                      | 18                                    | 4               | 18                     | 0                                     | 80              | 0                      | 80                                    | 0   | 89  | 0     | 13  | 0     | 13       | 0        | 13 | 4  | 3  | 0  | 0  | 3  | 0  | 0           | 2 | 12            | 0           | Calcutta.      |
| ...                                    | ...                    | ...                                   | 20  | 0                      | 19                                    | 0               | 19                     | 0                                     | ...             | ...                    | ...                                   | 90              | 0                      | 90                                    | 0   | 90  | 0     | 12  | 8     | 12       | 8        | 9  | 21 | 2  | 15 | 6  | 2  | 15 | 6           | 3 | 6             | 0           | St. Pergunnah. |
| ...                                    | ...                    | ...                                   | ...   | 20                     | 0                                     | 20              | 0                      | 20                                    | 0               | ...                    | ...                                   | ...             | ...                    | 11                                    | 104   | 11  | 104   | 11  | 104   | 3        | 0        | 0  | 3  | 0  | 0  | 3  | 0  | 0  | 3           | 4 | 0             | Nuddea.     |                |
| ...                                    | ...                    | ...                                   | ...   | ...                    | ...                                   | ...             | ...                    | ...                                   | ...             | 160                    | 0                                     | 160             | 0                      | 120                                   | 0   | 10  | 8     | 10  | 8     | 12       | 0        | 3  | 12 | 0  | 3  | 12 | 0  | 3  | 4           | 0 | Khoolna.      |             |                |
| ...                                    | ...                    | ...                                   | ...   | 21                     | 12                                    | 23              | 0                      | 21                                    | 0               | 100                    | 0                                     | 100             | 0                      | 120                                   | 0   | 10  | 12    | 10  | 12    | 10       | 12       | 8  | 2  | 0  | 3  | 2  | 0  | 3  | 4           | 0 | Jessore.      |             |                |
| 40                                     | 0                      | 40                                    | 0   | 20                     | 0                                     | 20              | 0                      | 16                                    | 0               | 130                    | 0                                     | 130             | 0                      | 120                                   | 0   | 12  | 0     | 12  | 0     | 11       | 0        | 3  | 5  | 0  | 3  | 5  | 0  | 3  | 4           | 0 | Moorshedabad. |             |                |
| ...                                    | ...                    | ...                                   | ...   | 11                     | 0                                     | 11              | 0                      | ...                                   | ...             | 160                    | 0                                     | 160             | 0                      | 160                                   | 0   | 12  | 8     | 12  | 8     | 11       | 8        | 3  | 2  | 0  | 3  | 2  | 0  | 3  | 6           | 0 | Dinapore.     |             |                |
| ...                                    | ...                    | ...                                   | ...   | 16                     | 0                                     | 16              | 8                      | 20                                    | 0               | 240                    | 0                                     | 240             | 0                      | 240                                   | 0   | 12  | 0     | 12  | 0     | 12       | 0        | 3  | 1  | 3  | 3  | 2  | 6  | 3  | 0           | 0 | Rajshahye.    |             |                |
| ...                                    | ...                    | ...                                   | ...   | 8                      | 10                                    | 8               | 10                     | 10                                    | 12              | 120                    | 0                                     | 120             | 0                      | 120                                   | 0   | 10  | 5     | 10  | 5     | 11       | 3        | 3  | 8  | 0  | 3  | 8  | 0  | 3  | 6           | 0 | Rangpore.     |             |                |
| ...                                    | ...                    | ...                                   | ...   | ...                    | ...                                   | ...             | ...                    | ...                                   | ...             | 90                     | 0                                     | 90              | 0                      | 90                                    | 0   | 10  | 8     | 12  | 0     | 11       | 4        | 3  | 5  | 4  | 3  | 1  | 0  | 3  | 8           | 0 | Bogra.        |             |                |
| ...                                    | ...                    | ...                                   | ...   | 20                     | 0                                     | 20              | 0                      | 17                                    | 12              | 200                    | 0                                     | 200             | 0                      | 200                                   | 0   | 12  | 0     | 12  | 0     | 11       | 4        | 3  | 5  | 0  | 3  | 5  | 0  | 3  | 6           | 0 | Pabna.        |             |                |
| 26                                     | 0                      | 27                                    | 0   | 16                     | 0                                     | 8               | 0                      | 8                                     | 0               | 8                      | 0                                     | 120             | 0                      | 120                                   | 0   | 110 | 0     | 9   | 0     | 9        | 0        | 9  | 0  | 4  | 1  | 0  | 4  | 0  | 0           | 4 | 4             | 0           | Darjeeling.    |
| 20                                     | 0                      | 20                                    | 0   | 16                     | 0                                     | 12              | 0                      | 12                                    | 0               | ...                    | 128                                   | 0               | 128                    | 0                                     | 128   | 0   | 11    | 0   | 11    | 0        | 11       | 0  | 3  | 6  | 0  | 3  | 6  | 0  | 3           | 8 | 0             | Jalpigurne. |                |
| Eastern Districts.                     |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |     |       |     |       |          |          |    |    |    |    |    |    |    |             |   |               |             |                |
| ...                                    | ...                    | ...                                   | ...   | 18                     | 0                                     | 18              | 0                      | ...                                   | ...             | 120                    | 0                                     | 120             | 0                      | 120                                   | 0   | 12  | 0     | 12  | 0     | 10       | 8        | 3  | 3  | 0  | 3  | 3  | 0  | 3  | 8           | 0 | Dacca.        |             |                |
| ...                                    | ...                    | ...                                   | ...   | 20                     | 0                                     | 20              | 0                      | 10                                    | 0               | 160                    | 0                                     | 160             | 0                      | 140                                   | 0   | 12  | 0     | 12  | 0     | 12       | 12       | 3  | 1  | 0  | 3  | 1  | 0  | 3  | 2           | 0 | Furzedpore.   |             |                |
| ...                                    | ...                    | ...                                   | ...   | 13                     | 0                                     | 14              | 0                      | 13                                    | 0               | 120                    | 0                                     | 120             | 0                      | 120                                   | 0   | 12  | 0     | 12  | 0     | 11       | 8        | 3  | 4  | 0  | 3  | 4  | 0  | 3  | 6           | 0 | Backergunge.  |             |                |
| ...                                    | ...                    | ...                                   | ...   | 16                     | 0                                     | 20              | 0                      | 16                                    | 0               | ...                    | ...                                   | ...             | ...                    | 12                                    | 0   | 12  | 0     | 10  | 12    | 3        | 4        | 0  | 3  | 5  | 0  | 3  | 10 | 0  | Mymensingh. |   |               |             |                |

I In sub-divisions retail prices of salt per rupee were:—Lalbagh 13 seers, Jungipore and Kandi 12½ seers.

J In Nattore sub-division retail price of salt 12 seers per rupee.

K In sub-divisions retail prices of salt per rupee were:—Kurigram 12 seers, Gaibanda 9½ seers.

L In Serajgunge sub-division retail price of salt 12 seers per rupee.

M At Siliguri retail price of salt 10 seers per rupee.

N In Alipore sub-division (at Pallacotta) retail price of salt 10 seers per rupee.

O In sub-divisions retail prices of salt per rupee were:—Manickgunge 11 seers, Munshigunge 10½ seers and Naraingunge 11½ seers.

P In sub-divisions retail prices of salt per rupee were:—Gualundo 12 seers and Madaripore 12½ seers.

Q In sub-divisions retail prices of salt per rupee were:—Patuakhali 9½ seers, Perozepore 11 seers, and Bhoia 10½ seers.

R In sub-divisions retail prices of salt per rupee were:—Kishoregunge 9½ seers, Attea 12 seers, Jamalpore 10½ seers, Sherepere 10 seers and Netrokona 10 seers.

*PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the*

| Number. | DISTRICTS. | CEREALS AND GRAIN.                    |  |  |                                       |                  |  |   |  |   |                                       |
|---------|------------|---------------------------------------|--|--|---------------------------------------|------------------|--|---|--|---|---------------------------------------|
|         |            | WHEAT.                                |  |  | BARLEY.                               | RICE, BEST SORT. |  | KANONI OR KAKRI.<br>ITALIAN MILLER.<br>( <i>Setaria italica</i> ) |  | GRAM, CHANA,<br>CHHOLA, KAD-LAY<br>OR BUNAGA.<br>( <i>Cicer ariselinum</i> .) |                                       |
|         |            | Present return.                       |  |  | Present return.                       |                  |  | Present return.   |  |   | Present return.                       |
|         |            | Next preceding return                 |  |  | Next preceding return.                |                  |  | Next preceding return.  |  |   | Next preceding return.                |
|         |            | Corresponding return<br>of last year. |  |  | Corresponding return<br>of last year. |                  |  | Corresponding return<br>of last year.                             |  |   | Corresponding return<br>of last year. |

**Eastern Districts.—Concluded.**

|   | S.  | Ch. | S.  | Ch. | S.  | Ch. | S.  | Ch. | S.  | Ch. | S.  | Ch. | S. | Ch. | S. | Ch. | S.  | Ch. | S.  | Ch.             | S.  | Ch. | S.  | Ch. | S.  | Ch. | S.  | Ch. |    |    |   |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|----|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|
| 22 Chittagong ...                               | 16  | 0   | 16  | 0   | 16  | 0   | ... | ... | ... | 12  | 0   | 12  | 0  | 10  | 0  | 16  | ... | ... | ... | 16              | 0   | 16  | 0   | 14  | 0   |     |     |     |    |    |   |
| 23 Noakholly ...                                | ... | ... | ... | ... | ... | ... | ... | ... | ... | 20  | 0   | 18  | 0  | 14  | 0  | 22  | ... | ... | ... | 18              | 0   | 13  | 0   | 11  | 0   |     |     |     |    |    |   |
| 24 Tipperah ...                                 | 11  | 14  | 11  | 7   | 12  | 2   | ... | ... | ... | 15  | 12  | 17  | 8  | 15  | 13 | 19  | ... | ... | ... | 18              | 4   | 16  | 0   | 17  | 0   |     |     |     |    |    |   |
| 25 Chittagong Hill Tracts.<br>Hill Tipperah ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 11  | 7   | 11  | 7  | 10  | 0  | 13  | ... | ... | ... | ...             | ... | ... | ... | ... | ... | ... | ... |     |    |    |   |
| BKHAH.  |     |     |     |     |     |     |     |     |     |     |     |     |    |     |    |     |     |     |     |                 |     |     |     |     |     |     |     |     |    |    |   |
| Patna ...                                       | 18  | 0   | 18  | 0   | 21  | 0   | 18  | 0   | 28  | 0   | 30  | 0   | 11 | 8   | 11 | 8   | 11  | 8   | 20  | 24              | 0   | 24  | 0   | 20  | 0   | 29  | 0   | 21  | 0  | 28 | 0 |
| 26 Gya ...                                      | 16  | 0   | 16  | 0   | 18  | 0   | 33  | 0   | 31  | 0   | 30  | 0   | 9  | 8   | 9  | 8   | 9   | 0   | 18  | 17              | 0   | 17  | 0   | 16  | 0   | 28  | 0   | 28  | 0  | 23 | 8 |
| 28 Shahabad ..                                  | 16  | 0   | 16  | 0   | 17  | 8   | 29  | 0   | 29  | 0   | 26  | 0   | 10 | 0   | 8  | 0   | 8   | 0   | 16  | 16              | 0   | 17  | 0   | 16  | 0   | 27  | 0   | 39  | 0  | 27 | 0 |
| 29 Durbhanga ...                                | 18  | 8   | 17  | 9   | 18  | 0   | 33  | 0   | 30  | 12  | 24  | 8   | 12 | 0   | 12 | 0   | 10  | 0   | 18  | 30              | 0   | ... | ... | ... | 29  | 0   | 27  | 7   | 21 | 8  |   |
| 30 Moanserpore ...                              | 20  | 0   | 20  | 0   | 20  | 0   | 30  | 0   | 30  | 0   | 28  | 0   | 12 | 0   | 12 | 0   | 13  | 0   | 20  | ...             | ... | ... | ... | ... | 26  | 0   | 26  | 0   | 28 | 0  |   |
| 3 Saran ...                                     | 14  | 8   | 15  | 0   | 19  | 0   | 27  | 0   | 27  | 0   | 27  | 8   | 8  | 0   | 8  | 0   | 8   | 12  | 20  | 14              | 0   | 14  | 0   | 12  | 0   | 26  | 0   | 26  | 0  | 26 | 0 |
| 32 Champaran ..                                 | 20  | 0   | 20  | 0   | 20  | 0   | 36  | 0   | 35  | 0   | 29  | 0   | 8  | 0   | 7  | 8   | 10  | 8   | 16  | ...             | ... | ... | ... | ... | 31  | 0   | 31  | 0   | 29 | 0  |   |
| 33 Monghyr ...                                  | 18  | 9   | 18  | 9   | 20  | 0   | 33  | 8   | 33  | 8   | 33  | 8   | 13 | 14  | 13 | 14  | 11  | 9   | 16  | 21              | 0   | 31  | 8   | 16  | 12  | 30  | 8   | 30  | 8  | 26 | 4 |
| 34 Bhagulpor ...                                | 17  | 10  | 17  | 10  | 18  | 15  | 35  | 5   | 35  | 5   | 31  | 9   | 16 | 6   | 17 | 10  | 13  | 14  | 18  | 1               | ... | ... | ... | ... | 29  | 0   | 27  | 13  | 25 | 4  |   |
| 35 Purneah ...                                  | 16  | 0   | 16  | 0   | 20  | 0   | ... | ... | ... | 16  | 0   | 16  | 0  | 16  | 0  | 17  | 20  | 0   | 20  | 0               | 20  | 0   | ... | ... | 30  | 0   | 30  | 0   | 30 | 0  |   |
| 36 Maldah ..                                    | 16  | 0   | 16  | 0   | 18  | 0   | ... | ... | ... | 13  | 0   | 13  | 0  | 10  | 0  | 23  | ... | ... | ... | ...             | ... | ... | ... | ... | 28  | ✓   | 24  | 0   | 26 | 0  |   |
| 37 Southal Pergah.                              | 13  | 0   | 13  | 0   | 13  | 12  | ... | ... | ... | 17  | 0   | 17  | 0  | 16  | 0  | 25  | ... | ... | ... | ...             | ... | ... | ... | ... | 22  | 0   | 22  | 0   | 20 | 0  |   |
| ORISSA.   |     |     |     |     |     |     |     |     |     |     |     |     |    |     |    |     |     |     |     |                 |     |     |     |     |     |     |     |     |    |    |   |
| (Kali)  |     |     |     |     |     |     |     |     |     |     |     |     |    |     |    |     |     |     |     |                 |     |     |     |     |     |     |     |     |    |    |   |
| 28 Cuttack ...                                  | 17  | 1   | 15  | 12  | 17  | 1   | ... | ... | ... | 11  | 13  | 11  | 13 | 10  | 8  | 19  | 1   | ... | ... | ...             | ... | ... | ... | ... | 17  | 1   | 17  | 1   | 17 | 1  |   |
| 39 Pooree ..                                    | 11  | 13  | 10  | 8   | 14  | 7   | ... | ... | ... | 13  | 2   | 13  | 2  | 14  | 7  | 21  | 1   | ... | ... | ...             | ... | ... | ... | ... | 11  | 13  | 13  | 2   | 14 | 7  |   |
| 40 Balasore ...                                 | 15  | 0   | 15  | 0   | 15  | 0   | 18  | 0   | 13  | 0   | 13  | 0   | 15 | 0   | 15 | 0   | 13  | 0   | 25  | ...             | ... | ... | ... | ... | 15  | 0   | 15  | 0   | 15 | 0  |   |
| CHOTA NAGPORE                                   |     |     |     |     |     |     |     |     |     |     |     |     |    |     |    |     |     |     |     |                 |     |     |     |     |     |     |     |     |    |    |   |
| South-Western Frontier Agency.                  |     |     |     |     |     |     |     |     |     |     |     |     |    |     |    |     |     |     |     |                 |     |     |     |     |     |     |     |     |    |    |   |
| 41 Hazareebagh ...                              | 17  | 0   | 17  | 0   | 17  | 0   | 17  | 0   | 18  | 0   | 18  | 0   | 9  | 0   | 10 | 0   | 10  | 0   | 17  | Not procurable. |     |     |     | 30  | 0   | 30  | 0   | 28  | 8  |    |   |
| 42 Lohardugga ...                               | 21  | 0   | 22  | 0   | 20  | 0   | 24  | 0   | 26  | 0   | 20  | 0   | 17 | 0   | 17 | 0   | 16  | 0   | 22  | ...             | ... | ... | ... | ... | 31  | 0   | 32  | 0   | 16 | 0  |   |
| 43 Singbhoom ...                                | 20  | 0   | 20  | 0   | 24  | 0   | 32  | 0   | 32  | 0   | 32  | 0   | 20 | 0   | 20 | 0   | 24  | 0   | 24  | ...             | ... | ... | ... | ... | 16  | 0   | 16  | 0   | 16 | 0  |   |
| 44 Manbhoom ...                                 | 17  | 0   | 18  | 0   | 18  | 0   | 36  | 0   | 38  | 0   | ... | 17  | 0  | 17  | 0  | 15  | 0   | 25  | ... | ...             | ... | ... | ... | ... | 16  | 0   | 16  | 0   | 17 | 0  |   |

**S** In Cox's Bazar sub-division retail price of salt 10 seers per rupee.

**T** In Fenny sub-division retail price of salt 9 seerns per rupoe.  
In sub-division retail price of salt 10 seerns per rupoe.

U In sub-divisions retail prices of salt per rupee were :- Brahmunberiah 13 seers and Chandpor

W In sub-divisions retail prices of salt per rupee were:—Sasseram 14 seers, Marud 14 seers, a

3. In sub-divisions retail prices of salt per rupee were:—Sasseram 12 seers, Buxar 12½ seers and

Y In sub-divisions retail prices of salt per rupce were:—Majepore 12½ seers and Mundanabari 11 seers  
Z In sub-divisions retail prices of salt per rupce were:—Majepore 12½ seers and Seetamarho 11

2. In sub-divisions retail prices of salt per rupee were :—Sewan  $11\frac{1}{4}$  seers and Gopalgunge  $11\frac{1}{8}$  seers.

CALCUTTA,  
The 9th August 1867.

*Districts of Bengal during the Fortnight ending 31st July 1887—(Concluded.)*

|   |                        |                                       |   |                        |                                       |                 |                        |                                       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |                        |                                       | DISTRICTS. |
|---|------------------------|---------------------------------------|---|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|---|------------------------|---------------------------------------|------------|
| INDIAN-CORN OR<br>MAIZE.<br>(Zea Mays.) |                        |                                       | ARHAR OR THUR.<br>CADJAN PEA.<br>(Cajanus indicus.) |                        |                                       | FERNWOOD.       |                        |                                       | SALT.   |                        |                                       |            |
| Present return.                         | Next preceding return. | Corresponding return<br>of last year. | Present return.                                     | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return.                               | Next preceding return. | Corresponding return<br>of last year. |            |

*Eastern Districts.—Concluded.*

| S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | Rs. A. P. | Rs. A. P. | Rs. A. P.               |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|-------------------------|
| ...    | ...    | ...    | 8 0    | 9 0    | 9 0    | 80     | 80     | 75     | 8 4    | 10 0   | 12 0   | 1 6    | 0      | ...    | 3 2       | 0         | Chittagong.             |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | 9 0    | 9 0    | 8 0    | 3 8    | 0      | 3 12   | 0         | 4 8       | Noakhelly.              |
| ...    | ...    | ...    | 9 13   | 9 12   | 9 2    | ...    | ...    | ...    | 11 0   | 11 0   | 11 0   | 3 7    | 0      | 3 7    | 0         | 3 9       | Tipperah.               |
| ...    | ...    | ...    | ...    | ...    | ...    | 320    | 320    | 320    | 8 0    | 8 0    | 8 0    | 1 8    | 0      | 1 8    | 0         | 4 3       | Chittagong Hill Tracts. |
| ...    | ...    | ...    | 16 0   | 16 0   | 16 0   | ...    | ...    | ...    | 11 0   | 11 0   | 11 0   | 3 4    | 0      | 3 4    | 0         | 3 1       | Hill Tipperah, Ollah.   |

## BHAR.

|       |       |      |       |      |      |     |     |     |       |       |      |      |   |      |   |      |                  |
|-------|-------|------|-------|------|------|-----|-----|-----|-------|-------|------|------|---|------|---|------|------------------|
| 25 0  | 25 0  | 28 0 | 25 0  | 25 0 | 26 0 | 120 | 120 | 119 | 11 12 | 11 12 | 11 8 | 3 1  | 0 | 3 1  | 0 | 3 1  | Patna.           |
| ...   | ...   | ...  | 22 0  | 23 0 | 22 8 | 100 | 100 | 100 | 11 0  | 11 0  | 11 0 | 3 5  | 0 | 3 5  | 0 | 3 5  | Gyt.             |
| ...   | ...   | ...  | 16 0  | 16 0 | 19 8 | 20  | 110 | 100 | 13 8  | 12 8  | 12 8 | 3 3  | 0 | 3 3  | 0 | 3 5  | Shahabad.        |
| 26 4  | 28 9  | ...  | 22 8  | 22 0 | 22 0 | 176 | 173 | 163 | 11 8  | 11 8  | 11 8 | 3 4  | 0 | 3 4  | 0 | 3 4  | Darbhanga.       |
| 27 0  | 27 0  | 25 0 | 22 0  | 22 0 | 22 0 | 120 | 123 | 140 | 12 0  | 12 0  | 12 0 | 3 4  | 0 | 3 4  | 0 | 3 1  | Muzaffarpore.    |
| 20 0  | 20 0  | 25 0 | 28 8  | 26 0 | 25 0 | 160 | 169 | 180 | 12 0  | 13 0  | 12 0 | 3 2  | 0 | 3 2  | 0 | 3 4  | Saran.           |
| 31 0  | 31 0  | 28 0 | ...   | 22 0 | 26 0 | 160 | 160 | ... | 12 0  | 12 0  | 11 8 | 3 4  | 0 | 3 4  | 0 | 3 7  | Champaran.       |
| 27 12 | 27 12 | 31 8 | 22 1  | 23 1 | 21 0 | 126 | 120 | 126 | 12 9  | 12 9  | 12 1 | 3 0  | 0 | 3 0  | 0 | 3 0  | Monghyr.         |
| 37 14 | 35 5  | 25 4 | 21 7  | 21 7 | 20 3 | 135 | 151 | 160 | 12 10 | 12 10 | 12 0 | 3 0  | 0 | 3 0  | 0 | 3 2  | Bhagulpore.      |
| ...   | ...   | ...  | 13 0  | 16 0 | 16 0 | 160 | 160 | 160 | 10 8  | 10 8  | 10 8 | 3 8  | 0 | 3 8  | 0 | 3 19 | Purneah.         |
| ...   | ...   | ...  | ...   | ...  | ...  | 120 | 120 | 160 | 11 0  | 11 8  | 12 0 | 3 7  | 0 | 3 5  | 0 | 3 1  | Mahmah.          |
| 36 0  | 36 0  | 28 0 | 29 0  | 25 0 | 22 0 | 200 | 200 | 200 | 11 8  | 11 8  | 11 8 | 3 4  | 0 | 3 4  | 0 | 3 6  | Southern Pergas. |
| ...   | ...   | ...  | 17 1  | 14 7 | ...  | 80  | 80  | 80  | 11 0  | 13 0  | 14 0 | 2 12 | 0 | 2 14 | 0 | 2 12 | Cuttack.         |
| ...   | ...   | ...  | 15 12 | 14 7 | 18 6 | 70  | 70  | 80  | 11 7  | 14 7  | 14 7 | 2 10 | 0 | 2 10 | 0 | 2 10 | Pooree.          |
| ...   | ...   | ...  | 10 0  | 10 0 | 13 0 | 100 | 160 | 140 | 10 8  | 10 8  | 10 0 | 3 5  | 0 | 3 5  | 0 | 3 12 | Balasore.        |

## CHOTA NAGPORE.

*South-Western Division Agency.*

|      |      |      |      |      |      |     |     |     |       |       |       |     |   |     |   |      |             |
|------|------|------|------|------|------|-----|-----|-----|-------|-------|-------|-----|---|-----|---|------|-------------|
| 27 0 | 25 0 | 32 0 | 19 0 | 19 0 | 18 0 | 320 | 320 | 240 | 10 0  | 10 0  | 8 12  | 3 8 | 0 | 3 8 | 0 | 4 4  | Hazaribagh. |
| ...  | ...  | ...  | 28 0 | 28 0 | 20 0 | 120 | 120 | 130 | 9 12  | 9 12  | 9 0   | 4 0 | 0 | 4 0 | 0 | 4 0  | Loharungga. |
| ...  | ...  | ...  | 20 0 | 20 0 | 21 0 | 320 | 320 | 360 | 9 0   | 9 0   | 9 0   | 4 0 | 0 | 4 0 | 0 | 4 0  | Singbhum.   |
| ...  | ...  | ...  | 21 0 | 21 0 | 17 0 | 240 | 240 | 240 | 10 10 | 10 10 | 10 12 | 3 8 | 0 | 3 8 | 0 | 3 11 | Manbhum.    |

Z1 In Bettiah sub-division retail price of salt 11½ seers per rupee.

Z4 In sub-divisions retail prices of salt per rupee were:—Begusarai 11 seers and Jamui 11½ seers.

Z3 In Ranki, Madhupore, and Sonpore sub-divisions retail price of salt 11 seers per rupee.

Z4 In Kishengunge and Arraerah (at Rannergunge) sub-divisions retail price of salt 10 seers per rupee.

Z5 In Pakur and Rajmahal sub-divisions retail price of salt 12 seers.

Z6 In Buxarduck sub-division retail price of salt 9½ seers per rupee.

Z7 In Guvindharpore sub-division retail price of salt 13 seers per rupee.

Published for general information.

W. C. MACPHERSON,  
Offg. Secy. to the Govt. of Bengal.

**PRICES-CURRENT** (wholesale) of Food-grains, Firewood, and Salt in

| Number. | MARTS.          | WHEAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    |
|---------|-----------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|         |                 | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|         |                 | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.         | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |
| 1       | Calcutta ...    | 2 43 0          | 2 10 3                 | 2 8 6                              | 1 6 4           | 1 8 6                  | 1 10 9                             | 3 12 0           | 3 4 3                  | 3 14 3                             | 2 2 3           | 1 13 6                 | 2 4                                |
| 2       | Seraijunge ...  | 2 3 0           | 2 3 0                  | 2 1 6                              | ...             | ...                    | ...                                | 3 10 0           | 4 0 0                  | 4 12 0                             | 2 0 0           | 2 0 0                  | 1 14                               |
| 3       | Dacca ...       | 2 11 0          | 2 11 0                 | 2 8 0                              | 1 6 0           | 1 6 0                  | 1 8 0                              | 2 6 0            | 2 7 0                  | 2 8 0                              | 1 15 0          | 2 0 0                  | 2 2                                |
| 4       | Narainjunge ... | ...             | ...                    | ...                                | ...             | ...                    | ...                                | 2 2 0            | ...                    | 2 8 0                              | 2 1 0           | ...                    | 1 15                               |
| 5       | Chittagong ...  | 2 6 0           | 2 6 0                  | 2 6 0                              | ...             | ...                    | ...                                | 3 0 0            | 3 2 0                  | 3 12 0                             | 2 3 0           | 2 5 0                  | 2 12                               |
| 6       | Patna ...       | 2 4 0           | 2 4 0                  | 1 13 6                             | 1 5 3           | 1 5 3                  | 1 4 0                              | 3 0 0            | 3 0 0                  | 3 0 0                              | 1 14 6          | 1 13 0                 | 2 1                                |
| 7       | Balasore ...    | 2 8 0           | 2 8 0                  | 2 7 0                              | 3 0 0           | 3 0 0                  | 3 0 0                              | 2 8 0            | 2 8 0                  | 3 0 0                              | 2 7 0           | 1 7 0                  | 1 10                               |
| 8       | Pooroo ...      | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | 1 14 0          | 1 11 0                 | 2 0 6                              |
| 9       | Cuttack ...     | 2 2 0           | 2 5 0                  | 2 2 0                              | ...             | ...                    | ...                                | 3 4 0            | 3 4 0                  | 3 10 0                             | 2 0 0           | 2 0 0                  | 2 5 0                              |

Calcutta,  
The 9th August 1887.



uring the Fortnight ending 31st July 1887.

PRICES PER MAUND

| LOWAR OR 'HOLUN.<br>(Sorghum Vulgare.) |                        |                                    | RAJRA OR 'UMST<br>(Pennisetum typhoides.) |                        |                                    |
|--|------------------------|------------------------------------|---|------------------------|------------------------------------|
| Present return.                        | Next preceding return. | Corresponding return of last year. | Present return.                           | Next preceding return. | Corresponding return of last year. |
| R. A. P.                               | R. A. P.               | R. A. P.                           | R. A. P.                                  | R. A. P.               | R. A. P.                           |
| 1 12 0                                 | 1 10 0                 | 1 14 0                             | 2 8 3                                     | 2 8 0                  | 2 8 0                              |
| ...                                    | ...                    | ...                                | ...                                       | ...                    | ...                                |
| ...                                    | ...                    | ...                                | ...                                       | ...                    | ...                                |
| ...                                    | ...                    | ...                                | ...                                       | ...                    | ...                                |
| ...                                    | ...                    | ...                                | ...                                       | ...                    | ...                                |
| 1 6 0                                  | 1 6 0                  | 1 8 0                              | 1 6 0                                     | 1 6 0                  | 1 6 0                              |
| ...                                    | ...                    | ...                                | ...                                       | ...                    | ...                                |
| ...                                    | ...                    | ...                                | ...                                       | ...                    | ...                                |
| ...                                    | ...                    | ...                                | ...                                       | ...                    | ...                                |

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| ARAR OR THUR<br>(Cajanus indica.) |                        |                                    | PIERWOOD.       |                        |                                    | SALT.           |                        |                                    | MARTS.       |
|-----------------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--------------|
| Present return.                   | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |              |
| R. A. P.                          | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |              |
| 1 15 0                            | 1 15 0                 | 2 0 0                              | 0 6 9           | 0 6 0                  | 0 6 9                              | 3 0 0           | 3 0 0                  | 2 12 0                             | Calcutta.    |
| ...                               | ...                    | ...                                | ...             | ...                    | ...                                | 2 12 0          | 2 12 0                 | 3 3 3                              | Serejgunge.  |
| 2 0 0                             | 2 0 0                  | ...                                | 0 5 0           | 0 5 0                  | 0 5 0                              | 3 3 0           | 3 3 0                  | 3 8 0                              | Dacca.       |
| 2 3 0                             | ...                    | 1 14 0                             | 0 8 0           | ...                    | 0 6 0                              | 3 2 0           | ...                    | 3 4 0                              | Narainsunge. |
| 3 8 0                             | 4 6 0                  | 4 0 0                              | ...             | ...                    | ...                                | 4 6 0           | ...                    | 3 2 0                              | Chittagong.  |
| 8 0                               | 1 8 0                  | 1 6 0                              | 0 5 0           | 0 5 0                  | 0 5 3                              | 3 1 6           | 3 1 6                  | 3 1 6                              | Patna.       |
| 5 0                               | 3 5 0                  | 3 0 0                              | 0 4 0           | 0 4 0                  | 0 4 0                              | 3 5 0           | 3 5 0                  | 3 12 0                             | Balmore.     |
| ...                               | ...                    | ...                                | ...             | ...                    | ...                                | 2 10 0          | 2 10 0                 | 2 10 0                             | Poorse.      |
| 0 0                               | 2 10 0                 | ...                                | 0 8 0           | 0 8 0                  | 0 8 0                              | 2 12 0          | 2 14 0                 | 2 12 0                             | Cuttack.     |

Published for general information.

W. C. MACPHERSON,  
Offy. Secy. to the Govt. of Bengal.

## STATEMENT SHOWING THE STOCKS OF RICE IN AND AROUND CALCUTTA.

STOCK IN HAND AS COMPILED ON—

| NAMES OF PLACES.   | 1st week of August 1886.      | 1st week of Oct. 1886.           | 1st week of Nov. 1886.         | 1st week of Dec. 1886.          | 1st week of Jan. 1887.         | 1st week of Feb. 1887.            | 1st week of Mar. 1887.         | 1st week of April 1887.      | 1st week of May 1887.      | 1st week of June 1887.      | 1st week of July 1887.      | 1st week of August 1887.        |
|--|-------------------------------|----------------------------------|--------------------------------|---------------------------------|--------------------------------|-----------------------------------|--------------------------------|------------------------------|----------------------------|-----------------------------|-----------------------------|---------------------------------|
|  | Mds.                          | Mds.                             | Mds.                           | Mds.                            | Mds.                           | Mds.                              | Mds.                           | Mds.                         | Mds.                       | Mds.                        | Mds.                        | Mds.                            |
| Balachatta   | 5,30,000                      | 3,00,000                         | 3,81,000                       | 3,11,000                        | 4,15,500                       | 4,73,000                          | 11,01,000                      | 12,57,000                    | 10,35,700                  | 7,01,000                    | 6,72,000                    | 6,72,000                        |
| Ootadana   | 57,300                        | 54,800                           | 66,500                         | 29,800                          | 47,700                         | 61,300                            | 72,400                         | 69,500                       | 42,000                     | 73,000                      | 53,000                      | 53,000                          |
| Chitnore, Gohadure, (Vomer to L., Hatkins, and Gulp) Ghat. | 5,65,200                      | 5,00,500                         | 6,24,100                       | 8,18,100                        | 7,75,000                       | 5,52,700                          | 7,47,100                       | 6,33,200                     | 6,10,000                   | 5,55,000                    | 6,17,200                    | 6,17,200                        |
| Patherichatta, Posta, and Jorabagan.                       | 8,700                         | 1,000                            | 3,000                          | 4,000                           | 6,000                          | 4,000                             | 5,200                          | 5,000                        | 8,000                      | 3,000                       | 2,000                       | 2,000                           |
| Taliyguner, Chitiah, Kidderpore, and Moonshimunge.         | 1,82,400                      | 1,25,000                         | 1,15,300                       | 1,45,400                        | 1,55,100                       | 1,30,500                          | 1,75,000                       | 1,55,000                     | 1,23,500                   | 1,11,700                    | 1,07,800                    | 1,07,800                        |
| 21 Minor Bazzars (estimated)                               | 2,40,000                      | 2,40,000                         | 2,17,000                       | 2,40,000                        | 2,40,000                       | 2,40,000                          | 2,40,000                       | 2,40,000                     | 2,40,000                   | 2,40,000                    | 2,40,000                    | 2,40,000                        |
| Other retail shops, 3,129 in number (estimated).           | 2,50,000                      | 2,50,000                         | 2,50,000                       | 2,50,000                        | 2,50,000                       | 2,50,000                          | 2,50,000                       | 2,50,000                     | 2,50,000                   | 2,50,000                    | 2,50,000                    | 2,50,000                        |
| Bidyabhaty, Newabgoner, Bhudhwar, and Chundernagore.       | 18,157                        | 30,150                           | 28,111                         | 7,200                           | 7,000                          | 5,120                             | 6,112                          | 6,248                        | 8,775                      | 6,430                       | 34,740                      | 34,740                          |
| <b>Total</b>   | 18,20,077                     | 17,74,362                        | 17,02,911                      | 18,38,000                       | 17,57,180                      | 18,03,690                         | 17,52,743                      | 20,01,742                    | 23,49,648                  | 20,50,130                   | 19,77,340                   | 19,77,340                       |
| On Railway accumen on both sides of the river.             | 8,000                         | 11,011                           | 11,004                         | 7,215                           | 21,200                         | 10,238                            | 17,883                         | 9,883                        | 9,434                      | 6,190                       | 4,244                       | 4,244                           |
| (By Port Com- missioners' re- turns.)                      | August 86. 66,139             | September 86. 55,117             | October 86. 23,114             | December 86. 20,278             | January 87. 23,253             | February 87. 21,171               | March 87. 78,208               | April 87. 51,807             | May 87. 18,510             | June 87. 18,532             | July 87. 2,570              | August 87. 70,990               |
| On boats un- loaded  | At August 86. 15,753          | September 86. 25,380             | October 86. 44,000             | December 86. 21,211             | January 87. 29,273             | February 87. 1,01,704             | March 87. 1,77,000             | April 87. 51,375             | May 87. 30,235             | June 87. 17,539             | July 87. 24,701             | August 87. 25,344               |
| (By Canal returns)   | 1st to 31st August 86. 15,753 | 1st to 31st September 86. 25,380 | 1st to 31st October 86. 44,000 | 1st to 31st December 86. 21,211 | 1st to 31st January 87. 29,273 | 1st to 31st February 87. 1,01,704 | 1st to 31st March 87. 1,77,000 | 1st to 31st April 87. 51,375 | 1st to 31st May 87. 30,235 | 1st to 31st June 87. 17,539 | 1st to 31st July 87. 24,701 | 1st to 31st August 1887. 25,344 |
| <b>Grand total of Stocks</b>                               | 10,35,018                     | 15,77,000                        | 17,05,015                      | 18,57,007                       | 18,11,005                      | 21,42,550                         | 20,20,600                      | 20,17,827                    | 23,75,530                  | 20,55,257                   | 20,89,908                   | 20,89,908                       |
| Probable stock available for exportation by sea.           | 8½ lakhs                      | 9 lakhs                          | 7½ lakhs                       | 8½ lakhs                        | 8½ lakhs                       | 11 lakhs                          | 40 lakhs                       | 29 lakhs                     | 10½ lakhs                  | 10½ lakhs.                  | 10½ lakhs.                  | 10½ lakhs.                      |

STATISTICAL DEPARTMENT,

The 8th August 1887.

W. C. MACPHERSON,  
Offy. Secretary to the Govt. of Bengal.

**Abstract of the results of Meteorological Observations taken at the Alipore Observatory in the month of July 1887.**

|   | Inches. | Date.            | Hour. |
|---|---------|------------------|-------|
| The mean pressure of the month ... ..   | 29.518  |                  |       |
| The average pressure of July from 24 years' registers ...   | 29.537  |                  |       |
| The highest pressure in the month ... ..  | 29.713  | 3rd              | 22h.  |
| The lowest pressure in the month ... ..   | 29.288  | 13th             | 16h.  |
| The range of pressure ... ..  | 0.425   |                  |       |
| The total number of hours of bright sunshine during the month   | 95.5    |                  |       |
| The maximum possible number of hours of sunshine ...  | 413.1   |                  |       |
| ☉   |         |                  |       |
| The mean temperature of the month ... ..  | 82.5    |                  |       |
| The average temperature of July from 24 years' registers ...  | 83.5    |                  |       |
| The highest temperature in the month ... ..   | 92.4    | 17th             |       |
| The lowest temperature in the month ... ..  | 76.4    | 10th & 15th      |       |
| The range of temperature during the month ... ..  | 16.0    |                  |       |
| The mean daily range of temperature ... ..  | 8.9     |                  |       |
| The greatest range of temperature in one day ... ..   | 13.1    | 16th             |       |
| Per cent.   |         |                  |       |
| The mean humidity of the month ... ..   | 87      |                  |       |
| The average humidity of July from 24 years' registers ...   | 85      |                  |       |
| Inches.   |         |                  |       |
| The mean vapour tension of the month ... ..   | 0.908   |                  |       |
| The average vapour tension of July from 9 years' registers ..   | 1.002   |                  |       |
| The mean cloud proportion of the month ... ..   | 8.24    |                  |       |
| The average cloud proportion of July from 10 years' registers ...   | 8.10    |                  |       |
| Inches.   |         |                  |       |
| The total rainfall of the month ... ..  | 18.19   |                  |       |
| The total rainfall indicated by a Beckley's self-registering rain-gauge (mouth of the gauge about 52 feet above the ground) ... | 17.56   |                  |       |
| The average fall of July from 48 years' registers ... ..  | 12.84   |                  |       |
| The greatest fall in 24 hours ... ..  | 6.18    | 9th              |       |
| Days.   |         |                  |       |
| The number of rainy days in the month ... ..  | 27      |                  |       |
| The average number of rainy days in July from 24 years' registers ... ..  | 25      |                  |       |
| ☉   |         |                  |       |
| The mean maximum equilibrium temperature of solar radiation during the month ... ..   | 140.3   |                  |       |
| The mean difference of sun and air temperatures ... ..  | 53.2    |                  |       |
| The greatest sun temperature ... ..   | 155.9   | 4th              |       |
| The greatest excess of sun over air temperature ... ..  | 67.2    | 4th              |       |
| The mean temperature of the nocturnal radiation thermometer on woollen cloth ... ..   | 75.9    |                  |       |
| The mean depression of the nocturnal radiation thermometer below the minimum air temperature at 4 feet above the ground ... ..  | 2.3     |                  |       |
| The greatest depression of the nocturnal radiation thermometer below the minimum air temperature ... ..                         | 4.5     | 16th             |       |
| Miles.  |         |                  |       |
| The mean movement of the wind per day ... ..  | 118.8   |                  |       |
| The greatest movement of the wind in one day ... ..   | 267.0   | 10th             |       |
| The greatest movement of the wind in one hour ... ..  | 20.0    | 10th 6 to 7 A.M. |       |

The number of hours with winds from each of the 8 points—

N. 14. NE. 32. E. 122. SE. 145. S. 126. SW. 190. W. 68. NW. 27. Calm 20.

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park-street Observatory). The barometer is about 3 feet higher at Alipore, and, other things being equal, reads therefore .003 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently about 0.6° higher; and, finally, the thermometer which furnished the record of temperature at the Surveyor-General's Office during 20 years and upwards is found to read 0.6 higher than the Kew standard thermometer, which is the standard of reference at the present Observatory.

Meteorological Report of the Provi

| DISTRICT.          |   |                  | Representative stations. | STATION OBSERVATIONS.                         |  |                           |                            |                             |                   |                  |                                 |                          |                             |                            |                                     | HUMIDITY.                       |                         | CLOUD.                      |  |
|--------------------|---|------------------|--------------------------|---|--|---------------------------|----------------------------|-----------------------------|-------------------|------------------|---------------------------------|--------------------------|-----------------------------|----------------------------|-------------------------------------|---------------------------------|-------------------------|-----------------------------|--|
|                    |   |                  |                          | AIR PRESSURE.                                 |  |                           |                            | TEMPERATURE.                |                   |                  |                                 | Mean, 10 A.M., humidity. | Variation from normal mean. | Mean cloud amount, 10 A.M. | Variation from normal mean, 10 A.M. |                                 |                         |                             |  |
|                    |   |                  |                          | Highest, 10 A.M., barometer reading of month. | Lowest, 10 A.M., barometer reading of month. | Mean, 10 A.M., for month. | Mean reduced to sea-level. | Variation from normal mean. | Highest of month. | Lowest of month. | Mean daily maximum temperature. |                          |                             |                            |                                     | Mean daily minimum temperature. | Mean daily temperature. | Variation from normal mean. |  |
| ORISSA.            | Pooree  | Gopalnora        | 29.687                   | 29.112  | 29.555                                       | 29.605                    | -0.03                      | 93.2                        | 75.8              | 86.0             | 79.7                            | 82.9                     | +0.1                        | 79                         | -                                   | 62                              | -                       |                             |  |
|                    |   | False Point      | 29.712                   | 29.131  | 29.576                                       | 29.595                    | -0.07                      | 93.0                        | 75.1              | 86.0             | 77.6                            | 82.3                     | -0.9                        | 79                         | -7                                  | 79                              | 0                       |                             |  |
|                    | Cuttack                                       | Cuttack          | 29.656                   | 29.373  | 29.517                                       | 29.508                    | -0.06                      | 93.1                        | 71.8              | 80.3             | 74.3                            | 81.8                     | -0.3                        | 72                         | -9                                  | 84                              | +0.9                    |                             |  |
| SOUTH-WEST BENGAL. | Balasore                                      | Balasore         | 29.661                   | 29.339  | 29.512                                       | 29.571                    | -0.03                      | 92.4                        | 75.3              | 86.0             | 77.5                            | 82.8                     | +0.1                        | 80                         | -                                   | 65                              | -                       |                             |  |
|                    | South-West Midnapore and South 24-Pergunnahs. | Saugor Island    | 29.710                   | 29.329  | 29.554                                       | 29.580                    | -0.028                     | 93.7                        | 76.5              | 87.5             | 79.8                            | 83.7                     | -0.1                        | 86                         | 0                                   | 84                              | +0.5                    |                             |  |
|                    | Midnapore                                     | Midnapore        | 29.583                   | 29.232  | 29.439                                       | 29.539                    | -0.04                      | 92.3                        | 75.3              | 86.0             | 78.1                            | 83.7                     | -0.1                        | 79                         | -                                   | 60                              | -                       |                             |  |
|                    | 24-Pergunnahs, Howrah, and Hooghly.           | Calcutta         | 29.707                   | 29.311  | 29.550                                       | 29.571                    | -0.07                      | 92.5                        | 76.2              | 87.3             | 78.2                            | 82.6                     | -0.8                        | 82                         | -6                                  | 87                              | +0.7                    |                             |  |
|                    | Burdwan                                       | Burdwan          | 29.634                   | 29.262  | 29.474                                       | 29.573                    | -0.028                     | 91.6                        | 76.9              | 90.1             | 79.1                            | 84.8                     | 0                           | 76                         | -7                                  | 89                              | +0.8                    |                             |  |
|                    | Bankoora                                      | Bankoora         | 29.700                   | 29.001  | 29.557                                       | -                         | -                          | 94.1                        | 75.6              | 88.4             | 78.1                            | 83.3                     | -                           | 75                         | -                                   | 72                              | -                       |                             |  |
|                    | West Burdwan and Beerbhoom.                   | Raniganj         | 29.398                   | 29.005  | 29.210                                       | -                         | -0.00                      | 97.0                        | 71.9              | 80.1             | 76.7                            | 84.1                     | -0.1                        | 82                         | -                                   | 77                              | -                       |                             |  |
|                    | Meershabad                                    | Berhampore       | 29.685                   | 29.339  | 29.521                                       | 29.587                    | -0.05                      | 93.7                        | 75.6              | 89.2             | 78.5                            | 83.9                     | -1.0                        | 84                         | -12                                 | 86                              | +0.8                    |                             |  |
|                    | Nuddea  | Krishnagar       | 29.687                   | 29.335  | 29.528                                       | -                         | -                          | 93.8                        | 75.3              | 89.3             | 78.1                            | 83.7                     | -                           | 80                         | -                                   | 84                              | -                       |                             |  |
|                    | Jessore and Khoolna                           | Jessore          | 29.727                   | 29.116  | 29.562                                       | 29.595                    | -0.019                     | 94.5                        | 76.9              | 89.3             | 78.9                            | 84.1                     | 0                           | 84                         | -3                                  | 87                              | +0.4                    |                             |  |
|                    | Chittagong                                    | Chittagong       | 29.694                   | 29.076  | 29.559                                       | 29.648                    | -0.02                      | 90.6                        | 71.9              | 85.8             | 76.4                            | 81.1                     | -0.3                        | 82                         | -5                                  | 86                              | +1.2                    |                             |  |
|                    | Chittagong Hill Tracts                        | Dennakri         | -                        | -   | -  | -                         | -                          | Observations not received.  |                   |                  |                                 |                          |                             |                            |                                     |                                 |                         |                             |  |
| EAST BENGAL.       | Backergunj                                    | Barrisal         | 29.750                   | 29.428  | 29.589                                       | 29.601                    | -0.04                      | 92.3                        | 76.5              | 87.5             | 78.9                            | 82.9                     | +1.6                        | 86                         | -                                   | 83                              | -                       |                             |  |
|                    | Nonkholly                                     | Nonkholly        | 29.715                   | 29.117  | 29.579                                       | 29.623                    | -0.15                      | 90.5                        | 75.8              | 86.2             | 77.9                            | 81.9                     | +0.4                        | 85                         | -                                   | 40                              | -                       |                             |  |
|                    | Furzedpore                                    | Furzedpore       | 29.760                   | 29.408  | 29.571                                       | -                         | -0.03                      | 87.0                        | 71.9              | 86.1             | 78.1                            | 82.3                     | -0.7                        | 85                         | -                                   | 38                              | -                       |                             |  |
|                    | Dacca   | Dacca            | 29.730                   | 29.420  | 29.587                                       | 29.609                    | -0.01                      | 92.1                        | 76.7              | 88.7             | 79.1                            | 83.9                     | +0.2                        | 83                         | -4                                  | 78                              | -0.2                    |                             |  |
|                    | Tipperah                                      | Coomilla         | 29.732                   | 29.419  | 29.586                                       | 29.621                    | -0.01                      | 92.3                        | 74.8              | 89.5             | 76.8                            | 82.7                     | +1.1                        | 80                         | -                                   | 60                              | -                       |                             |  |
|                    | Mymensingh                                    | Mymensingh       | 29.731                   | 29.433  | 29.578                                       | -                         | +0.00                      | 93.3                        | 76.1              | 90.0             | 78.3                            | 83.7                     | +1.0                        | 82                         | -                                   | 68                              | -                       |                             |  |
|                    | Bogra   | Bogra            | 29.675                   | 29.339  | 29.522                                       | 29.585                    | -                          | 91.8                        | 75.3              | 89.1             | 78.6                            | 84.0                     | -                           | 81                         | -                                   | 82                              | -                       |                             |  |
|                    | Pubna   | Sernajun         | 29.714                   | 29.410  | 29.550                                       | 29.536                    | -0.028                     | 94.1                        | 75.7              | 87.3             | 78.5                            | 83.9                     | +0.6                        | 83                         | -                                   | 72                              | -                       |                             |  |
|                    | Rajshahye                                     | Rampore Beaulah. | 29.673                   | 29.359  | 29.523                                       | 29.533                    | +0.06                      | 94.5                        | 69.7              | 89.7             | 72.8                            | 81.3                     | -2.4                        | 82                         | -                                   | 46                              | -                       |                             |  |
|                    | Maldah  | Maldah           | 29.660                   | 29.292  | 29.431                                       | -                         | -                          | 94.0                        | 75.3              | 90.1             | 78.9                            | 84.5                     | -                           | 81                         | -                                   | 61                              | -                       |                             |  |
|                    | Dinapore                                      | Dinapore         | 29.643                   | 29.319  | 29.475                                       | 29.505                    | -0.09                      | 95.6                        | 74.1              | 89.9             | 79.2                            | 84.6                     | +0.3                        | 80                         | -                                   | 55                              | -                       |                             |  |
|                    | Rungpore                                      | Rungpore         | 29.665                   | 29.370  | 29.495                                       | 29.619                    | -0.02                      | 95.3                        | 71.7              | 90.5             | 78.4                            | 84.9                     | +0.9                        | 82                         | -                                   | 35                              | -                       |                             |  |
|                    | Jalpigore and Cooch Behar.                    | Jalpigore        | 29.546                   | 29.201  | 29.341                                       | 29.627                    | +0.06                      | 91.6                        | 74.8              | 89.6             | 77.1                            | 83.4                     | +0.5                        | 83                         | -                                   | 70                              | -                       |                             |  |
|                    | Darjeeling Hill Tracts                        | Darjeeling       | 29.601                   | 29.782  | 29.888                                       | -                         | -0.02                      | 70.1                        | 55.6              | 66.4             | 57.4                            | 61.9                     | -0.1                        | 93                         | -2                                  | 88                              | +0.1                    |                             |  |
|                    | Purneah and North Bhagalpore.                 | Purneah          | 29.656                   | 29.337  | 29.484                                       | 29.600                    | +0.07                      | 95.2                        | 75.6              | 89.6             | 78.9                            | 84.1                     | -0.7                        | 81                         | -4                                  | 50                              | -2.1                    |                             |  |
|                    | Mozafferpore                                  | Mozafferpore     | -                        | -   | -  | -                         | -                          | Observations suspended.     |                   |                  |                                 |                          |                             |                            |                                     |                                 |                         |                             |  |
|                    | Durghunga                                     | Durghunga        | 29.576                   | 29.265  | 29.420                                       | 29.581                    | -0.05                      | 93.4                        | 77.0              | 90.3             | 80.1                            | 85.2                     | +0.7                        | 81                         | -2                                  | 58                              | -0.6                    |                             |  |
|                    | Champaran                                     | Motihari         | 29.486                   | 29.185  | 29.365                                       | 29.571                    | -0.09                      | 95.8                        | 75.4              | 91.7             | 78.6                            | 85.2                     | +1.1                        | 73                         | -                                   | 74                              | -                       |                             |  |
|                    | Saran   | Chupra           | 29.517                   | 29.189  | 29.379                                       | -                         | +0.02                      | 97.5                        | 77.1              | 92.6             | 79.5                            | 86.1                     | +0.5                        | 78                         | -                                   | 67                              | -                       |                             |  |
|                    |   | Denree           | 29.375                   | 28.953  | 29.215                                       | 29.566                    | -0.06                      | 91.9                        | 77.0              | 89.0             | 78.9                            | 83.5                     | +1.3                        | 77                         | -                                   | 52                              | -                       |                             |  |
|                    | Shahabad                                      | Buxar            | 29.475                   | 29.066  | 29.317                                       | 29.536                    | -0.03                      | 96.4                        | 76.9              | 90.6             | 79.2                            | 84.9                     | +0.6                        | 74                         | -                                   | 68                              | -                       |                             |  |
|                    |   | Arrah            | 29.796                   | 29.151  | 29.322                                       | 29.518                    | -0.08                      | 95.4                        | 76.6              | 91.8             | 79.5                            | 85.6                     | +0.6                        | 80                         | -                                   | 70                              | -                       |                             |  |
|                    | Gya   | Gya              | 29.391                   | 29.071  | 29.176                                       | 29.559                    | -0.11                      | 95.0                        | 76.1              | 91.5             | 78.9                            | 85.2                     | 0                           | 71                         | -8                                  | 77                              | -0.7                    |                             |  |
|                    | Patna   | Bankipore        | 29.535                   | 29.212  | 29.327                                       | 29.499                    | -0.06                      | 95.9                        | 77.1              | 90.9             | 79.9                            | 85.4                     | -0.3                        | 85                         | 14                                  | 87                              | +0.7                    |                             |  |
|                    | South Bhagalpore and Monghyr.                 | Bhagalpore       | 29.552                   | 29.190  | 29.396                                       | 29.538                    | -0.04                      | 94.1                        | 75.0              | 89.8             | 79.6                            | 84.2                     | -0.4                        | 80                         | -                                   | 50                              | -                       |                             |  |
|                    | Southal Pergunnahs                            | Naya Doonka      | 29.250                   | 28.900  | 29.059                                       | -                         | -                          | 139.6                       | 75.8              | 88.4             | 77.7                            | 82.1                     | -0.1                        | 87                         | -                                   | 66                              | -                       |                             |  |
|                    | Hazaribagh                                    | Hazaribagh       | 29.752                   | 29.109  | 29.560                                       | 29.587                    | +0.02                      | 92.0                        | 76.7              | 84.9             | 79.1                            | 79.0                     | -0.3                        | 81                         | -4                                  | 97                              | +0.7                    |                             |  |
|                    | Joharunga and Manbhoom.                       | Ranchee          | 29.697                   | 29.293  | 29.488                                       | 29.572                    | -0.07                      | 90.0                        | 68.4              | 83.6             | 72.0                            | 77.8                     | -0.6                        | 83                         | -                                   | 89                              | -                       |                             |  |
|                    | Singhboon                                     | Chaitussa        | 29.055                   | 28.630  | 29.001                                       | -                         | -0.05                      | 94.6                        | 74.4              | 88.1             | 76.9                            | 83.5                     | -0.8                        | 79                         | -                                   | 81                              | -                       |                             |  |
|                    |   | Sibazar          | 29.471                   | 29.157  | 29.315                                       | 29.677                    | +0.02                      | 97.1                        | 75.5              | 91.6             | 78.1                            | 84.9                     | +0.5                        | 83                         | 0                                   | 81                              | -0.7                    |                             |  |
| ASSAM.             |   | Dibrui           | 29.685                   | 29.308  | 29.511                                       | 29.628                    | -0.06                      | 92.7                        | 76.3              | 87.9             | 78.7                            | 83.3                     | -0.3                        | 84                         | -1                                  | 57                              | -0.7                    |                             |  |
|                    |   | Silenar          | 29.708                   | 29.337  | 29.511                                       | 29.619                    | -0.03                      | 97.6                        | 74.3              | 92.6             | 77.3                            | 86.0                     | +1.7                        | 77                         | -8                                  | 83                              | +0.8                    |                             |  |

\* Mean of 50 days.













## SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS TAKEN IN ASSAM, DURING THE MONTH OF JULY 1887.

THE month of July in Bengal is one of the most important of the whole year from a meteorological point of view, for it is the first complete month of the actual monsoon period. It is generally the case that the complete establishment of the two great branches of the monsoon current does not take place till quite the end of June or beginning of July, and usually the rainfall in the Lower Provinces in July is heavier than during any other month of the year. Another reason why the meteorology of this month is important is that the distribution of the rains in July generally gives a rough indication of the probable distribution of the rainfall during the whole of the monsoon period.

The circumstances and conditions of the establishment of the south-west monsoon have been dealt with in previous reports, and it has been pointed out that, while during June the rainfall in Bengal is practically almost entirely brought up by the Bay of Bengal monsoon current, at the end of this month, or commencement of July, the conditions change, and the Bombay branch of the monsoon, blowing from the Indian Ocean and the Arabian Sea, advances slowly across Central India and the Central Provinces, and makes its influence felt in Bengal, and particularly in the western districts of the province. In its forward progress the Bombay current meets the Bay of Bengal monsoon current, and the interaction between the two currents gives rise to ascensional motion, which, according to well known physical laws, causes condensation of the aqueous vapour in the form of rain. The Arabian Sea branch of the monsoon current therefore exercises a considerable influence on the rainfall in Behar, Chutia Nagpur and Bengal generally during July.

The Bay of Bengal current, if it alone prevailed, as is the case to a certain extent in June, would undoubtedly deposit the greater part of its vapour as rain in the neighbourhood of the sea coast, and along the areas nearest to the hills in the east and north of the province. The interaction between the two branches of the monsoon current is undoubtedly greatest in the western districts of the province, and therefore tends to give heavier rainfall to Chutia Nagpur, South Behar and West Orissa, or to those parts of the province which would receive the smallest amounts of rain from the direct action of the Bay of Bengal branch; that is, the combined effect of the two branches is to produce in normal years a fairly uniform rainfall over the whole province. The amount of the interaction between the two branches of the monsoon current will depend on two things—first, on the relative strengths of the two currents; and second, on the position or direction in which the currents meet, for as the Bengal current is changed by the physical configuration of the country over which it is flowing from a south-westerly wind at the head of the Bay, first into a southerly, then into a south-easterly, and finally into an easterly current, it is evident that interaction with the westerly current will be more marked in Behar, where the Bay of Bengal current is easterly, than it will be in Orissa, where it is south-westerly. Thus in normal years the rainfall in the western parts of Behar and of Chutia Nagpur is practically entirely brought about by the interaction above described.

It must, however, be remembered that the south-west monsoon winds are by no means steady. They blow vigorously for a few days, giving more or less general rain, and then fall off in strength, when the rainfall becomes local. A fresh rush of winds then occurs, followed by general rainfall with subsequent lulls as just described. It is during these periods of comparative calm that conditions become favourable for the generation of small cyclonic storms, which in most cases are formed near the head of the Bay, though they also, but more rarely, may form over the land. With the advance of these cyclonic storms heavy rain generally occurs, and it depends to a great extent on the character of these small storms or atmospheric whirls, that is, whether they are of concentrated or of diffused nature, whether the rainfall which accompanies their advance falls only near the path of the storm, or whether it is widely diffused over a large portion of the province. With the advance of these storms strong humid winds generally set in over the whole province, giving rise to general rain for some days. The precise conditions which determine the formation of these storms are, however, not clearly understood, and while in some years a constant succession of such storms will occur, in other years they may be almost absent, or at all events very few of any importance occur.

It will thus be seen that the meteorological conditions of July depend mainly on two points—first, on the character and intensity of the two monsoon currents from the Bay of Bengal and Arabian Sea; and second, on the occurrence, nature and paths of the small cyclonic storms which frequently occur in the rainy season.

*Average distribution of the rainfall in July.*—Two lines of maximum normal rainfall may be traced in Bengal during July. The first line is more or less parallel to the sea coast, and is caused by the humid winds from the Bay of Bengal. The second line of maximum rainfall is more or less parallel to the hill ranges in the east and north of the province, and this is accounted for by the well-known fact that these ranges cause ascensional motion of the Bay of Bengal current, and consequent precipitation of heavy rainfall. The line of 20 inches average rainfall in July runs through the Eastern Bengal districts at some little distance from the coast line, the distance from the coast increasing as it runs to the eastward; the second line of 20 inches average rainfall is found along the Darjeeling Hills, running almost east and west. The line of 15 inches average rainfall starts from Saugor Island and runs in an easterly direction parallel to the first-mentioned

line till near the Tipperah Hills, when it suddenly turns in a north-westerly direction, finally passing through Bogra and Dinagepore, where it is more or less parallel to the line of 20 inches in the Darjeeling Hills. The line of 12 inches average rainfall runs from Motihari in Northern Behar almost due south-east parallel to the 15-inch line to Rajmehal, and thence through Jessore along the borders of the Chutia Nagpur district into South Behar. Inside this area of average rainfall of less than twelve inches there are two areas of considerable interest. The first is the area of minimum rainfall of the month, which embraces the Jessore district, some parts of the Nuddea and Burdwan districts, as well as the Rajshahye district. This minimum fall is explained by the fact that this portion of Bengal is not influenced by either of the three causes which tend to produce increased rainfall: namely, it is not near the coast line when the humid winds expend their first force; it is not near any hill ranges where ascensional air motion will take place; and third, it is not under the influence of the interaction between the two branches of the monsoon current as previously described. The other area of interest is one of increased precipitation near Patna. The Chutia Nagpur Division receives during the month a normal rainfall of between twelve and fifteen inches, and this comparatively large amount is evidently produced by the interaction of the two branches of the monsoon current over this district.

*Meteorology of the month.*—At the commencement of July the monsoon current blowing over the province from the Bay of Bengal was decidedly light, and during the first six days the passage of the current over Bengal was partially stopped by the formation of a feeble whirl in the Bay of Bengal, which only reached the land on the 7th, close to Saugor Island. With the advance of the feeble storm over the land a moderately strong monsoon current then commenced to flow over Bengal, and gave moderate amounts of rain. This depression had practically disappeared on the 8th, but on the 9th a new depression was formed in Central Bengal, which commenced to move in a north-westerly direction, passing near Burdwan and then into the North-West Provinces, finally disappearing on the 13th in the north-east of Rajputana. Again, with the advance of the depression a moderate monsoon current flowed over the province. This small storm was still advancing when, on the 11th and 12th, another small depression commenced to form at the head of the Bay, and over South-East Bengal, which depression afterwards moved in a north-westerly direction and only filled up and disappeared over Beluchistan on the 17th. The indraught towards this storm had ceased to affect Bengal after the 15th, and the most noticeable feature in the weather on the 16th was the setting in of a westerly wind current over the greater part of the province, due to the abnormal strength of the Bombay branch of the monsoon, which drove back the easterly and south-easterly wind current which had previously been blowing. A slight area of comparatively low pressure was also developed on the 16th over the eastern part of South Behar. Conditions on this day were not favourable for heavy rain, and only light and local falls were reported over the greater part of the province. On the 17th the weather conditions over Bengal became extremely abnormal, in the fact that at practically all stations in the province wind was north-westerly. This was apparently brought about by the unusual strength of the westerly Bombay current, which entirely drove back the very feeble monsoon current which was blowing from the Bay of Bengal, and thus practically at all stations from Buxar down to Negapatam winds became westerly and north-westerly. Under these circumstances, a short break in the rains became established, and on this day practically the whole province was rainless. Such abnormal conditions as these, however, could not continue long, and on the 18th the Bay of Bengal current commenced to strengthen slightly, and in South Bengal there were distinct indications of interaction between the two opposing wind currents, which gave rise to somewhat numerous and heavy local showers, but it was evident that the southerly winds would gradually drive back the abnormal north-westerly winds. On the 19th the advancing southerly current had made further progress, and at all, except a few stations in the west of Behar and Chutia Nagpur, winds had become southerly and south-easterly. The amount of interaction became larger, and in North Bengal heavy rain fell, but elsewhere rainfall was light and local. On the 19th, however, a rapid fall of pressure took place in the north-west angle of the Bay, and a new depression was formed, which, however, only passed over the land on the 24th and 25th and disappeared on the 28th. During the whole period of the existence of this feeble storm, the winds blowing in connection with it were very light. There was, however, the usual indraught towards the storm, and thus the rainfall-bearing current was deflected towards the depression, and the greater part of the province received only local showers during the existence of the storm at the head of the Bay, though the area in immediate proximity to the storm received more general and heavier rain. Directly, however, the feeble storm had passed inland, the monsoon current blowing from the Bay of Bengal commenced to increase in strength and to pass over the land, and on the 26th the wind velocity had strengthened at Saugor Island from 15 miles an hour on the 26th and 27th to 20 miles an hour on the 28th, while for the 24 hours ending 10 A.M. of the 29th the velocity had averaged 27 miles an hour. For the last two or three days of the week therefore the monsoon current blowing over the province was decidedly strong, and rainfall became general and in many cases heavy on the 27th, 28th, and 29th. The weather conditions at the close of the month were in fact decidedly favourable for the continuance of rainfall in Bengal, and more favourable than they had been at any previous time throughout the month.

Speaking generally, it may be said that the monsoon current blowing from the Bombay side during July has been abnormally strong throughout the month, and this has caused the

Bay of Bengal monsoon current to be deflected in a more westerly direction than is usual. Hence the rainfall due to this current has been deflected towards the Burma coast, and particularly heavy rain has been reported along this coast, while the rainfall over Bengal has been correspondingly deficient.

Bengal thus has been under the influence of no less than four distinct barometric depressions during the month, the formation and history of which may be shortly described as follows :—

1 *Feeble depression of 2nd to 8th July.*—On the 2nd instant pressure became comparatively low off the Arakan coast, and winds showed a slight tendency to circulation along this coast. On the following day these indications of the formation of a feeble barometric depression or whirl were confirmed, and the depression was probably on this day near the centre of the Bay and south of a line joining Akyab and Gopalpore. On the 4th the whirl had developed to a sufficient extent to cause a distinct cyclonic circulation of winds over the whole of the northern half of the Bay, and on this day probably the centre of the whirl or feeble depression was to the west of the centre of the Bay, and to the east-south-east of Gopalpore. On the 5th it had distinctly developed and had advanced in a north-westerly direction, the centre being to the south of Saugor Island and about east-north-east of False Point. Notwithstanding that it had distinctly developed, it was still exceedingly feeble, and the wind velocities in connection with it were very small, though the circulation was completely cyclonic. On the 6th it had again advanced, and on this day apparently the centre was close to Saugor Island, but it was clear that it was not developing to any extent, but that it was rather becoming more feeble. On the 7th it had passed inland, but it had weakened to such an extent that it had almost disappeared, and on the 8th it had quite filled up. For the whole period of its existence the winds accompanying it, as judged by the coast stations were comparatively weak, but at sea it probably gave rise to strong winds and squally weather. In its advance it brought rather heavy rain, and on the 6th Balasore, Jellasore, Contai, Saugor Island, Devog, and other stations each reported about 2 inches of rain.

2. *Depression of 9th to 13th July.*—On 9th July the pressure fell decidedly rapidly at some of the stations in Central Bengal, and a distinct barometric depression was formed over this area. The depression was accompanied by a decided cyclonic circulation of winds. On the 10th the depression had developed very rapidly, and had moved slowly in a westerly direction. On this day pressure fell rapidly at the stations in Central and Western Bengal and in Chutia Nagpur, the fall at some stations almost equalling 0·15", while many stations such as Calcutta, Burdwan, Bankoora, and Raneeunge, &c., showed falls considerably exceeding a tenth of an inch. Winds also decidedly increased in force, and there was again on this day a strong cyclonic circulation of winds round the centre of the feeble storm. The centre was near Burdwan, where a pressure of 29·361" was registered, and towards which point baric gradients were decidedly steep. The small storm was fed by a powerful monsoon current, and heavy rain was brought on both the 9th and the 10th to the districts affected by the storm. On the following day pressure fell rapidly at Allahabad and Benares, and the depression, which was on the previous day in West Bengal, had apparently been transferred to this district while on the 12th it had advanced into Bundelkund, and on the 13th into the north-east of Rajputana, where it filled up.

3. *Depression of 11th to 17th July.*—On Monday, the 11th, also pressure began to fall off the east coast of the Bay, and this continued on the 12th, when pressure became decidedly low over South-East Bengal, and it was evident that a small barometric depression was forming either over the sea area just to the south of the Sunderbuns, or over the land area to the south of Jessore. On the 13th a distinct depression was developed, and at 10 A.M. on this day its centre was nearly between Calcutta and Saugor Island. During the same afternoon the centre passed only a short distance to the south of Calcutta in a westerly direction. This storm was small; but with a moderately steep gradient and pressure at Calcutta fell to about 29·3". On the morning of the 14th the small storm had passed into the Central Provinces and Central India. This storm again advanced in a westerly direction, and on the morning of the 15th it was near Hoshuugabad. On the morning of the 16th the small storm had reached Hyderabad in Sind, and was disappearing across the Indus, while on the 17th it had disappeared over Beluchistan. The storm which appeared in South Bengal on the 12th had therefore a life history of from five to six days, and it travelled over a distance of from 1,500 to 1,600 miles quite unbroken; the direction of its movement was a little to the north of west. It was accompanied by a clearly marked cyclonic circulation of winds, but though the wind force at the land stations was only moderate, during its formation and advance very strong winds were blowing over the sea at the head of the Bay, and weather was decidedly squally, if not rather stormy, though at no time was the storm of any particular intensity.

*Depression of the 19th to 28th July.*—On the 19th instant a rapid fall of pressure took place in the north-west angle of the Bay, the fall at False Point being 0·127". A distinct but feeble barometric depression was thus formed, the centre of which was to the south-east of False Point, and which was accompanied by a feeble cyclonic circulation of winds. This small depression was the principal feature in the meteorology of the last ten days of the month, and it continued to exist without intensifying to any material extent, and without any movement beyond a slight shifting of the centre from day to day up till the 24th. On the 20th the centre of the depression was apparently to the south of Saugor Island; on the 21st the centre of the wind circulation was between Saugor Island and Balasore, and on the 22nd the centre of the wind circulation was between Balasore and False Point.

On the 23rd pressure had fallen over the whole province, the fall being largest in the north-west angle of the Bay, and the small barometric depression which existed over this area decidedly intensified. The lowest pressure reported on this day was 29.513" at Balasore, and the centre of the depression appeared to be between this station and False Point. A very distinct cyclonic circulation of winds accompanied the very feeble storm, but wind velocities in connection with it were small. On the 24th pressure again fell generally over the province, the fall being very rapid in the north-west angle of the Bay, where at Saugor Island it amounted to 0.151". This was produced by the further intensification of the depression, the centre of which on this day was decidedly nearer to the land and to Saugor Island than it was on the previous day, and on this date the centre appeared to be almost equi-distant between Saugor Island and Balasore. Pressure at Saugor Island at 10 a.m. on the 24th was 29.391", and at Balasore 29.409". Winds again showed a very complete cyclonic circulation round the depression, and practically this circulation affected the wind directions at all the stations in the province. Wind velocities in the neighbourhood of the disturbance, however, continued moderate only, though undoubtedly the weather over the sea area at the head of the Bay was decidedly squally. On this day the depression appears to have commenced to move in a north-westerly direction, and at 10 a.m. of the 25th it was in the extreme west of South-west Bengal, and passing into the south of Chutia Nagpur. On the morning of the 26th it had travelled towards Jubbulpur and Sutna, where on the 27th it rapidly diminished in intensity, and on the morning of the 28th it had practically disappeared. This small storm had therefore a life history of about eight days, of which for the first five it remained almost stationary, and it was only during the last two or three days of its existence that it moved in a north-westerly or west-north-westerly direction, gradually decreasing in intensity in its progress over the land.

These four depressions, it will be noticed, have all affected the central, western and south-western districts of Bengal only, and by the rainfall they have brought they have caused the rainfall of these districts to be heavier than they otherwise would have been, and thus many parts of these districts have received falls in excess of the normal, while considerable tracts of the north and east of the province have received very deficient rainfalls.

*Pressure.*—The variations of pressure have been controlled to a great extent by the passage of the succession of depressions just described. For the first week of July the mean pressure of the province of Bengal was in excess of the normal by 0.019", while in Assam the excess was 0.015"; in the second week, as Bengal was under the influence of two depressions, pressure was decidedly below the normal, the defects ranging from 0.123" at Burdwan and 0.113" at Calcutta, where these stations were fully influenced by the depressions, to a defect of 0.063" at Purneah. In Assam, too, the general defect was nearly 0.08". In the third week pressure was rather largely in defect at its commencement, while at its close it had become much more nearly normal, while in the fourth week pressure was again below the normal, the defects being largest at the stations affected by the depression, where at Saugor Island and Calcutta they amounted to about 0.06", while at Sibsaigar and Purneah, which were unaffected by the depression, the pressure was almost normal. For the whole month the mean pressure has been below the normal at almost all stations, and taking only those stations into consideration from which means have been obtained for several years, the average defect in pressure of the province has been 0.017", while the extreme variations are from a defect of 0.037" at Calcutta, 0.032" at Chittagong, 0.028" at Saugor Island, and 0.027" at False Point to an excess of 0.007" at Purneah and 0.002" at Hazaribagh. These figures would therefore tend to show that pressure has been relatively low at the head of the Bay, and perhaps over the sea area, where one of the depressions remained stationary for several days.

*Temperature.*—The variations of temperature during the month have not been of great importance, and the mean temperature of the various meteorological districts has in no case varied from the normal of the month by more than about half a degree, and thus while North and South Behar and East Bengal have recorded temperatures from 0.2° to 0.5° in excess of the normal, Orissa, South-West Bengal and Chutia Nagpur have recorded temperatures from 0.3° to 0.5° in defect of the normal, and in North Bengal temperature has been quite normal. For the whole province for July temperature has been on the average precisely normal. In Assam the mean temperature has been in excess of the normal by 0.6°.

*Rainfall.*—The causes which have affected the rainfall in Bengal during July have already been explained. The Bay of Bengal branch of the monsoon which has been blowing has on the whole been rather weaker than usual, but the Bombay branch blowing from the Arabian Sea has been of very great strength, and has swept across India to an abnormal extent, and has thus had the effect of deflecting the Bay of Bengal branch in a more westerly direction than usual. The rainfall from the Bengal current has been determined towards the Burma coast, and the greater part of Bengal (and particularly the eastern and northern districts, which depend almost wholly for their rainfall on this current) has received a rainfall rather largely in defect of the normal. This scarcity of rainfall has, however, been compensated for in some districts by the formation and passage of the four barometric depressions which have previously been described. The districts which have been most affected by these depressions have been Southern and Western Bengal and parts of Orissa and Chutia Nagpur, and the distribution of the rainfall, as compared with the normal, exactly agrees with the area which has thus been affected. The rainfall in Bengal generally, owing to the deflection of the rain-bearing current, has been considerably below

the normal, but while this is the case, South-West Bengal has received a fall three per cent. in excess of the normal. In Chutia Nagpur the fall for the month has been seven per cent. in defect of the normal, and in Orissa the defect has been nine per cent. The defects in the other districts which have scarcely been affected by the passage of the depressions have been much larger, and thus in South Behar the defect has been equal to seventeen per cent. of the normal, and in East Bengal to twenty per cent. In the two northern districts the defects have been excessive, and thus in North Bengal the defect has been thirty-seven per cent., and in North Behar it has been no less than forty-one per cent. of the normal. If these various districts may be said to have an equal value in the calculation, then the average rainfall of the whole of Bengal for July may be said to have been equal to eighty-two per cent. of the normal.

The comparison of the actual rainfall of the various great divisions of the province during July with the normal is most accurately shown in the form of a percentage. The figures representing the rainfall for the month, calculated in this way, are included in the table below under the heading of July. This table really gives a condensed summary of the rainfall statistics of the present year up to date for each meteorological division, the first seven columns giving the actual rainfalls in each division in each month expressed as a percentage of the normal, while the eighth column of figures shows the actual rainfall for the first seven months of the year expressed as a percentage of the normal for the period; the figure 100 will therefore in this table represent a normal rainfall, a number larger than 100 an excess fall, and so on:—

| Meteorological districts. | January. | February. | March. | April. | May. | June. | July. | Total actual rainfall of first seven months expressed as a percentage of the normal fall for the period. |
|---------------------------|----------|-----------|--------|--------|------|-------|-------|--|
| Orissa                    | 119      | Nil.      | 137    | 90     | 103  | 86    | 91    | 94   |
| South-West Bengal         | 292      | 2         | 253    | 56     | 139  | 83    | 103   | 104  |
| East Bengal               | 412      | 14        | 208    | 34     | 71   | 79    | 80    | 82   |
| North Bengal              | 530      | 2         | 274    | 114    | 158  | 139   | 68    | 121  |
| North Behar               | 381      | Nil.      | 127    | 109    | 177  | 135   | 59    | 105  |
| South Behar               | 411      | Nil.      | 263    | 184    | 424  | 70    | 83    | 119  |
| Chutia Nagpur             | 500      | Nil.      | 10     | 111    | 331  | 73    | 93    | 108  |

From the above table it will be seen that the districts in which the rainfall has been so largely in defect in July are those in which the falls were in large excess in the previous months; and that, taking the rainfall of the first seven months of the year into account, all districts, except East Bengal and Orissa, have received falls in excess of the normal, and that in North Bengal and South Behar the falls have been rather largely in excess, the excess falls equalling about 20 per cent.

Taking up the rainfall of the Province more in detail, when compared with the normal for July, the province is clearly divided into three sections, and a tract of country which has received excess rainfall lies between two areas of decided defect. The district of excess rainfall may be roughly described as a band of country varying from about 50 to 100 miles in width, which starts from the Sunderbuns running northwards, and including the greater part of the 24-Pergunnahs district, then including parts of the Midnapore and Bankoorah districts, and the greater part of Burdwan and Moorshedabad. The band then suddenly turns towards the west and includes part of the Sonthal Pergunnahs, parts of the Monghyr and Gya districts, and a considerable part of Hazaribagh. There are also districts of excess falls in Cuttack, Balasore and Chittagong. The excess falls in some of these districts are considerable, and in a good many instances exceed five inches, while at Tumlook in the Midnapore district the excess is 8.52 inches. On either side of this band of excess rainfall, the falls are all in defect, the district to the west and south-west of the excess region generally showing a defect of less than three inches, while to the east and north of the area of excess the defects are much larger, and the greater part of this area shows a defect exceeding three inches, and a large area a defect of more than five inches, while there is a small area in North Bengal represented by such stations as Julpigoree, Micklijunge and Buxa, and another area in South-East Bengal represented by Comilla and Fenny, which have received falls more than ten inches below the normal for the month. Taking the areas into consideration, only about one-fifth or one-sixth of the province has received an excess fall, while the remainder has been decidedly in defect.

The actual falls which have been received during the month have varied even more largely than usual, and while some stations in the province in North Bengal have received a fall of about 30 inches and upwards, and others in the extreme south-east have received a similar quantity, other districts in North Behar and one station in Cuttack have received falls of less than five inches during the month.

The districts which have thus received falls largely in defect of the normal are Pooree, Krishnagore, Jessore, Mymensingh, Tipperah, Furreedpore, all the districts in North Bengal and in North Behar, and all in South Behar, except the Sonthal Pergunnahs. In Chutia Nagpur Manbhoom has been also in decided defect.

The following table gives full data for the comparison of the actual and the normal rainfall of the month of July in all districts of the province. The figures are derived from the average and actual rainfall of the rain-recording stations in each district, due allowance or weight being given for the area which each station represents. This gives a more



accurate average than the arithmetical means given in the weekly and monthly meteorological tables. The first column gives the normal or average district rainfall as determined from the rainfall observations of the past 15 years. The second column gives the actual district rainfall as determined from the weighted actual rainfalls of the month at the reporting station in each district. The third column expresses the ratio of the actual district rainfall of the past month to the normal rainfall as a percentage. The fourth column gives the same information as the third column in a slightly different form. It states as a percentage how much the district rainfall of the month varied in excess or defect from the normal rainfall, and is hence the difference between the numbers in the third column and 100 :—

| DIVISION.         | DISTRICT.                       | Normal district rainfall, July | Actual district rainfall, July 1886. | Percentage of actual to normal rainfall. | Percentage excess (+) defect (—) |
|-------------------|---------------------------------|--------------------------------|--------------------------------------|--|----------------------------------|
| Orissa            | Pooree ...                      | 10.90                          | 8.52                                 | 78                                       | — 22                             |
|                   | Cuttack ...                     | 12.43                          | 13.11                                | 106                                      | + 6                              |
|                   | Balasore ...                    | .....                          | .....                                | .....                                    | .....                            |
| South-West Bengal | Midnapore ...                   | 12.74                          | 16.42                                | 129                                      | + 29                             |
|                   | 24 <sup>th</sup> Pergunnahs ... | 12.91                          | 15.44                                | 112                                      | + 12                             |
|                   | Howrah ...                      | 13.16                          | 15.68                                | 119                                      | + 19                             |
|                   | Hooghly ...                     | 12.39                          | 11.10                                | 90                                       | — 10                             |
|                   | Burdwan ...                     | 11.61                          | 12.44                                | 107                                      | + 7                              |
|                   | Bankoora ...                    | 13.11                          | 14.19                                | 108                                      | + 8                              |
|                   | Boerbhoom ...                   | .....                          | .....                                | .....                                    | .....                            |
|                   | Nuddea ...                      | 10.12                          | 7.86                                 | 78                                       | — 22                             |
|                   | Khoolna ...                     | 12.86                          | 11.72                                | 91                                       | — 9                              |
|                   | Jessore ...                     | 10.39                          | 6.33                                 | 61                                       | — 39                             |
| East Bengal       | Moorshedabad ...                | 10.80                          | 13.10                                | 121                                      | + 21                             |
|                   | Chittagong ...                  | 12.59                          | 28.49                                | 226                                      | + 126                            |
|                   | Backergunge ...                 | 18.48                          | 17.70                                | 96                                       | — 4                              |
|                   | Noakholly ...                   | 21.27                          | 18.47                                | 87                                       | — 13                             |
|                   | Furreedpore ...                 | 12.30                          | 7.15                                 | 61                                       | — 39                             |
|                   | Dacca ...                       | 13.41                          | 12.26                                | 91                                       | — 9                              |
|                   | Comnilla ...                    | 15.30                          | 7.43                                 | 49                                       | — 51                             |
|                   | Mymensingh ...                  | .....                          | .....                                | .....                                    | .....                            |
| North Bengal      | Pubna ...                       | 10.76                          | 8.51                                 | 79                                       | — 21                             |
|                   | Bogra ...                       | 13.72                          | 10.20                                | 74                                       | — 26                             |
|                   | Rajshahye ...                   | 11.73                          | 8.41                                 | 72                                       | — 28                             |
|                   | Maldah ...                      | 11.58                          | 7.28                                 | 63                                       | — 37                             |
|                   | Dinagpore ...                   | 12.02                          | 9.38                                 | 78                                       | — 22                             |
|                   | Rungpore ...                    | 14.10                          | 7.24                                 | 51                                       | — 49                             |
|                   | Cooch Behar ...                 | .....                          | .....                                | .....                                    | .....                            |
|                   | Julpigoree ...                  | 25.55                          | 12.84                                | 51                                       | — 49                             |
| North Behar       | Darjeeling ...                  | 24.43                          | 21.66                                | 89                                       | — 11                             |
|                   | Purneah ...                     | 15.30                          | 7.16                                 | 49                                       | — 51                             |
|                   | North Bhagulpore ...            | 11.17                          | 5.00                                 | 45                                       | — 55                             |
|                   | Darbhunga ...                   | 11.42                          | 9.06                                 | 79                                       | — 21                             |
|                   | Mozufferpore ...                | 10.98                          | 7.11                                 | 65                                       | — 35                             |
|                   | Chumparan ...                   | 11.83                          | 7.34                                 | 62                                       | — 38                             |
| South Behar       | Saran ...                       | 11.60                          | 8.56                                 | 74                                       | — 26                             |
|                   | Shahabad ...                    | 11.87                          | 7.35                                 | 62                                       | — 38                             |
|                   | Gya ...                         | 11.86                          | 10.15                                | 86                                       | — 14                             |
|                   | Patna ...                       | 11.77                          | 8.47                                 | 72                                       | — 28                             |
|                   | Monghyr ...                     | 11.65                          | 11.28                                | 88                                       | — 12                             |
|                   | South Bhagulpore ...            | 10.76                          | 8.46                                 | 79                                       | — 21                             |
| Chutia Nagpur     | Sonthal Pergunnahs ...          | 12.79                          | 12.14                                | 97                                       | — 3                              |
|                   | Hazaribagh ...                  | .....                          | .....                                | .....                                    | .....                            |
|                   | Lohardugga ...                  | 12.52                          | 17.60                                | 141                                      | + 41                             |
|                   | Singbhoom ...                   | 14.11                          | 13.85                                | 98                                       | — 2                              |
|                   | Manbhoom ...                    | 11.24                          | 9.06                                 | 81                                       | — 19                             |

The following table gives the summary of the temperature and rainfall data of each of the seven Meteorological Divisions of the province for the month of July 1887:—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                   |                               |                         |                        |                       |  | RAINFALL. |                 |            |                          |                                 |            |                      |                 |
|------------------------------|--------------------------------|-------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|--------------------------|---------------------------------|------------|----------------------|-----------------|
|                              | Highest observed during month. | Lowest observed during month. | Averages for month.     |                        |                       | Average mean of month above or below normal mean of month. | Of month. |                 |            | Rainy days.              |                                 |            | Since 15th May 1887. |                 |
|                              |                                |                               | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average.  | Normal average. | Variation. | Average number in month. | Normal average number in month. | Variation. | Average.             | Normal average. |
|                              |                                |                               |                         |                        |                       |  |           |                 |            |                          |                                 |            |                      |                 |
|                              |                                |                               |                         |                        |                       |  |           |                 |            |                          |                                 |            |                      |                 |
| Orissa                       | 96.4                           | 74.8                          | 87.6                    | 78.3                   | 83.0                  | —0.3   | 11.53     | 12.00           | —1.13      | 16.0                     | 18.0                            | —1.4       | 23.21                | 23.68           |
| South-West Bengal            | 97.3                           | 74.9                          | 88.0                    | 78.6                   | 83.8                  | —0.3   | 12.34     | 11.96           | +0.39      | 20.5                     | 19.9                            | +0.6       | 25.34                | 24.75           |
| East Bengal                  | 98.3                           | 71.9                          | 87.4                    | 77.8                   | 82.6                  | +0.5   | 13.32     | 10.60           | —3.28      | 21.1                     | 22.4                            | —1.3       | 29.60                | 30.57           |
| North Bengal                 | 95.6                           | 69.7                          | 80.4                    | 77.7                   | 83.8                  | 0  | 9.13      | 14.45           | —5.32      | 15.6                     | 18.7                            | —3.1       | 44.20                | 36.76           |
| North Behar                  | 97.5                           | 75.4                          | 91.1                    | 79.2                   | 85.2                  | +0.4   | 7.52      | 12.69           | —5.17      | 15.3                     | 15.8                            | —0.5       | 27.50                | 22.62           |
| South Behar                  | 96.4                           | 73.8                          | 90.1                    | 78.9                   | 84.5                  | +0.2   | 10.05     | 12.18           | —2.13      | 17.4                     | 17.8                            | —0.4       | 22.89                | 20.29           |
| Chutig Nagpur                | 92.0                           | 68.4                          | 84.2                    | 72.6                   | 78.4                  | —0.5   | 12.37     | 13.24           | —0.87      | 14.3                     | 21.3                            | —7.0       | 24.78                | 22.83           |
| Assam                        | 97.6                           | 74.3                          | 90.7                    | 78.0                   | 84.4                  | +0.6   |           |                 |            |                          |                                 |            |                      |                 |

\* Chyebassa not included.

METEOROLOGICAL OFFICE, BENGAL ;  
The 9th August 1887.

ALEXANDER PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal.



Results of the Meteorological Observations taken at the Alipore Observatory from  
31st July to 6th August 1887.

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 29 Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain.   | WEATHER.                          |
|--------|-------|-----------------|-------------------------------------|-------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|-----------------------------------|
|        |       |                 |                                     |                                     | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |         |                                   |
| 1887   |       | °               |                                     | inches.                             | °            | °        | °      | °        | °              | inches.         | °          | %         |                       |                 | Inches. |                                   |
| July   | 31st  | 152.9           | 3.3                                 | 29.527                              | 83.3         | 89.4     | 9.5    | 79.9     | 80.1           | 0.984           | 78.7       | 86        | SW, W and variable    | 165             | 0.33    | Chiefly cloudy,<br>o, g, d, p, <. |
| Aug.   | 1st   | 96.7            | Nil                                 | .496                                | 80.0         | 80.0     | 3.6    | 77.3     | 77.6           | .918            | 76.6       | 90        | W and SW by W ...     | 200             | 1.97    | Cloudy, o, g, d,<br>p, t.         |
| "      | 2nd   | 127.7           | ...                                 | .614                                | 81.7         | 85.0     | 9.1    | 75.9     | 78.2           | .919            | 76.7       | 85        | SW and S ...          | 189             | 0.47    | Chiefly cloudy<br>o, g, d, p.     |
| "      | 3rd   | 148.2           | 7.2                                 | .641                                | 82.6         | 87.8     | 10.6   | 77.2     | 79.5           | .952            | 77.7       | 83        | S and SSW ...         | 162             | Nil     | Chiefly cloudy,<br>Δ.             |
| "      | 4th   | 155.6           | 8.0                                 | .585                                | 84.5         | 88.0     | 8.8    | 79.2     | 79.8           | .955            | 77.8       | 81        | SSW and WSW ...       | 146             | .....   | Chiefly cloudy.                   |
| "      | 5th   | 151.9           | 4.8                                 | .594                                | 84.4         | 88.7     | 8.8    | 79.9     | 80.6           | .997            | 79.1       | 84        | SSW and S ...         | 161             | .....   | Chiefly cloudy,<br>o, g.          |
| "      | 6th   | 154.5           | 4.0                                 | .628                                | 82.9         | 88.5     | 10.5   | 78.0     | 79.9           | .983            | 78.7       | 87        | SW and SSW ...        | 167             | 0.49    | Cloudy, o, g, d<br>p, t, <.       |

|  |     |         |        |
|--|-----|---------|--------|
| The mean pressure of the seven days  | ... | Inches. | 29.582 |
| The average pressure of the corresponding period for 24 years, S. G.'s Office          | ... | ...     | 29.580 |
| The total number of hours of bright sunshine   | ... | Hours   | 27.3   |
| The maximum possible number of hours of sunshine                                       | ... | ...     | 91.6   |
| The mean temperature of the seven days   | ... | °       | 82.9   |
| The average temperature of the corresponding period for 24 years, S. G.'s Office       | ... | ...     | 82.9   |
| The extreme variation of temperature   | ... | ...     | 13.5   |
| The maximum temperature  | ... | ...     | 89.4   |
| The highest velocity of the wind in one hour   | ... | Miles.  | 14     |
| The highest pressure of wind on one square foot  | ... | Lbs.    | ...    |
| The mean relative humidity   | ... | %       | 85     |
| The average relative humidity of the corresponding period for 24 years, S. G.'s Office | ... | ...     | 87     |
| The total fall of rain from 31st July to 6th August 1887                               | ... | Inches. | 3.26   |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ...     | 3.75   |
| The total fall from 1st January to 6th August 1887                                     | ... | ...     | 38.37  |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ...     | 37.43  |

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph. The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Alipore Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, t thunder, < lightning, Δ dew.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 8th August 1887.

# Meteorological Report of the Province of E

| METEOROLOGICAL DIVISION.  | DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                      |                       |                     |                      |                           |                                   |                                 |                                     |
|---------------------------|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------|-----------------------|---------------------|----------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|
|                           |                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.         |                       |                     |                      |                           |                                   |                                 |                                     |
|                           |                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week. | Date.                 | Lowest during week. | Date.                | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. |
| Pooree                    | Gopulpore              | ...                     | 29.638                          | 29.688                     | +0.05                | SSW                   | 226.0               | 90.2                 | 1st Aug.              | 79.8                | 30th July            | 88.4                      | 81.5                              | 85.0                            | +2.0                                |
|                           |                        | False Point             | 29.671                          | 29.689                     | +0.060               | WSW                   | 278.0               | 91.0                 | 31st July, 4th Aug.   | 78.6                | 31st ..              | 80.3                      | 79.1                              | 84.2                            | +1.8                                |
| Cuttack                   | Cuttack                | ...                     | 29.598                          | 29.677                     | +0.060               | SW                    | 65.0                | 90.0                 | 31st July             | 78.8                | 3rd Aug.             | 80.6                      | 78.5                              | 79.0                            | +0.6                                |
| Balasore                  | Balasore               | ...                     | 29.585                          | 29.614                     | +0.030               | SW                    | 223.5               | 90.4                 | 31st July, 1, 5 Aug.  | 70.2                | 2nd ..               | 83.5                      | 77.9                              | 85.2                            | +1.2                                |
| South-West Midnapore      | Saugor Island          | ...                     | 29.630                          | 29.686                     | +0.051               | SW                    | 440.0               | 80.2                 | 5th Aug.              | 79.5                | 3rd ..               | 87.3                      | 81.0                              | 84.2                            | +0.8                                |
| South 24-Pergunnahs       |                        | ...                     | 29.503                          | 29.658                     | +0.041               | S, SW                 | 100.1               | 91.3                 | 31st July, 5th Aug.   | 78.3                | 30th July.           | 88.0                      | 77.5                              | 83.1                            | -0.5                                |
| Midnapore                 | Midnapore              | ...                     | 29.611                          | 29.633                     | +0.057               | WSW, SW               | 175.0               | 80.5                 | 1st ..                | 75.7                | 2nd Aug.             | 80.6                      | 78.1                              | 82.4                            | -1.1                                |
| Howrah                    | Calcutta               | ...                     | 29.531                          | 29.630                     | +0.042               | S                     | 96.0                | 90.6                 | 31st July, 1st Aug.   | 75.9                | 2nd ..               | 88.8                      | 78.2                              | 83.5                            | -0.5                                |
| Hooghly                   | Burdwan                | ...                     | 29.305                          | —                          | —                    | W                     | 19.0                | 89.1                 | 31st July, 5th Aug.   | 74.1                | 1st ..               | 80.2                      | 70.2                              | 81.6                            | —                                   |
| Burdwan                   | Bankoora               | ...                     | 29.280                          | 29.597                     | +0.035               | SW                    | —                   | 89.5                 | 5th ..                | 75.0                | 2nd ..               | 86.9                      | 77.3                              | 82.1                            | -1.0                                |
| Bankoora                  | Raneegunge             | ...                     | 29.580                          | 29.627                     | +0.016               | SSW                   | 127.0               | 80.6                 | 31st July, 2nd Aug.   | 75.3                | 3rd ..               | 87.7                      | 78.2                              | 83.0                            | -1.0                                |
| Beerbhoom                 | Krishnagur             | ...                     | 29.570                          | 29.635                     | —                    | SW                    | 112.2               | 90.3                 | 31st ..               | 75.8                | 2nd ..               | 88.4                      | 77.3                              | 82.9                            | —                                   |
| West Burdwan              | Jessore                | ...                     | 29.611                          | 29.644                     | +0.025               | SW                    | 103.1               | 91.8                 | 31st ..               | 75.4                | 2nd ..               | 88.8                      | 78.2                              | 83.5                            | -0.6                                |
| Morshedabad               | Chittagong             | ...                     | 29.627                          | 29.717                     | +0.038               | SSE                   | 141.0               | 85.6                 | 3rd ..                | 74.5                | 4th ..               | 83.9                      | 75.8                              | 79.9                            | -1.2                                |
| Nuddea                    | Chittagong Hill Tracts | ...                     | 29.643                          | 29.655                     | +0.048               | SSE                   | 123.0               | 89.3                 | 1st ..                | 75.4                | 2nd ..               | 85.8                      | 77.8                              | 81.8                            | +0.3                                |
| Jessore                   | Barrisal               | ...                     | 29.632                          | 29.676                     | —                    | SE                    | 56.2                | 88.2                 | 2nd ..                | 74.9                | 2nd ..               | 85.4                      | 76.7                              | 81.1                            | —                                   |
| Khoolna                   | Noakholly              | ...                     | 29.616                          | 29.656                     | +0.029               | S                     | 141.0               | 87.0                 | 4th ..                | 76.4                | 2nd ..               | 85.9                      | 78.2                              | 82.1                            | -0.5                                |
| Chittagong                | Furreedpore            | ...                     | 29.631                          | 29.653                     | +0.040               | SSE                   | 175.0               | 89.5                 | 5th ..                | 76.2                | 2nd ..               | 80.8                      | 78.8                              | 82.8                            | +0.6                                |
| Chittagong Hill Tracts    | Dumagiri               | ...                     | 29.641                          | 29.677                     | +0.018               | SE                    | 105.3               | 87.4                 | 31st July             | 74.8                | 2nd ..               | 85.7                      | 76.3                              | 81.0                            | -0.1                                |
| Backergunge               | Dacca                  | ...                     | 29.620                          | 29.678                     | +0.023               | SE                    | 123.0               | 89.3                 | 31st ..               | 76.1                | 30th July & 2nd Aug. | 86.4                      | 77.2                              | 81.8                            | -0.6                                |
| Noakholly                 | Commillah              | ...                     | 29.554                          | 29.617                     | —                    | Calm                  | 107.6               | 89.3                 | 31st ..               | 76.3                | 2nd Aug.             | 87.4                      | 77.8                              | 83.6                            | —                                   |
| Furreedpore               | Commillah              | ...                     | 29.596                          | 29.643                     | +0.022               | SSE                   | 112.9               | 89.6                 | 2nd Aug.              | 74.7                | 2nd ..               | 87.3                      | 77.6                              | 82.5                            | -0.7                                |
| Dacca                     | Mymensingh             | ...                     | 29.546                          | 29.616                     | +0.032               | Variable              | 122.2               | 90.3                 | 31st July             | 66.77               | 3rd ..               | 89.0                      | 78.4                              | 79.2                            | -3.8                                |
| Commillah                 | Bogra                  | ...                     | 29.482                          | —                          | —                    | Calm, SE              | 26.5                | 83.9                 | 1st Aug.              | 75.7                | 3rd ..               | 89.0                      | 78.0                              | 83.5                            | —                                   |
| Mymensingh                | Bogra                  | ...                     | 29.507                          | 29.626                     | +0.019               | ENE                   | 68.0                | 89.1                 | 1st ..                | 75.1                | 5th ..               | 87.2                      | 77.4                              | 82.3                            | -1.7                                |
| Bogra                     | Pubna                  | ...                     | 29.526                          | 29.651                     | +0.035               | E                     | 76.0                | 91.8                 | 1st ..                | 74.7                | 5th ..               | 88.5                      | 77.3                              | 82.9                            | -0.7                                |
| Pubna                     | Rajshahye              | ...                     | 29.372                          | 29.660                     | +0.055               | E                     | 122.3               | 90.5                 | 2nd ..                | 73.8                | 3rd ..               | 87.4                      | 75.6                              | 81.5                            | -1.4                                |
| Rajshahye                 | Maldah                 | ...                     | 22.508                          | —                          | +0.022               | E                     | 45.0                | 71.1                 | 2nd ..                | 55.7                | 3rd ..               | 65.2                      | 67.2                              | 61.2                            | -1.5                                |
| Maldah                    | Dinagopore             | ...                     | 29.510                          | 29.636                     | +0.049               | Calm                  | 37.0                | 80.2                 | 2nd ..                | 75.6                | 30th July            | 86.9                      | 77.2                              | 82.0                            | -3.1                                |
| Dinagopore                | Rangpore               | ...                     | 29.443                          | 29.610                     | +0.038               | ENE                   | 134.0               | 90.4                 | 2nd ..                | 77.5                | 30th ..              | 87.6                      | 78.8                              | 83.2                            | -1.6                                |
| Rangpore                  | Chumpran               | ...                     | 29.368                          | 29.602                     | +0.002               | SE                    | 229.4               | 92.2                 | 2nd ..                | 76.4                | 3rd ..               | 89.3                      | 77.8                              | 83.5                            | -0.5                                |
| Julpigoree                | Sarun                  | ...                     | 29.405                          | 29.600                     | -0.004               | South-westerly SSW    | 14.4                | 95.5                 | 30th July             | 76.1                | 3rd ..               | 88.8                      | 78.0                              | 83.4                            | -0.7                                |
| Cooch Behar               | Shahabad               | ...                     | 29.280                          | 29.615                     | +0.014               | W                     | 145.9               | 86.4                 | 31st ..               | 76.0                | 1, 3, 5 ..           | 83.6                      | 76.9                              | 80.3                            | -1.1                                |
| Darjeeling Hill Districts | Buxar                  | ...                     | 29.351                          | 29.593                     | -0.004               | W                     | 104.9               | 88.4                 | 31st July, 3, 5, Aug. | 76.7                | 3rd ..               | 86.9                      | 77.9                              | 82.4                            | -0.7                                |
| Purneah                   | Arrah                  | ...                     | 29.382                          | 29.579                     | +0.002               | SW                    | 93.0                | 91.4                 | 2nd Aug.              | 76.6                | 3, 4 ..              | 87.6                      | 77.9                              | 82.8                            | -1.4                                |
| North Bhagulpore          | Gya                    | ...                     | 29.214                          | 29.501                     | -0.003               | NW                    | 65.0                | 89.4                 | 31st July             | 75.8                | 3rd ..               | 87.5                      | 77.5                              | 82.5                            | -1.6                                |
| Mozufferpore              | Patna                  | ...                     | 29.436                          | 29.610                     | +0.020               | Variable              | 62.0                | 80.9                 | 2nd Aug.              | 77.7                | 1, 3, 4 ..           | 80.2                      | 78.6                              | 82.4                            | -2.3                                |
| Durbhunga                 | South Bhagulpore       | ...                     | 29.428                          | 29.588                     | -0.005               | E                     | 58.1                | 89.4                 | 2nd ..                | 77.0                | 30th July & 3rd Aug. | 97.7                      | 78.1                              | 82.9                            | -0.6                                |
| Chumpran                  | Monghyr                | ...                     | 29.103                          | —                          | —                    | Calm                  | 60.0                | 88.8                 | 2nd ..                | 74.8                | 3rd ..               | 86.0                      | 76.7                              | 81.8                            | —                                   |
| Sarun                     | Hazaribagh             | ...                     | 27.633                          | 29.635                     | +0.038               | W                     | 257.0               | 85.4                 | 5th ..                | 71.7                | 2, 4, ..             | 81.4                      | 72.4                              | 77.1                            | -1.0                                |
| Shahabad                  | Lohardugga             | ...                     | 27.507                          | 28.621                     | +0.013               | WSW                   | 179.2               | 84.5                 | 31st July             | 69.0                | 1, 3, ..             | 81.2                      | 71.0                              | 70.1                            | -1.4                                |
| Gya                       | Manbhoom               | ...                     | 28.901                          | —                          | —                    | SSW                   | 66.5                | 90.5                 | 5th Aug.              | 74.2                | 3rd ..               | 87.4                      | 76.1                              | 81.8                            | —                                   |
| Patna                     | Singbhoon              | ...                     | 29.370                          | 29.703                     | +0.036               | SW                    | 58.0                | 92.0                 | 2nd ..                | 76.5                | 3, 5, ..             | 90.5                      | 77.8                              | 84.1                            | -0.9                                |
| South Bhagulpore          | Assam                  | ...                     | 29.537                          | 29.654                     | +0.023               | ESE                   | 158.0               | 89.2                 | 31st July             | 76.3                | 5th ..               | 86.6                      | 78.0                              | 82.3                            | -1.2                                |
| Monghyr                   | Silchar                | ...                     | 29.600                          | 29.705                     | +0.017               | Calm                  | 68.0                | 92.5                 | 1st Aug.              | 75.8                | 2nd ..               | 81.0                      | 76.8                              | 83.2                            | -0.4                                |

**Explanation. — Summary.**—The normal means of air pressure and temperature are the arithmetical average or means of the readings during the same period for the past 30 years. The humidity of the atmosphere is expressed as a percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The number of days in which rain fell is indicated by the number of stations in which it fell. A rainy day is one on which at least hundredth of an inch fell. The district readings in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell. Means for six days.

the week ending Friday, the 5th August 1887.

| DISTRICT OBSERVATIONS. |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Representative station. | DISTRICT.                 | METEOROLOGICAL DIVISION |  |  |  |
|------------------------|--------------|--------------------|--------------|------------|--------------------|--------------|------------|--------------------|--------------|------------|-------------------------------|------------------------------|-------------------------------|-------------------------|---------------------------|-------------------------|--|--|--|
| RAINFALL.              |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               |                         |                           |                         |  |  |  |
| Of week.               |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               |                         |                           |                         |  |  |  |
| Mean for district.     | Normal mean. | Mean for district. | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. | Average number of rainy days. | Normal number of rainy days. | Average number of rainy days. |                         |                           |                         |  |  |  |
| 4.7                    | Nil.         |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               |                         |                           |                         |  |  |  |
| 6.3                    | 1.01         | 0.60               | 2.81         | 11.52      | 14.50              | -2.08        | 19.51      | 24.87              | -5.36        | 2.3        | 4.3                           | 4.3                          | 4.3                           | Gopalpore               | Pooroo                    | ORISSA.                 |  |  |  |
| 7.7                    | 1.80         | 1.25               | 2.30         | 12.77      | 14.33              | -1.56        | 26.83      | 25.87              | +0.96        | 4.2        | 4.0                           | 4.0                          | 4.0                           | Falme Point             | Cuttack                   |                         |  |  |  |
| 6.0                    | 4.26         | 2.77               | 3.38         | 13.53      | 14.70              | -1.26        | 25.73      | 25.03              | +0.70        | 4.0        | 4.4                           | 4.4                          | 4.4                           | Cuttack                 | Balasore                  |                         |  |  |  |
| 8.1                    | 2.37         | 4.58               | 3.27         | 20.00      | 17.45              | +3.54        | 31.05      | 29.57              | +2.08        | 4.0        | 4.7                           | 4.7                          | 4.7                           | Balasore                | South-West Midnapore      |                         |  |  |  |
| 5.7                    | 3.49         | 5.44               | 3.86         | 23.13      | 15.34              | +7.79        | 35.53      | 26.78              | +8.75        | 3.7        | 4.7                           | 4.7                          | 4.7                           | Saugor Island           | South 24-Pergunnahs       |                         |  |  |  |
| 7.0                    | 2.77         | 3.03               | 3.42         | 15.64      | 14.78              | +0.86        | 25.32      | 27.44              | -2.12        | 3.3        | 5.4                           | 5.4                          | 5.4                           | Midnapore               | Midnapore                 |                         |  |  |  |
| 9.1                    | 4.17         | 4.68               | 2.79         | 16.23      | 12.30              | +3.93        | 31.23      | 23.61              | +7.62        | 5.0        | 5.4                           | 5.4                          | 5.4                           | Calcutta                | 24-Pergunnahs...          |                         |  |  |  |
| 7.7                    | 10.12        | 10.45              | 3.04         | 24.20      | 15.88              | +8.41        | 36.07      | 27.58              | +8.49        | 5.8        | 4.5                           | 4.5                          | 4.5                           | Howrah                  | Howrah                    |                         |  |  |  |
| 9.1                    | 6.50         | 42.6               | 3.20         | 16.80      | 15.14              | +1.66        | 30.80      | 27.08              | +3.72        | 4.8        | 5.1                           | 5.1                          | 5.1                           | Hooghly                 | Hooghly                   |                         |  |  |  |
| 10.0                   | 3.74         | 3.10               | 3.37         | 14.88      | 13.37              | +1.51        | 35.72      | 24.09              | +10.73       | 5.0        | 5.0                           | 5.0                          | 5.0                           | Burdwan                 | Burdwan                   |                         |  |  |  |
| 8.3                    | 1.20         | 3.01               | 2.56         | 10.75      | 11.97              | -1.22        | 24.13      | 25.22              | -1.09        | 4.2        | 5.1                           | 5.1                          | 5.1                           | Bankoora                | Bankoora                  |                         |  |  |  |
| 8.7                    | 1.03         | 2.29               | 3.20         | 10.42      | 13.52              | -3.10        | 21.00      | 29.39              | -7.48        | 4.8        | 5.0                           | 5.0                          | 5.0                           | Raneegunge              | Beerbhoom                 |                         |  |  |  |
| 9.4                    | 9.89         | 8.70               | 6.98         | 33.53      | 35.12              | -1.59        | 52.13      | 70.97              | -18.84       | 6.0        | 4.3                           | 4.3                          | 4.3                           | West Burdwan            | West Burdwan              |                         |  |  |  |
| 9.1                    | 2.94         | 4.17               | 4.19         | 20.88      | 21.05              | -0.17        | 31.88      | 41.86              | -12.98       | 4.8        | 4.2                           | 4.2                          | 4.2                           | Berhampore              | Moorshedabad              |                         |  |  |  |
| 7.4                    | 7.91         | 9.06               | 5.40         | 22.63      | 27.17              | -4.64        | 30.24      | 60.44              | -30.20       | 6.5        | 4.2                           | 4.2                          | 4.2                           | Krishnagur              | Nuddea                    |                         |  |  |  |
| 3.0                    | 1.56         | 1.89               | 3.61         | 9.12       | 14.06              | -4.94        | 21.50      | 31.20              | -9.70        | 5.0        | 5.0                           | 5.0                          | 5.0                           | Jessore                 | Jessore                   |                         |  |  |  |
| 7.6                    | 2.10         | 2.00               | 4.03         | 12.37      | 16.50              | -4.13        | 23.08      | 34.02              | -10.94       | 6.0        | 5.0                           | 5.0                          | 5.0                           | Chittagong              | Chittagong                |                         |  |  |  |
| 7.0                    | 5.15         | 3.53               | 4.40         | 10.39      | 17.32              | -6.93        | 21.18      | 39.08              | -14.90       | 5.2        | 5.8                           | 5.8                          | 5.8                           | Demagiri                | Chittagong Hill Tracts    |                         |  |  |  |
| 8.9                    | 6.08         | 5.21               | 5.13         | 12.66      | 14.07              | -2.31        | 39.47      | 35.05              | +3.53        | 5.2        | 5.8                           | 5.8                          | 5.8                           | Barrisal                | Backergunge               |                         |  |  |  |
| 9.6                    | 6.22         | 3.54               | 2.74         | 11.84      | 14.62              | -2.78        | 40.00      | 31.11              | +8.89        | 5.3        | 5.9                           | 5.9                          | 5.9                           | Noakholly               | Noakholly                 |                         |  |  |  |
| 8.6                    | 4.11         | 3.25               | 2.90         | 11.60      | 12.18              | -0.49        | 27.52      | 27.15              | +0.37        | 5.0        | 4.8                           | 4.8                          | 4.8                           | Furzedpore              | Furzedpore                |                         |  |  |  |
| 5.0                    | 3.68         | 3.34               | 2.85         | 11.45      | 13.07              | -2.52        | 27.95      | 27.11              | +0.84        | 3.5        | 5.4                           | 5.4                          | 5.4                           | Dacca                   | Dacca                     |                         |  |  |  |
| 7.0                    | 2.24         | 2.14               | 3.40         | 8.82       | 14.79              | -5.97        | 30.48      | 29.00              | +1.48        | 5.6        | 4.8                           | 4.8                          | 4.8                           | Commillah               | Tipperah                  |                         |  |  |  |
| 7.1                    | 10.63        | 0.38               | 2.61         | 14.17      | 14.23              | -0.45        | 47.05      | 30.90              | +16.15       | 6.0        | 4.6                           | 4.6                          | 4.6                           | Mymensingh              | Mymensingh                |                         |  |  |  |
| 6.9                    | 8.54         | 5.90               | 2.65         | 13.06      | 13.10              | -0.04        | 57.81      | 43.55              | +14.26       | 4.5        | 4.1                           | 4.1                          | 4.1                           | Bogra                   | Bogra                     |                         |  |  |  |
| 8.0                    | 6.18         | 7.65               | 3.85         | 19.61      | 23.48              | -3.87        | 74.99      | 62.28              | +12.71       | 6.2        | 4.0                           | 4.0                          | 4.0                           | Serajunge               | Pubna                     |                         |  |  |  |
| 8.8                    | 8.95         | 6.83               | 6.55         | 30.59      | 34.70              | -4.19        | 70.82      | 68.90              | +1.92        | 0.5        | 3.9                           | 3.9                          | 3.9                           | Rampore Beaulah         | Rajahahye                 |                         |  |  |  |
| 6.4                    | 2.61         | 1.60               | 2.82         | 7.73       | 16.10              | -8.37        | 36.73      | 29.54              | +7.19        | 4.8        | 4.9                           | 4.9                          | 4.9                           | Maldah                  | Maldah                    |                         |  |  |  |
| 7.0                    | 4.11         | 3.08               | 2.00         | 9.82       | 13.17              | -3.35        | 27.34      | 21.43              | +5.91        | 5.7        | 4.3                           | 4.3                          | 4.3                           | Dinapore                | Dinapore                  |                         |  |  |  |
| 8.6                    | 2.61         | 1.74               | 2.59         | 8.51       | 13.28              | -2.28        | 29.34      | 22.14              | +7.20        | 5.7        | 3.3                           | 3.3                          | 3.3                           | Runkpore                | Runkpore                  |                         |  |  |  |
| 8.6                    | 4.95         | 4.35               | 2.16         | 11.21      | 13.86              | -5.35        | 23.59      | 23.06              | +0.53        | 5.0        | 4.0                           | 4.0                          | 4.0                           | Julpigoree              | Julpigoree                |                         |  |  |  |
| 8.6                    | 4.35         |                    |              |            | 14.27              | -3.06        | 22.10      | 21.60              | +0.50        | 5.3        | 5.8                           | 5.8                          | 5.8                           | Cooch Behar             | Cooch Behar               |                         |  |  |  |
| 9.7                    | 3.27         | 5.42               | 2.67         | 12.15      | 13.78              | -1.61        | 21.72      | 19.64              | +2.08        | 6.0        | 3.8                           | 3.8                          | 3.8                           | Darjeeling              | Darjeeling Hill Districts |                         |  |  |  |
| 9.6                    | 3.84         |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Purneah                 | Purneah                   |                         |  |  |  |
| 9.3                    | 2.11         | 4.08               | 2.95         | 13.75      | 14.35              | -0.60        | 23.61      | 21.05              | +2.56        | 5.8        | 3.8                           | 3.8                          | 3.8                           | Purneah                 | North Bhagulpore          |                         |  |  |  |
| 9.9                    | 4.82         | 4.64               | 2.55         | 11.81      | 13.87              | -2.06        | 24.74      | 21.34              | +3.50        | 6.0        | 3.5                           | 3.5                          | 3.5                           | Mozufferpore            | Mozufferpore              |                         |  |  |  |
| 6.4                    | 1.70         | 4.07               | 2.79         | 13.10      | 13.54              | -0.44        | 27.45      | 21.78              | +5.69        | 4.2        | 3.6                           | 3.6                          | 3.6                           | Durbhunga               | Durbhunga                 |                         |  |  |  |
| 8.7                    | 4.06         | 5.03               | 2.70         | 16.33      | 12.80              | +3.53        | 34.43      | 25.87              | +8.56        | 6.0        | 2.8                           | 2.8                          | 2.8                           | Motilhari               | Chumparan                 |                         |  |  |  |
| 9.0                    | 4.91         | 4.68               | 3.34         | 15.84      | 16.05              | -0.21        | 27.57      | 26.89              | +0.68        | 5.2        | 3.3                           | 3.3                          | 3.3                           | Chupra                  | Sarun                     |                         |  |  |  |
| 9.7                    | 5.40         | 4.68               | 3.57         | 16.17      | 15.39              | +0.78        | 28.90      | 24.48              | +4.42        | 5.3        | 4.1                           | 4.1                          | 4.1                           | Dehree                  | Shahabad                  |                         |  |  |  |
| 9.3                    | 2.70         | 3.31               | 3.76         | 16.90      | 17.54              | -0.65        | 32.12      | 28.13              | +3.99        | 6.0        | 4.1                           | 4.1                          | 4.1                           | Paxar                   | Arrah                     |                         |  |  |  |
| 8.0                    | 3.39         |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Gya                     | Gya                       |                         |  |  |  |
| 7.5                    | 4.79         |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Bankipore               | Patna                     |                         |  |  |  |
| 9.1                    | 4.78         |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Bhagulpore              | South Bhagulpore          |                         |  |  |  |
|                        |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               |                         | Monghyr                   |                         |  |  |  |
|                        |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Doomka                  | Sonthal Pergunnahs        |                         |  |  |  |
|                        |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Hazaribagh              | Hazaribagh                |                         |  |  |  |
|                        |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Ranchee                 | Lohardugga                |                         |  |  |  |
|                        |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               |                         | Manbhoom                  |                         |  |  |  |
|                        |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Chyebnass               | Singbhoom                 |                         |  |  |  |
|                        |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Sibangar                |                           |                         |  |  |  |
|                        |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Dhubri*                 | Assam                     |                         |  |  |  |
|                        |              |                    |              |            |                    |              |            |                    |              |            |                               |                              |                               | Slichar                 |                           |                         |  |  |  |

variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater. and amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall, the normal means of the district are the numerical averages of the rainfall returns received in the district, i.e., from the total rainfall at the sub-division







**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVA-  
TIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
5TH OF AUGUST 1887.**

At the close of the previous week, a small cyclonic storm, which had formed at the head of the Bay, had advanced inland through South-West Bengal, and had filled up and disappeared near Sutna on the 28th. In the rear of the storm a very strong monsoon current set in from the Bay of Bengal, and on the 30th, the first day of the present week, conditions were decidedly favourable for general rainfall in Bengal. The strength of the monsoon current blowing at the head of the Bay may be inferred from the velocity of the wind as registered at Saugor Island, and on the 30th wind velocity was 23 miles an hour; on the 31st it was 21 miles an hour, on 1st August it had fallen to 12 miles, but on the 2nd it rose to 30 miles an hour, thus showing that a very strong monsoon current was passing over the province. Practically speaking, a strong monsoon has been blowing over the province for the whole of the week, and the only change in these meteorological conditions which has to be registered is the alternate preponderance of one or other of the two branches of the monsoon current. At the commencement of the week the westerly element in the wind directions, that is, the Bombay current derived from the Arabian Sea, was gradually strengthening, and this continued on the 30th and 31st of July. On 1st August, however, the south-easterly and easterly winds from the Bay of Bengal commenced to increase in strength, and gradually drove back the westerly winds, and at the point where the two currents met, there was a slight, but distinct, cyclonic circulation set up, which continued on the 2nd. On the 3rd of August the Bombay current again strengthened, and drove back the easterly winds, and this continued up till the close of the week. Owing to the interaction of these two wind currents, conditions generally have been decidedly favourable to rainfall over the whole province, and practically the whole of the Province of Bengal has received a rainfall in excess of the normal. The week has thus been characterised by very simple meteorological conditions, and for almost the first time during the present monsoon season, conditions have been nearly normal for general rainfall, and the province has been free from such abnormal conditions as the formation and passage of barometric depressions.

*Pressure.*—The changes of pressure, which have occurred during the present week, are of small importance. They have consisted merely of the usual oscillating movements which always occur even when the atmosphere is in a normal condition, and thus on the 30th of July pressure was rising slowly, and on 31st July and 1st August the rise was succeeded by a slow fall. Pressure again increased on the 2nd and fell on the 3rd and 4th, and on the 5th it was again rising. These changes have therefore not produced any very material alteration in the pressure distribution, and pressure has been above the normal by small amounts in all districts, the general excess being about 0.03" to 0.05". The largest excess pressures are, however, recorded usually in Orissa and South-West Bengal, and at False Point the average excess for the week equals 0.069" and at Calcutta 0.057". In Assam pressure has been above the normal by amounts which average about 0.02" to 0.03".

*Temperature.*—The variations of temperature from day to day have been of comparatively little importance; but owing to the heaviness of the rainfall, temperature has generally been decidedly lower than the normal in most districts. The only district where this has not been the case is Orissa, which shows a temperature no less than 1.4° in excess of the normal, but in this district rainfall has been comparatively light during the week. In all other districts temperature has been below the normal by amounts varying from 0.2° in East Bengal to 1.5° in Behar. The mean temperature of the whole Province of Bengal for the week has been 0.7° in defect of the normal. In Assam also temperature has been in defect of the normal by 0.8°.

*Rainfall.*—Has been fairly general throughout the week, and in most districts falls have occurred on from five to six days out of the seven. South-West Bengal, however, has only received rain on an average of 4.4 days, and in Orissa the number of rainy days has only been three. The falls which have been received have also been heavy: thus in North Bengal the average fall is about five and a half inches; in East Bengal it has exceeded five inches, and in South-West Bengal, South Behar, and Chutia Nagpur the falls have averaged between 4 and 5 inches. In North Behar the fall has been rather less than three inches, and in Orissa it has been less than one-and-a-half inches. Expressed as a percentage of the normal fall for the week, the actual average amounts received in each meteorological district become—Orissa 48 per cent., South-West Bengal 136 per cent., East Bengal 121 per cent., North Bengal 182 per cent., North Behar 119 per cent., South Behar 173 per cent., and Chutia Nagpur 130 per cent., or, taking each of these meteorological districts as having an equal value in the calculation, the actual fall over the whole province during the week has equalled 130 per cent. of the normal for the period.

Taking up the rainfall rather more in detail, the following districts have received extremely large excess falls during the week:—in South-West Bengal, Bankaorah, Baidwan and Ranigunge; in North Bengal, Dinagapore, Rungpore, and Julpigoree; in Behar, Chupra, Buxar, Dêhree, Gya, Bankipore, Bhagnulpore and Nya Doonka; and in Chutia Nagpur, Lohardugga and Hazaribagh. On the other hand the following districts have received comparatively small falls:—Pooree, Cuttack, Furreedpore, Dacca, Maldah and Motihari.

In Assam the following amounts of rain have been received during the week :—Sibsagar 3·9 inches, Dhubri 4·79 inches, and Silchar 4·78 inches.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 5th of August 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          | RAINFALL.       |            |                         |                                |            |                    |                |                      |                 |  |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|--------------------|----------------|----------------------|-----------------|--|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of July. |                | Since 15th May 1887. |                 |  |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Aver g'.           | Normal average | Average.             | Normal average. |  |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                    |                |                      |                 |  |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                    |                |                      |                 |  |
| Orissa                       | 91·0                          | 76·3                         | 89·0                    | 79·3                   | 84·1                  | +1·4   | 1·28†    | 2·87            | -1·61†     | 3·0†                    | 4·2                            | -1·3†      | 11·73†             | 14·98          | 24·14†               | 25·91           |  |
| South-West Bengal            | 91·8                          | 74·1                         | 87·7                    | 78·1                   | 82·9                  | -0·5   | 4·43     | 3·26            | +1·17      | 4·4                     | 4·3                            | -0·4       | 10·18              | 14·36          | 29·23                | 26·83           |  |
| East Bengal                  | 89·5                          | 74·5                         | 85·7                    | 77·3                   | 81·5                  | -0·2   | 4·05     | 4·22            | -0·17      | 5·6                     | 5·3                            | +0·3       | 15·32              | 19·29          | 31·73                | 42·23           |  |
| North Bengal                 | 83·9                          | 66·7†                        | 88·0                    | 70·2                   | 82·1                  | -1·5   | 5·47     | 3·00            | +2·47      | 5·5                     | 4·0                            | +1·5       | 14·09              | 16·46          | 40·23                | 38·78           |  |
| North Behar                  | 95·5                          | 75·6                         | 88·1                    | 77·9                   | 83·0                  | -1·5   | 2·90     | 2·44            | +0·46      | 5·3                     | 5·5                            | +1·8       | 9·60               | 14·40          | 29·31                | 24·35           |  |
| South Behar                  | 91·4                          | 74·8                         | 80·6                    | 77·7                   | 82·3                  | -1·3   | 4·69     | 2·71            | +1·98      | 5·6                     | 4·1                            | +1·5       | 13·74              | 14·06          | 26·45                | 22·18           |  |
| Chota Nagpur                 | 85·4*                         | 69·9*                        | 81·5*                   | 71·7*                  | 79·6*                 | -1·2*  | 4·52     | 3·47            | +1·05      | 5·2                     | 5·3                            | -0·1       | 15·27              | 15·93          | 27·28                | 25·54           |  |
| Assam                        | 82·0                          | 75·8                         | 88·9                    | 77·5                   | 83·2                  | -0·8   |          |                 |            |                         |                                |            |                    |                |                      |                 |  |

\* Chhébassa not included.  
† Average of three stations.

METEOROLOGICAL OFFICE, BENGAL :  
The 9th August, 1887.

A. PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal.



Abstract of the results of the Thermometric Observations taken at the Meteorological Office, Chowringhee, in the month of July 1887.

|   |     |     |       |         |
|---|-----|-----|-------|---------|
| The mean temperature during the month                         | ... | ... | 82.3  | Date.   |
| The highest temperature during the month                      | ... | ... | 93.4  | 1st     |
| The lowest temperature during the month                       | ... | ... | 76.0  | 10th    |
| The range of temperature during the month                     | ... | ... | 17.4  |         |
| The mean daily range of temperature during the month          | ... | ... | 10.9  |         |
| The greatest range of temperature in one day during the month | ... | ... | 14.6  | 16th    |
|   |     |     |       | %       |
| The mean humidity during the month                            | ... | ... | 90    |         |
|   |     |     |       | Inches. |
| The mean vapour tension during the month                      | ... | ... | .980  |         |
| The total rainfall of the month                               | ... | ... | 18.39 |         |
| The greatest fall in 24 hours                                 | ... | ... | 5.93  | 10th    |
| The number of rainy days in the month                         | ... | ... | 26    | days    |

A. PEDLER,

For Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA ;

Calcutta, the 8th August 1887.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 31st July to 6th August 1887.

| MONTH. | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRI.     |            |           | Rain.   |
|--------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|        |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.  |       |              |          |        |          |                | Inches.         |            | %         | Inches. |
| July   | 31st  | 82.8         | 92.0     | 12.2   | 79.8     | 80.7           | 1.021           | 79.9       | 91        | 0.16    |
| August | 1st   | 79.2         | 81.6     | 3.8    | 77.8     | 77.9           | .940            | 77.3       | 94        | 2.54    |
| "      | 2nd   | 81.3         | 87.8     | 11.5   | 76.3     | 78.7           | .948            | 77.6       | 89        | 0.10    |
| "      | 3rd   | 83.0         | 89.8     | 12.0   | 77.8     | 79.5           | .962            | 78.1       | 85        | 0.32    |
| "      | 4th   | 84.2         | 90.5     | 10.6   | 79.9     | 80.0           | .969            | 78.3       | 82        | ...     |
| "      | 5th   | 83.3         | 91.2     | 11.4   | 79.8     | 80.7           | 1.015           | 79.7       | 89        | 0.02    |
| "      | 6th   | 81.2         | 91.6     | 12.9   | 78.7     | 79.7           | .996            | 79.1       | 93        | 0.45    |

The mean temperature of the seven days

The extreme variation of temperature

The maximum temperature

The mean relative humidity

The total fall of rain from 31st July to 6th August 1887

The mean temperature and humidity are obtained by applying to the mean of the 10th, 16th, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ;

The 8th August 1887.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

## MEMORANDUM.

THE number of deaths recorded during the month of March 1887, in the districts of Bengal under registration, amounted to 105,767 among a population of 66,163,884, yielding a death-rate of 19.08 per 1,000, as opposed to 18.36 per 1,000 during the preceding month, and 18.48 per 1,000 during the corresponding month of the past year.

2. The following districts returned the highest proportions of deaths:—

| Districts.  | Ratio per mille. | Districts. | Ratio per mille. |
|-------------|------------------|------------|------------------|
| Backergunge | 39.00            | Rungpore   | 27.96            |
| Puri        | 35.40            | Birbhum    | 27.36            |
| Jalpaiguri  | 33.84            | Balasore   | 25.80            |
| Dinajpur    | 29.64            |            |                  |

3. In comparison with the mortality during the corresponding month of the preceding year, the death-rates from small-pox, fever and the maladies coming under the head of "Other Causes" presented no noticeable differences, and those from cholera, bowel-complaints and injury were stationary.

|                  |     |     |     | Ratio per mille during— |             |
|------------------|-----|-----|-----|-------------------------|-------------|
|                  |     |     |     | March 1887.             | March 1886. |
| Cholera          | ... | ... | ... | 1.56                    | 1.56        |
| Small-pox        | ... | ... | ... | .08                     | .10         |
| Fever            | ... | ... | ... | 13.56                   | 13.44       |
| Bowel-complaints | ... | ... | ... | .72                     | .72         |
| Injury           | ... | ... | ... | .31                     | .24         |
| Other causes     | ... | ... | ... | 2.76                    | 2.28        |

4. The undermentioned districts suffered pre-eminently from cholera, fever and the maladies classed under the head of "Other causes," the rest of the diseases (indicated in the above table) manifesting no noticeable exacerbations.

| Cholera.      | Ratio per mille. | Fever.     | Ratio per mille. | Other Causes. | Ratio per mille. |
|---------------|------------------|------------|------------------|---------------|------------------|
| Backergunge   | 13.80            | Jalpaiguri | 30.12            | Puri          | 18.36            |
| Puri          | 7.44             | Dinajpur   | 27.84            |               |                  |
| 24-Pergunnahs | 5.64             | Rungpore   | 26.28            |               |                  |
| Balasore      | 5.64             | Rajshahye  | 21.96            |               |                  |
| Khulna        | 3.72             | Pubna      | 21.48            |               |                  |
| Tipperah      | 2.52             |            |                  |               |                  |
| Cuttack       | 2.52             |            |                  |               |                  |
| Maldah        | 2.40             |            |                  |               |                  |
| Howrah        | 2.28             |            |                  |               |                  |
| Murshidabad   | 2.28             |            |                  |               |                  |

5. In relation to Sex, Class and Age, the death-rates during the month under notice stood as follows:—

## According to Sex.

|   | Ratio per mille. |
|---|------------------|
| Males   | 21.24            |
| Females   | 17.04            |
| Ratio of male deaths to every 100 female deaths | 122              |

## According to Class.

|               | Ratio per mille. |
|---------------|------------------|
| Christians    | 14.76            |
| Hindus        | 18.60            |
| Mahomedans    | 20.28            |
| Budhists      | 15.00            |
| Other classes | 18.60            |

## According to Age.

|                      | Ratio per mille. |
|----------------------|------------------|
| Under 1 year         | 118.80           |
| 1 and under 5 years  | 18.84            |
| 5 " " 10 "           | 8.64             |
| 10 " " 15 "          | 7.92             |
| 15 " " 20 "          | 12.24            |
| 20 " " 30 "          | 18.20            |
| 30 " " 40 "          | 15.96            |
| 40 " " 50 "          | 20.76            |
| 50 " " 60 "          | 30.00            |
| 60 years and upwards | 47.52            |

The 8th August 1887.

R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

**MORTALITY ACCORDING TO--**

| DIVISIONS.                        |            | DISTRICTS. |          | POPULATION. |          | DEATHS FROM— |        |                   |         |                 |             |          |            |        |                   | DISEASE. |                 |             |  |  |        |          |        |          |        | RATIO PER 1,000 OF POPULATION PER ANNUM. |        | COMPARISON WITH PREVIOUS PERIOD. |        | DEATHS AMONG— |       | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | Ratio of male deaths to every 100 female deaths. |  |
|-----------------------------------|------------|------------|----------|-------------|----------|--------------|--------|-------------------|---------|-----------------|-------------|----------|------------|--------|-------------------|----------|-----------------|-------------|--|--|--------|----------|--------|----------|--------|--|--------|----------------------------------|--------|---------------|-------|--|--|--|--|
|                                   |            | Males.     | Females. | Total.      | Cholera. | Small-pox.   | Fever. | Bowel-complaints. | Injury. | Other diseases. | All causes. | Cholera. | Small-pox. | Fever. | Bowel-complaints. | Injury.  | Other diseases. | All causes. | Ratio of deaths per 1,000 of population in the previous month. | Ratio of deaths per 1,000 of population in the corresponding month of the previous year. | Males. | Females. | Males. | Females. | Males. | Females.                                 | Males. | Females.                         | Males. | Females.      |       |  |  |  |  |
| HYDRABAD                          | Bardwan    | 668,905    | 729,558  | 1,398,463   | 96       | 1,768        | 5      | 1,763             | 96      | 185             | 16          | 1,255    | 1,835      | 1,685  | 1,685             | 1,685    | 1,685           | 1,685       | 1,685  | 1,685  | 1,685  | 1,685    | 1,685  | 1,685    | 1,685  | 1,685                                    | 1,685  | 1,685                            | 1,685  | 1,685         |       |  |  |  |  |
|                                   | Bankura    | 167,130    | 234,616  | 401,746     | 41       | 1,135        | 1      | 1,135             | 46      | 10              | 22          | 415      | 1,045      | 1,045  | 1,045             | 1,045    | 1,045           | 1,045       | 1,045  | 1,045  | 1,045  | 1,045    | 1,045  | 1,045    | 1,045  | 1,045                                    | 1,045  | 1,045                            | 1,045  | 1,045         |       |  |  |  |  |
|                                   | Birbhum    | 881,673    | 412,668  | 1,294,341   | 50       | 1,135        | 1      | 1,135             | 46      | 10              | 22          | 415      | 1,045      | 1,045  | 1,045             | 1,045    | 1,045           | 1,045       | 1,045  | 1,045  | 1,045  | 1,045    | 1,045  | 1,045    | 1,045  | 1,045                                    | 1,045  | 1,045                            | 1,045  | 1,045         | 1,045 |  |  |  |  |
|                                   | Bidarpur   | 1,245,995  | 347,895  | 1,593,890   | 87       | 1,135        | 1      | 1,135             | 46      | 10              | 22          | 415      | 1,045      | 1,045  | 1,045             | 1,045    | 1,045           | 1,045       | 1,045  | 1,045  | 1,045  | 1,045    | 1,045  | 1,045    | 1,045  | 1,045                                    | 1,045  | 1,045                            | 1,045  | 1,045         | 1,045 |  |  |  |  |
|                                   | See-mopore | 174,266    | 177,559  | 351,825     | 62       | 827          | 1      | 827               | 69      | 110             | 110         | 827      | 1,045      | 1,045  | 1,045             | 1,045    | 1,045           | 1,045       | 1,045  | 1,045  | 1,045  | 1,045    | 1,045  | 1,045    | 1,045  | 1,045                                    | 1,045  | 1,045                            | 1,045  | 1,045         | 1,045 |  |  |  |  |
| Total (Hydri including Serampore) |            | 480,031    | 624,674  | 1,104,705   | 199      | 1,255        | 185    | 1,255             | 185     | 16              | 16          | 1,255    | 1,835      | 1,685  | 1,685             | 1,685    | 1,685           | 1,685       | 1,685  | 1,685  | 1,685  | 1,685    | 1,685  | 1,685    | 1,685  | 1,685                                    | 1,685  | 1,685                            | 1,685  | 1,685         |       |  |  |  |  |
| MADRAS                            | Hydrabad   | 316,470    | 818,502  | 1,134,972   | 122      | 415          | 22     | 415               | 22      | 22              | 22          | 415      | 1,045      | 1,045  | 1,045             | 1,045    | 1,045           | 1,045       | 1,045  | 1,045  | 1,045  | 1,045    | 1,045  | 1,045    | 1,045  | 1,045                                    | 1,045  | 1,045                            | 1,045  | 1,045         |       |  |  |  |  |
|                                   | Hydrabad   | 805,779    | 449,642  | 1,255,421   | 97       | 1,135        | 24     | 1,135             | 24      | 70              | 70          | 415      | 1,045      | 1,045  | 1,045             | 1,045    | 1,045           | 1,045       | 1,045  | 1,045  | 1,045  | 1,045    | 1,045  | 1,045    | 1,045  | 1,045                                    | 1,045  | 1,045                            | 1,045  | 1,045         |       |  |  |  |  |
|                                   | Hydrabad   | 881,673    | 412,668  | 1,294,341   | 50       | 1,135        | 1      | 1,135             | 46      | 10              | 22          | 415      | 1,045      | 1,045  | 1,045             | 1,045    | 1,045           | 1,045       | 1,045  | 1,045  | 1,045  | 1,045    | 1,045  | 1,045    | 1,045  | 1,045                                    | 1,045  | 1,045                            | 1,045  | 1,045         | 1,045 |  |  |  |  |
|                                   | Hydrabad   | 1,245,995  | 347,895  | 1,593,890   | 87       | 1,135        | 1      | 1,135             | 46      | 10              | 22          | 415      | 1,045      | 1,045  | 1,045             | 1,045    | 1,045           | 1,045       | 1,045  | 1,045  | 1,045  | 1,045    | 1,045  | 1,045    | 1,045  | 1,045                                    | 1,045  | 1,045                            | 1,045  | 1,045         | 1,045 |  |  |  |  |
|                                   | Hydrabad   | 174,266    | 177,559  | 351,825     | 62       | 827          |        |                   |         |                 |             |          |            |        |                   |          |                 |             |  |  |        |          |        |          |        |  |        |                                  |        |               |       |  |  |  |  |



MEMORANDUM.

THE returns from the principal Municipalities in Bengal, for the week ending 23rd July 1887, disclose the following results:—

1. That the birth-rate in these Municipalities stood at 16·5 per 1,000 of population, against the same proportion in the preceding week ending 16th July, and the death-rate at 29·2 against 28 per 1,000, indicating improvement in the registration of the events.

2. That the highest proportion of births was returned from the Comillah Municipality, viz., at the rate of 38·5 per 1,000 of population, and of deaths from the following Municipalities:—

| Deaths. |     |                  | Deaths.             |     |                  |
|---------|-----|------------------|---------------------|-----|------------------|
|         |     | Ratio per mille. |                     |     | Ratio per mille. |
| Puri    | ... | 79·7             | Bhagulpore          | ... | 42·5             |
| Gya     | ... | 77·2             | Patna               | ... | 38·2             |
| Arrah   | ... | 68·2             | Suburbs of Calcutta | ... | 32·9             |

3. That, as compared with the results of the preceding week, there was a noticeable enhancement of mortality from fever, and only fractional differences in the casualty-rates from the rest of the death-causes, injury presenting no variation:—

| Ratio per mille during the weeks ending— |     |     |                 |                 |  |
|--|-----|-----|-----------------|-----------------|--|
|  |     |     | 23rd July 1887. | 16th July 1887. |  |
| Cholera                                  | ... | ... | 7·4             | 7·1             |  |
| Small-pox                                | ... | ... | ·1              | ·2              |  |
| Fever                                    | ... | ... | 10·3            | 8·9             |  |
| Bowel-complaints                         | ... | ... | 3·5             | 3·3             |  |
| Injury                                   | ... | ... | ·3              | ·3              |  |
| Other causes                             | ... | ... | 7·5             | 8·1             |  |

4. That the following Municipalities returned conspicuously high mortality from cholera and the maladies coming under the head of "Other causes," and no Municipality exhibited any noticeably high suffering from the other diseases mentioned in the foregoing table, excepting Puri, where 14·7 per 1,000 of the population died from bowel-complaints:—

| Cholera.            |     |                  | Other causes. |     |                  |
|---------------------|-----|------------------|---------------|-----|------------------|
|                     |     | Ratio per mille. |               |     | Ratio per mille. |
| Puri                | ... | 44·1             | Gya           | ... | 26·0             |
| Arrah               | ... | 41·9             | Bhagulpore    | ... | 16·2             |
| Gya                 | ... | 28·7             |               |     |                  |
| Bhagulpore          | ... | 12·7             |               |     |                  |
| Patna               | ... | 11·0             |               |     |                  |
| Chupra              | ... | 10·7             |               |     |                  |
| Suburbs of Calcutta | ... | 4·8              |               |     |                  |

5. That the mortality referable to Sex, Class and Age, stood as follows:—

| According to Sex.                               |                  | According to Class. |                  | According to Age.    |                  |
|---|------------------|---------------------|------------------|----------------------|------------------|
|   | Ratio per mille. |                     | Ratio per mille. |                      | Ratio per mille. |
| Males   | 28·2             | Christians          | 43·5             | Under 1 year         | 195·5            |
| Females   | 30·3             | Hindus              | 31·0             | 1 and under 5 years  | 58·8             |
| Ratio of male deaths to every 100 female deaths | 105              | Mahomedans          | 24·8             | 5 " " 10 "           | 19·0             |
|   |                  |                     |                  | 10 " " 15 "          | 13·1             |
|   |                  |                     |                  | 15 " " 20 "          | 21·9             |
|   |                  |                     |                  | 20 " " 30 "          | 14·2             |
|   |                  |                     |                  | 30 " " 40 "          | 15·5             |
|   |                  |                     |                  | 40 " " 50 "          | 17·8             |
|   |                  |                     |                  | 50 " " 60 "          | 34·4             |
|   |                  |                     |                  | 60 years and upwards | 80·8             |

R. LIDDERDALE, M.D., Deputy Surgeon-General,

The 8th August 1887.

Sanitary Commissioner for Bengal.

| DISTRICTS. |   | NAMES OF MUNICIPALITIES. |   | POPULATION. |   |   | BIRTHS. |   |    | MORTALITY ACCORDING TO— |    |            |          |        |  |              |            |        |                   | Ratio of male deaths to every 100 female deaths. |         |  |             |          |            |   |        |                   |         |                 |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| 1          | 2 | 3                        | 4 | 5           | 6 | 7 | 8       | 9 | 10 | 11                      | 12 | Disease.   |          |        |  |              |            |        |                   |  |         |  |             |          |            |   |        |                   |         |                 |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |   |                          |   |             |   |   |         |   |    |                         |    | NUMBER OF— |          |        | Ratio of male births to every 100 female births. | DEATHS FROM— |            |        |                   |  |         | RATIO PER 1,000 OF POPULATION PER ANNUM. |             |          |            | Ratio of deaths per 1,000 of population per annum in the previous week. | SEX.   |                   |         |                 |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |   |                          |   |             |   |   |         |   |    |                         |    | Males.     | Females. | Total. |  | Cholera.     | Small-pox. | Fever. | Bowel-complaints. |  | Injury. | Other diseases.                          | All causes. | Typhoid. | Small-pox. |   | Fever. | Bowel-complaints. | Injury. | Other diseases. | All causes. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |   |                          |   |             |   |   |         |   |    |                         |    |            |          |        |  |              |            |        |                   |  |         |  |             |          |            |   |        |                   |         |                 |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

## CALCUTTA AND EASTERN CANALS.

Statement showing Quantities of Goods carried during the month of June 1887.

| Number of<br>boats or<br>rafts.                       | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |                       |                          |   | PRIVATE.                 |           | REMARKS.                    |
|---|--------------------------------------|-------------------------------|-----------------------|--------------------------|---|--------------------------|-----------|-----------------------------|
|   |                                      | Quantity—Tons.                |                       |                          | Value.  | Quantity.                | Value.    |                             |
|   |                                      | Up.                           | Down.                 | Total.                   | Rupees.   | Tons.                    | Rupees.   |                             |
| 437   | 1. Grain ...                         | 7,050                         | 7                     | 7,057                    | 4,51,082  | 7,057                    | 4,51,082  | * For detail see next page. |
| 1   | 2. Cotton ...                        | 3                             | .....                 | 3                        | 1,600   | 3                        | 1,600     |                             |
| 94  | 3. Oilseeds ...                      | 1,463                         | 24                    | 1,487                    | 1,31,800  | 1,487                    | 1,31,800  |                             |
| 270   | 4. Salt ...                          | 661                           | 3,652                 | 4,313                    | 3,62,295  | 4,313                    | 3,62,295  |                             |
| .....   | 5. Piece-goods ...                   | .....                         | .....                 | .....                    | .....   | .....                    | .....     |                             |
| 4   | 6. Metal ...                         | 7                             | 14                    | 21                       | 6,740   | 21                       | 6,740     |                             |
| 84  | 7. Building materials ...            | 3,544                         | 151                   | 3,695                    | 66,426  | 3,695                    | 66,426    |                             |
| 1,116   | 8. Miscellaneous* ...                | 5,747                         | 94                    | 5,841                    | 10,12,409   | 5,841                    | 10,12,409 |                             |
| 433   | 9. Fuel ...                          | 9,416                         | 121                   | 9,537                    | 84,618  | 9,537                    | 84,618    |                             |
| .....   | 10. Timber ...                       | .....                         | .....                 | .....                    | .....   | .....                    | .....     |                             |
| 9 rafts   | 11. Bamboos ...                      | 1,600 No.                     | .....                 | 1,600 No.                | 200   | 1,600 No.                | 200       |                             |
| 2,439 &<br>9 rafts                                    | 12. Total ...                        | 27,891 &<br>1,600 No.         | 4,063                 | 31,954 &<br>1,600 No.    | 21,17,170   | 31,954 &<br>1,600 No.    | 21,17,170 |                             |
| 2,085 &<br>16 rafts                                   | 13. Total of same<br>month last year | 25,592<br>&<br>3,300 No.      | 3,759<br>&<br>150 No. | 29,351<br>&<br>3,450 No. | 50,28,551   | 29,351<br>&<br>3,450 No. | 50,28,551 |                             |
|   |                                      | Up.                           | Down.                 | Total.                   |   |                          | Rs. A.    |                             |
| 14. Total number of boats plying<br>cargo ... No.     |                                      | 2,168                         | 271                   | 2,439                    | Total tollage of month—<br>24 + 25 + 26 ...               |                          | 19,760 4  |                             |
| 14a. Ditto empty ditto ...                            |                                      | .....                         | .....                 | 1,657                    | Total tollage of same month<br>last year ...              |                          | 17,728 5  |                             |
| 15. Total number of boats plying<br>passenger ... No. |                                      | 236                           | 5                     | 241                      |   |                          |           |                             |
| 16. Total registered tonnage,<br>cargo ...            |                                      | 87,133                        | 10,258                | 97,391                   | Memorandum of Tollage.                                    |                          |           |                             |
| 17. Total registered tonnage,<br>passenger ...        |                                      | 15,375                        | 675                   | 16,050                   |   |                          |           |                             |
| 18. Ton-mileage ...                                   |                                      | .....                         | .....                 | .....                    |   |                          |           |                             |
| 19. Estimated value of cargo Rs.                      |                                      | 17,91,574                     | 3,25,396              | 21,16,970                | 1. Balance not recovered on<br>the 1st of the month       |                          | 395 4     |                             |
| 20. Number of passengers ...                          |                                      | 912                           | 48                    | 960                      | 2. Tollage per month ..                                   |                          | 19,760 4  |                             |
| 21. Rafts, bamboos c. ft.                             |                                      | 1,600                         | .....                 | 1,600                    | 3. Total ...  |                          | 20,155 9  |                             |
| 22. Do., bullahs ..                                   |                                      | .....                         | .....                 | .....                    |   |                          |           |                             |
| 23. Estimated value of rafts ...                      |                                      | 200                           | .....                 | 200                      | 4. Amount paid into trea-<br>sury during the<br>month ... |                          | 19,717 0  |                             |
| 24. Tollage on boats Rs.                              |                                      | 17,240-6 6                    | 2,513-4-0             | 19,753-10-6              | 5. Balance due at the end<br>of the month ...             |                          | 438 8     |                             |
| 25. Compounded tollage on<br>boats Rs.                |                                      | .....                         | .....                 | .....                    |   |                          |           |                             |
| 26. Tollage on rafts ..                               |                                      | 6-10-0                        | .....                 | 6-10-0                   |   |                          |           |                             |
| 27. Total tollage on boats per<br>ton-mile ...        |                                      | .....                         | .....                 | .....                    |   |                          |           |                             |
| 28. Total tollage on rafts per<br>100 cubic feet ...  |                                      | .....                         | .....                 | .....                    |   |                          |           |                             |



## ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).

## CALCUTTA AND EASTERN CANALS.

| DESCRIPTION.           | TOTAL GOVERNMENT AND PRIVATE. |       |        |           | PRIVATE.  |           | REMARKS. |
|------------------------|-------------------------------|-------|--------|-----------|-----------|-----------|----------|
|                        | Quantity—Tons.                |       |        | Value.    | Quantity. | Value.    |          |
|                        | Up.                           | Down. | Total. | Rupees.   | Tons.     | Rupees.   |          |
| (a) Jute ...           | 1,264                         | ..... | 1,264  | 1,23,900  | 1,264     | 1,23,900  |          |
| (b) Jaggery ...        | 520                           | ..... | 520    | 65,587    | 520       | 65,587    |          |
| (c) Sugar ..           | 38                            | ..... | 38     | 8,480     | 38        | 8,480     |          |
| (d) Tobacco ...        | 11                            | 1     | 12     | 3,350     | 12        | 3,350     |          |
| (e) Fish ...           | 63                            | 1     | 64     | 1,17,844  | 64        | 1,17,844  |          |
| (f) Hides ...          | 3                             | ..... | 3      | 1,610     | 3         | 1,610     |          |
| (g) Poultry ...        | 16                            | ..... | 16     | 14,525    | 16        | 14,525    |          |
| (h) Hay and straw ...  | 447                           | ..... | 447    | 9,396     | 447       | 9,396     |          |
| (j) Oils ...           | 49                            | 24    | 73     | 10,200    | 73        | 10,200    |          |
| (k) Earthenware ...    | 24                            | ..... | 24     | 336       | 24        | 336       |          |
| m) Other miscellaneous | 3,312                         | 68    | 3,380  | 6,57,181  | 3,380     | 6,57,181  |          |
| Total Miscellaneous... | 5,747                         | 94    | 5,841  | 10,12,409 | 5,841     | 10,12,409 |          |

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

## TOLLY'S NULLAH.

Statement showing Quantities of Goods carried during the month of June 1887.

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |              |                  | PRIVATE. |                  | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|--------------|------------------|----------|------------------|----------|
|                           |                                   | Quantity—Tons.                |              |                  | Value.   | Quantity.        |          |
|                           |                                   | Up.                           | Down.        | Total.           | Rupees.  | Tons.            |          |
| 1,278                     | 1. Grain ...                      | 5,767                         | 20           | 5,787            | 3,79,176 | 5,787            | 3,79,176 |
| 3                         | 2. Cotton ...                     | 8                             | .....        | 8                | 4,700    | 8                | 4,700    |
| 12                        | 3. Oilseeds ...                   | 94                            | 23           | 117              | 10,530   | 117              | 10,530   |
| 69                        | 4. Salt ...                       | 499                           | 371          | 870              | 73,065   | 870              | 73,065   |
| .....                     | 5. Piece-goods ...                | .....                         | .....        | .....            | .....    | .....            | .....    |
| .....                     | 6. Metal ...                      | .....                         | .....        | .....            | .....    | .....            | .....    |
| 402                       | 7. Building materials ...         | 2,518                         | .....        | 2,518            | 18,125   | 2,518            | 18,125   |
| 837                       | 8. Miscellaneous* ...             | 4,021                         | 50           | 4,080            | 4,21,204 | 4,080            | 4,21,204 |
| 173                       | 9. Fuel ...                       | 2,329                         | .....        | 2,329            | 56,937   | 2,329            | 56,937   |
| 1 raft                    | 10. Timber ...                    | .....                         | 30 No.       | 30 No.           | 1,200    | 30 No.           | 1,200    |
| 2 rafts                   | 11. Bamboos ...                   | 70 No.                        | .....        | 70 "             | 9        | 70 "             | 9        |
| 2,794 & 3 rafts           | 12. Total ...                     | 15,236 & 70 No.               | 473 & 30 No. | 15,709 & 100 No. | 9,64,946 | 15,709 & 100 No. | 9,64,946 |
| 2,179 & 8 rafts           | 13. Total of same month last year | 12,962 & 107 No.              | 621          | 13,583 & 107 No. | 6,93,152 | 13,583 107 No.   | 6,93,152 |

\* For detail see next page.

|   | Up.       | Down.    | Total.    |  | Rs. A.   |
|---|-----------|----------|-----------|--|----------|
| 4. Total number of boats plying cargo No.         | 2,736     | 58       | 2,794     | Total tollage of month—<br>24 + 25 + 26 ...          | 8,088 13 |
| 4a. Ditto empty ditto ...                         | .....     | .....    | 968       |  |          |
| 5. Total number of boats plying passenger No.     | 211       | 8        | 219       | Total tollage of same month last year ...            | 6,515 14 |
| 6. Total registered tonnage, cargo ...            | 45,564    | 1,654    | 47,218    |  |          |
| 7. Total registered tonnage, passenger ...        | 17,725    | 675      | 18,400    |  |          |
| 8. Ton-mileage ...                                | .....     | .....    | .....     |  |          |
| 9. Estimated value of cargo Rs.                   | 9,19,212  | 44,525   | 9,63,737  |  |          |
| 10. Number of passengers ...                      | 1,858     | 56       | 1,914     |  |          |
| 11. Rafts, bamboos c. ft.                         | 70        | .....    | 70        |  |          |
| 12. Do., bullahs "                                | .....     | ..       | .....     |  |          |
| 13. Estimated value of rafts Rs.                  | 9         | 1,200    | 1,209     |  |          |
| 14. Tollage on boats "                            | 7,674-1-0 | 402-15-0 | 8,077-0-0 |  |          |
| 15. Compounded tollage on boats Rs.               | .....     | .....    | .....     |  |          |
| 16. Tollage on rafts "                            | 0-9-0     | 11-4-0   | 11-13-0   |  |          |
| 17. Total tollage on boats per ton-mile ...       | .....     | .....    | .....     |  |          |
| 18. Total tollage on rafts per 100 cubic feet ... | .....     | .....    | .....     |  |          |
|   |           |          |           | Memorandum of Tollage.                               |          |
|   |           |          |           | 1. Balance not recovered on the 1st of the month ... | 172 2    |
|   |           |          |           | 2. Tollage per month ...                             | 8,088 13 |
|   |           |          |           | 3. Total ...   | 8,260 15 |
|   |           |          |           | 4. Amount paid into treasury, during the month ...   | 8,044 10 |
|   |           |          |           | 5. Balance due at the end of the month ...           | 216      |

## ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).

## TOLLY'S NULLAH.

| DESCRIPTION.                  | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE.  |          | REMARKS. |
|-------------------------------|-------------------------------|-------|--------|----------|-----------|----------|----------|
|                               | Quantity—Tons.                |       |        | Value.   | Quantity. | Value.   |          |
|                               | Up.                           | Down. | Total. | Rupees.  | Tons.     | Rupees.  |          |
| (a) Jute ...                  | 36                            | ..... | 36     | 3,500    | 36        | 3,500    |          |
| (b) Jaggery ...               | 542                           | 15    | 557    | 70,195   | 557       | 70,195   |          |
| (c) Sugar ...                 | .....                         | ..... | .....  | ... ..   | .....     | .....    |          |
| (d) Tobacco ...               | 69                            | 13    | 82     | 22,850   | 82        | 22,850   |          |
| (e) Fish ...                  | 21                            | ..... | 21     | 5,805    | 21        | 5,805    |          |
| (f) Hides ...                 | 2                             | 2     | 4      | 2,000    | 4         | 2,000    |          |
| (g) Poultry ...               | .....                         | ..... | .....  | ... ..   | .....     | .....    |          |
| (h) Hay and straw             | 467                           | ..... | 467    | 9,798    | 467       | 9,798    |          |
| (i) Oils ...                  | 386                           | 12    | 398    | 55,775   | 398       | 55,775   |          |
| (k) Earthenware .             | 199                           | 6     | 205    | 2,874    | 205       | 2,874    |          |
| (m) Other miscella-<br>neous. | 2,299                         | 11    | 2,310  | 2,48,407 | 2,310     | 2,48,407 |          |
| Total Miscellaneous ...       | 4,021                         | 59    | 4,080  | 4,21,204 | 4,080     | 4,21,204 |          |

ABSTRACT FOR THE MONTH OF JUNE 1887, AS COMPARED WITH THE  
CORRESPONDING MONTH OF THE PREVIOUS YEAR.

|                                 | TRAFFIC, 1887-88. |       |                      | TRAFFIC, 1886-87. |           |                      |
|---------------------------------|-------------------|-------|----------------------|-------------------|-----------|----------------------|
|                                 | During the month. |       | To end of the month. | During the month. |           | To end of the month. |
|                                 | Rs.               | A. P. | Rs. A. P.            | Rs. A. P.         | Rs. A. P. |                      |
| Calcutta and Eastern Canals ... | 19,760            | 4 6   | 63,236 14 9          | 17,728            | 5 6       | 59,295 15 6          |
| Tolly's Nullah ...              | 8,688             | 13 0  | 24,059 4 3           | 6,515             | 14 9      | 20,199 11 6          |
| Total ...                       | 27,849            | 1 6   | 87,296 3 0           | 24,244            | 4 3       | 79,495 11 0          |

CALCUTTA,  
The 9th August 1887.

A. D. McARTHUR, Major, R.E.,  
Under-Secretary to the Government of Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 6th August 1887, compared  
with the corresponding week of the previous year.

| NATURE OF CARGO.   |     |     | WEEK ENDING SATURDAY, THE<br>6TH AUGUST 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>7TH AUGUST 1886. |                     |          |
|--------------------|-----|-----|---|---------------------|----------|---|---------------------|----------|
|                    |     |     | Number of<br>boats.                           | Weight of<br>cargo. | Tollage. | Number of<br>boats.                           | Weight of<br>cargo. | Tollage. |
|                    |     |     | No.   | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy ... | ... | ... | 472   | 1,02,230            | 1,501    | 231   | 50,090              | 945      |
| Jute ...           | ... | ... | 16  | 2,525               | 51       | 10  | 3,100               | 51       |
| Firewood ...       | ... | ... | 129   | 57,725              | 817      | 79  | 38,275              | 566      |
| Other articles ... | ... | ... | 785   | 1,86,515            | 2,755    | 759   | 1,43,570            | 2,372    |
| Total ...          | ... | ... | 1,402   | 3,48,995            | 5,134    | 1,079   | 2,35,035            | 3,934    |

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 30th July 1887, on 1,519 miles open.

|   | COACHING TRAFFIC.     |                | MERCHANDISE AND MINERAL TRAFFIC. |                | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |          |
|---|-----------------------|----------------|----------------------------------|----------------|-----------------------------|-----------------|--------------------------|--------------|----------|
|   | Number of passengers. | Receipts.      | Weight carried.                  | Receipts.      |                             |                 | Coaching.                | Merchandise. | Total.   |
|   |                       | Rs. A. P.      | Mds. S.                          | Rs. A. P.      | Rs. A. P.                   | Rs. A. P.       |                          |              |          |
| Total traffic for the week ...                              | 234,120*              | 2,53,443 15 0* | 21,15,029 20                     | 4,30,313 5 0   | 20,088 0 0                  | 7,13,455 4 0    | 67,218½                  | 84,003½      | 151,221½ |
| Or per mile of railway ...                                  | 160 13 7              | 166 13 7       | 13 10 0                          | 289 3 5        | 13 10 0                     | 469 11 0        | .....                    | .....        | .....    |
| For previous 3 weeks of half-year ...                       | 800,391               | 7,96,077 14 0  | 74,73,960 20                     | 16,44,416 15 6 | 67,709 0 9                  | 25,08,803 14 3  | 213,873½                 | 296,147½     | 509,020½ |
| Total for 4 weeks ...                                       | 1,034,511             | 10,50,121 13 0 | 95,88,990 0                      | 20,83,730 4 6  | 88,407 0 9                  | 32,22,259 2 3   | 281,093                  | 379,150½     | 660,243½ |
| COMPARISON.   |                       |                |                                  |                |                             |                 |                          |              |          |
| Total for corresponding week of previous year ...           | 204,031               | 2,28,870 14 0  | 20,24,167 30                     | 4,73,601 12 9  | 19,289 2 4                  | 7,21,761 13 1   | 67,643                   | 92,372       | 160,015  |
| Per mile of railway corresponding week of previous year ... | .....                 | 151 1 1        | .....                            | 312 9 9        | 12 11 9                     | 476 6 7         | .....                    | .....        | .....    |
| Total to corresponding date of previous year ...            | 1,040,777             | 10,06,191 9 8  | 1,00,04,672 30                   | 22,64,886 9 9  | 77,888 7 10                 | 33,40,406 11 3  | 295,096                  | 428,708      | 723,804  |

\* The increase in coaching traffic is principally due to running of troop extra trains from Howrah to Jubbulpore.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 31ST JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 31ST JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 1,515                                    | 7,21,762  | 476              | 1,519                                    | 7,13,455  | 470              | 1,515   | 1,61,33,040     | 10,649           | 1,519   | 1,56,89,731     | 10,322           | .....                   | 4,52,318                |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 30th July 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 11,565                | 6,017 7 0   | 40,257 0                         | 2,787 11 0  | 27 11 0                     | 8,782 18 0      | 1,016                    | 1,123        | 2,739  |
| Or per mile of railway ...                                  | 204                   | 106 3 3     | 704 0                            | 47 13 10    | 0 7 9                       | 153 8 2         | .....                    | .....        | .....  |
| For previous 3 weeks of half-year ...                       | 36,440                | 17,254 13 0 | 1,46,465 20                      | 8,336 11 0  | 89 13 0                     | 26,280 4 0      | 5,335½                   | 2,530½       | 7,866  |
| Total for 4 weeks ...                                       | 48,105                | 23,272 4 0  | 1,86,722 20                      | 11,674 6 0  | 116 7 0                     | 35,063 1 0      | 6,351½                   | 3,653½       | 10,005 |
| COMPARISON.   |                       |             |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 12,048                | 6,506 3 1   | 50,042 30                        | 3,157 0 0   | 30 11 0                     | 9,702 14 1      | 1,501                    | 1,111        | 2,702  |
| Per mile of railway corresponding week of previous year ... | 211                   | 113 11 11   | 1,032 10                         | 55 3 1      | 0 11 1                      | 169 10 1        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 47,556                | 23,647 6 5  | 2,16,536 30                      | 13,245 13 0 | 107 5 6                     | 37,060 8 11     | 6,863                    | 4,221        | 11,087 |

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883

| RECEIPTS FOR WEEK ENDING 31ST JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 31ST JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 57½                                      | 9,703     | 170              | 57½                                      | 8,783     | 154              | 57½   | 1,63,746        | 2,803            | 57½   | 1,56,215        | 2,714            | .....                   | 8,538                   |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

*Approximate Return of Traffic for week ended 30th July 1887, on 12 miles open.*

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,751                 | 467 8 0    | 10,635 20                        | 308 8 0    | 9 2 0                       | 845 2 0         | 383½                     | 110          | 493½   |
| Or per mile of railway ...                                  | 229                   | 38 15 4    | 886 20                           | 25 11 4    | 0 12 2                      | 70 6 10         | 31½                      | 9            | 40½    |
| For previous 3 weeks of half-year ...                       | 11,158                | 1,783 2 0  | 30,630 10                        | 743 5 0    | 20 14 0                     | 2,558 5 0       | 1,157½                   | 404          | 1,561½ |
| Total for 4 weeks ...                                       | 13,909                | 2,250 10 0 | 41,265 30                        | 1,113 13 0 | 39 0 0                      | 3,403 7 0       | 1,541                    | 574          | 2,115  |
| COMPARISON.   |                       |            |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,708                 | 453 5 9    | 10,307 30                        | 259 3 0    | 7 14 3                      | 722 7 0         | 353                      | 140          | 493    |
| Per mile of railway corresponding week of previous year ... | 225                   | 37 15 2    | 859 30                           | 21 9 7     | 0 10 6                      | 60 3 3          | 29½                      | 11           | 40½    |
| Total to corresponding date of previous year ...            | 12,194                | 2,019 1 8  | 63,205 30                        | 1,270 1 0  | 53 1 3                      | 3,342 3 11      | 1,675                    | 879          | 2,454  |

*Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 31ST JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 31ST JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
| 12                                       | Rs. 722   | Rs. 60           | 12                                       | Rs. 845   | Rs. 70           | 12  | Rs. 20,614      | Rs. 1,718        | 12  | Rs. 17,732      | Rs. 1,478        | .....                   | Rs. 2,882               |

## SINDIA STATE RAILWAY.

*Approximate Return of Traffic for week ended 30th July 1887, on 74½ miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 4,653                 | 3,073 2 0   | 85,153 10                        | 2,201 9 0  | 54 3 0                      | 5,248 14 0      | 664                      | 1,200        | 1,864  |
| Or per mile of railway ...                                  | 624                   | 40 8 10     | 1,129 10                         | 29 6 11    | 0 11 7                      | 70 11 4         | 89                       | 161          | 250    |
| For previous 3 weeks of half-year ...                       | 16,915                | 14,119 10 0 | 2,85,920 30                      | 8,627 12 0 | 211 11 0                    | 22,959 1 0      | 2,264½                   | 4,194½       | 6,459½ |
| Total for 4 weeks ...                                       | 21,568                | 17,192 12 0 | 3,71,074 0                       | 10,829 5 0 | 265 14 0                    | 28,217 15 0     | 2,929½                   | 5,394½       | 8,324½ |
| COMPARISON.   |                       |             |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 5,353                 | 3,841 11 7  | 62,392 30                        | 3,098 11 0 | 75 4 3                      | 7,055 10 10     | 695                      | 1,435        | 2,130  |
| Per mile of railway corresponding week of previous year ... | 72                    | 51 14 4     | 844 30                           | 41 6 10    | 1 0 1                       | 94 5 3          | 93                       | 192          | 285    |
| Total to corresponding date of previous year ...            | 21,937½               | 15,940 4 8  | 2,46,198 10                      | 11,788 6 0 | 408 12                      | 24,127 7 5      | 3,118                    | 3,881        | 6,999  |

*Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 31ST JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 31ST JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
| 74½                                      | Rs. 7,056 | Rs. 94           | 74½                                      | Rs. 5,280 | Rs. 71           | 74½   | Rs. 1,24,503    | Rs. 1,664        | 74½   | Rs. 1,13,038    | Rs. 1,512        | Rs. 18,535              | .....                   |

## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 30th July 1887, on 22½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 14,464                | 4,036 11 0  | 3,611 30                         | 141 4 0   | 5 8 0                       | 4,183 7 0       | 915                      | 107          | 1,022  |
| Or per mile of railway ...                                  | .....                 | 181 6 9     | .....                            | 6 5 7     | 0 4 0                       | 188 0 4         | .....                    | .....        | .....  |
| For previous 3 weeks of half-year ...                       | 55,034                | 15,122 12 0 | 12,545 20                        | 423 6 0   | 22 5 0                      | 15,568 7 0      | 3,012½                   | 225½         | 3,238  |
| Total for 4 weeks ...                                       | 69,498                | 19,159 7 0  | 16,387 10                        | 564 10 0  | 27 13 0                     | 19,751 14 0     | 3,927½                   | 332½         | 4,260  |
| COMPARISON.   |                       |             |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 13,330½               | 3,290 8 7   | 1,355 30                         | 51 14 0   | 6 5 0                       | 3,298 11 7      | 651                      | 17           | 668    |
| Per mile of railway corresponding week of previous year ... | .....                 | 145 3 1     | .....                            | 2 5 4     | 0 3 0                       | 147 12 11       | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 80,454                | 19,353 0 4  | 13,287 90                        | 494 12 0  | 26 3 0                      | 19,875 15 4     | 4,201                    | 87           | 4,378  |

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 31ST JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 31ST JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½                                      | 3,280     | 148              | 22½                                      | 4,183     | 188              | 22½   | 92,608          | 4,162            | 22½   | 94,484          | 4,240            | 876                     | .....                   |

## INDIAN MIDLAND RAILWAY.

Approximate Return of Traffic for week ended 30th July 1887, on 42 miles open.

|   | COACHING TRAFFIC.     |           | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-----------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P. | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,047                 | 961 12 0  | 7,446 30                         | 667 15 0   | 19 13 0                     | 1,549 8 0       | 296                      | 293          | 588    |
| Or per mile of railway ...                                  | .....                 | 22 14 5   | .....                            | 13 8 4     | 0 7 0                       | 36 14 3         | .....                    | .....        | .....  |
| For previous 3 weeks of half-year ...                       | 7,237                 | 3,264 5 0 | 30,560 20                        | 3,505 11 0 | 86 1 0                      | 4,856 1 0       | 750                      | 1,176        | 1,926  |
| Total for 4 weeks ...                                       | 9,284                 | 4,226 1 0 | 38,007 10                        | 4,073 10 0 | 105 14 0                    | 5,405 9 0       | 1,042                    | 1,469        | 2,510  |
| COMPARISON.   |                       |           |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,270                 | 944 11 7  | 3,018 30                         | 271 8 0    | 30 9 3                      | 1,249 12 10     | 466                      | 182          | 648    |
| Per mile of railway corresponding week of previous year ... | .....                 | 22 7 10   | .....                            | 6 8 7      | 0 11 8                      | 29 12 1         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 11,634½               | 4,045 5 2 | 16,435 20                        | 1,296 7 0  | 92 8 3                      | 6,324 4 5       | 1,871                    | 733          | 2,604  |

Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 31ST JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 31ST JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 30TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 42                                       | 1,250     | 30               | 42                                       | 1,550     | 37               | 42  | 32,447          | 772              | 42  | 61,015          | 1,453            | 28,578                  | .....                   |

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 23rd July 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |          |
|---|-----------------------|--------------------|----------------------------------|--------------|---|-----------------|--------------------------|--------------|----------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |   |                 | Coaching.                | Merchandise. | Total.   |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.    | Rs. A. P.   | Rs. A. P.       |                          |              |          |
| Total traffic for the week ..                                 | 104,700               | 50,450 0 0         | 5,23,130 0                       | 97,000 0 0   | 13,780 0 0  | 1,61,230 0 0    | 19,432                   | 17,638       | 37,065   |
| Or per mile of railway ...                                    | 162                   | 78 0 0             | 811 0                            | 151 0 0      | 1 0 0†  | 250 0 0         | .....                    | .....        | .....    |
| For previous 2 weeks of half-year ...                         | 278,160               | 1,10,500 0 0       | 8,48,900 0                       | 1,23,000 0 0 | 24,700 0 0  | 2,67,660 0 0*   | 44,626                   | 32,820       | 77,546   |
| Total for 3 weeks ...   | 382,800               | 1,60,750 0 0       | 13,71,930 0                      | 2,20,000 0 0 | 38,540 0 0  | 4,28,290 0 0    | 63,958                   | 50,453       | 1,14,411 |
| COMPARISON.   |                       |                    |                                  |              |   |                 |                          |              |          |
| Total for corresponding week of previous year ...             | 112,078               | 55,226 0 0         | 3,28,660 0                       | 62,651 0 0   | 9,333 0 0   | 1,27,210 0 0    | 16,963                   | 15,662       | 32,625   |
| Per mile of railway corresponding period of previous year ... | 183                   | 91 0 0             | 541 0                            | 103 0 0      | .....   | 194 0 0         | .....                    | .....        | .....    |
| Total to corresponding date of previous year ...              | 416,006               | 1,70,023 0 0       | 10,71,815 0                      | 1,82,023 0 0 | 30,849 0 0  | 3,82,935 0 0    | 58,253                   | 51,245       | 1,09,498 |

\* Audited up to week ending

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† Steam-boat earnings, Rs. 13,000, have been excluded from the calculation.

NOTE.—Dacca and Assam-Bihar sections are also published separately.

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 645                                      | 1,27,210  | 210              | 645                                      | 1,61,230  | 250              | 606   | 22,26,576       | 230              | 645   | 22,01,328       | 214              | .....                   | 22,048                  |

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 30th July 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | *27,000               | 17,700 0 0         | 30,000 0                         | 2,400 0 0  | 80 0 0                      | 10,180 0 0      | 3,501                    | 1,709        | 5,210  |
| Or per mile of railway ...                                    | 216                   | 61 0 0             | 312 0                            | 19 0 0     | 1 0 0                       | 81 0 0          | .....                    | .....        | .....  |
| For previous 3 weeks of half-year ...                         | 77,200                | 26,100 0 0         | 1,32,000 0                       | 8,900 0 0  | 290 0 0                     | 35,290 0 0      | 11,511                   | 5,629        | 17,170 |
| Total for 4 weeks ...   | 104,200               | 33,800 0 0         | 1,61,000 0                       | 11,300 0 0 | 370 0 0                     | 45,470 0 0      | 15,042                   | 7,338        | 22,380 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 21,047                | 7,293 0 0          | 16,594 0                         | 1,066 0 0  | 19 0 0                      | 8,288 0 0       | 3,859                    | 1,365        | 5,224  |
| Per mile of railway corresponding period of previous year ... | 168                   | 58 0 0             | 133 0                            | 8 0 0      | .....                       | 66 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 106,314               | 35,480 0 0         | 69,167 0                         | 4,008 0 0  | 120 0 0                     | 40,208 0 0      | 17,083                   | 6,081        | 23,164 |

\* Includes 5,560 monthly tickets.

† Do. Rs. 700 on account of haulage of mails.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 31ST JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 31ST JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 30TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 125                                      | 8,288     | 66               | 125                                      | 10,180    | 81               | 125   | 2,13,706        | 162              | 125   | 2,09,605*       | 99               | .....                   | 6,101                   |

\* Audited up to week ending 7th May 1887.



## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 23rd July 1887, on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 10,500                | 3,900 0 0          | 3,130 0                          | 500 0 0   | 300 0 0                     | 4,000 0 0       | 2,161                    | 803          | 2,964  |
| Or per mile of railway ...                                    | 122                   | 44 0 0             | 36 0                             | 6 0 0     | 3 0 0                       | 53 0 0          | .....                    | .....        | .....  |
| For previous 2 weeks of half-year ...                         | 20,000                | 7,800 0 0          | 11,300 0                         | 1,000 0 0 | 110 0 0                     | 8,010 0 0       | 4,049                    | 1,803        | 5,752  |
| Total for 3 weeks ...   | 35,500                | 11,000 0 0         | 14,430 0                         | 1,500 0 0 | 410 0 0                     | 13,510 0 0      | 7,110                    | 2,606        | 9,716  |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 9,825                 | 3,102 0 0          | 2,090 0                          | 355 0 0   | 214 0 0                     | 3,671 0 0       | 1,261                    | 424          | 1,685  |
| Per mile of railway corresponding period of previous year ... | 114                   | 36 0 0             | 24 0                             | 4 0 0     | .....                       | 40 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 31,045                | 10,023 0 0         | 7,774 0                          | 1,176 0 0 | 365 0 0                     | 11,565 0 0      | 3,764                    | 1,356        | 5,120  |

## FINANCIAL YEAR.

*Approximate Statement of Gross Receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 86                                       | 3,671     | 43               | 86                                       | 4,000     | 53               | 86  | 77,065          | 87               | 86  | 75,595          | 55               | .....                   | 2,370                   |

## ASSAM-BEHAR STATE RAILWAY.

## PUENEAH SECTION.

*Approximate Return of Traffic for week ended 23rd July 1887, on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 3,000                 | 900 0 0            | 11,000 0                         | 1,200 0 0 | 30 0 0                      | 2,130 0 0       | 608                      | 410          | 1,078  |
| Or per mile of railway ...                                    | 77                    | 23 0 0             | 282 0                            | 31 0 0    | 1 0 0                       | 55 0 0          | .....                    | .....        | .....  |
| For previous 2 weeks of half-year ...                         | 6,100                 | 2,000 0 0          | 56,000 0                         | 5,550 0 0 | 100 0 0                     | 7,650 0 0       | 1,534                    | 930          | 2,464  |
| Total for 3 weeks ...   | 9,100                 | 2,900 0 0          | 67,000 0                         | 6,750 0 0 | 130 0 0                     | 9,780 0 0       | 2,202                    | 1,340        | 3,542  |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |

\* Audited up to week ending

1887.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 24TH JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 23RD JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 24TH JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 23RD JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  |           |                  |  | Rs.       | Rs.              |   |                 |                  |   | Rs.             | Rs.              |                         |                         |
| .....                                    | .....     | .....            | 39                                       | 2,130     | 55               | .....   | .....           | .....            | 39  | 50,296          | 81               | 50,296                  | .....                   |

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|   |     |     |     |     |     |     | Rs.       |
|---|-----|-----|-----|-----|-----|-----|-----------|
| Approximate earnings for week ending 23rd July 1887 | ... | ... | ... | ... | ... | ... | 8,852     |
| Corresponding week last year                        | ... | ... | ... | ... | ... | ... | 10,142    |
| Decrease  | ... | ... | ... | ... | ... | ... | 1,290     |
| Receipts from 1st to 23rd July 1887                 | ... | ... | ... | ... | ... | ... | 26,800    |
| From 1st to 24th July 1886                          | ... | ... | ... | ... | ... | ... | 29,177    |
| Decrease  | ... | ... | ... | ... | ... | ... | 2,377     |
|   |     |     |     |     |     |     | Miles.    |
| Miles open, week ending 23rd July 1887              | ... | ... | ... | ... | ... | ... | 51        |
| Corresponding week last year                        | ... | ... | ... | ... | ... | ... | 51        |
|   |     |     |     |     |     |     | Rs. A. P. |
| Receipts per mile open, week ending 23rd July 1887  | ... | ... | ... | ... | ... | ... | 173 9 1   |
| Corresponding week last year                        | ... | ... | ... | ... | ... | ... | 198 13 10 |
| Decrease  | ... | ... | ... | ... | ... | ... | 25 4 9    |

CHIEF OFFICE, D. H. RAILWAY, DARJEELING, the 30th July 1887.

W. STEVENSON, Acting Manager.

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|   |     |     |     |     |     |     | Rs.       |
|---|-----|-----|-----|-----|-----|-----|-----------|
| Approximate earnings for week ending 30th July 1887 | ... | ... | ... | ... | ... | ... | 10,947    |
| Corresponding week last year                        | ... | ... | ... | ... | ... | ... | 11,419    |
| Decrease  | ... | ... | ... | ... | ... | ... | 472       |
| Receipts from 1st to 30th July 1887                 | ... | ... | ... | ... | ... | ... | 37,747    |
| From 1st to 31st July 1886                          | ... | ... | ... | ... | ... | ... | 40,596    |
| Decrease  | ... | ... | ... | ... | ... | ... | 2,849     |
|   |     |     |     |     |     |     | Miles.    |
| Miles open, week ending 30th July 1887              | ... | ... | ... | ... | ... | ... | 51        |
| Corresponding week last year                        | ... | ... | ... | ... | ... | ... | 51        |
|   |     |     |     |     |     |     | Rs. A. P. |
| Receipts per mile open, week ending 30th July 1887  | ... | ... | ... | ... | ... | ... | 214 10 4  |
| Corresponding week last year                        | ... | ... | ... | ... | ... | ... | 223 14 7  |
| Decrease  | ... | ... | ... | ... | ... | ... | 9 4 3     |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 6th August 1887.

W. STEVENSON, Acting Manager, D.-H. Railway.



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, AUGUST 17, 1887.

## OFFICIAL PAPERS.

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### PROGRESS OF THE EDEN SANITARIUM, DARJEELING.

#### MUNICIPAL DEPARTMENT—MEDICAL.

*Calcutta, the 9th August 1887.*

#### RESOLUTION.

READ—

The Report on the working of the Eden Sanitarium, Darjeeling, for the year 1886, and the reports for the three previous years.

The Eden Sanitarium had its origin in the following note recorded by Sir Ashley Eden, Lieutenant-Governor of Bengal, on 11th June 1881 :—

Now that the Tramway has been brought into Darjeeling, and that the Sanitarium is placed in direct and easy communication with Calcutta and with most of the civil stations of Bengal, and now that tea-planters from the unhealthy Dooars and the Terai can reach this station easily and without exposure in a few hours, the question of providing a good, well-organized European hospital for the comfortable reception of patients and convalescents from the plains, forces itself upon the consideration of Government.

I have already received representations regarding hospital accommodation for sick persons and convalescents connected with the Eastern Bengal Railway, the Northern Bengal Railway, and the Darjeeling Tramway; and it appears that if nothing else be done, some arrangement must at once be made, in communication with the Managers of those lines, for supplying a great and growing need of this sort. But as Darjeeling increases—and it is now increasing daily—we shall have to provide hospital accommodation for the permanent residents of the station and district. There are the tea-planters and their assistants scattered about all over the district, some of them placed in very unhealthy situations. Cases in which young men are brought in suffering from fever of a severe type for medical attendance are very common, and a difficulty is frequently found in providing them with accommodation during their illness. The hotels and boarding-houses are generally full, and a sick person is not always a welcome inmate in a public establishment of that sort; and it is feared that many useful men have

lost their lives in the Dooars and the Terai, who would at once have come up for treatment if a comfortable hospital existed for their reception. Then, again, there are many cases of persons residing in outlying plantations, who desire attendance during their confinement, who can only obtain it at an enormous expense, altogether beyond their means, and who are not within reach of the Civil Surgeon, and cases are not unknown in which it has been found impossible to procure accommodation for such cases here on any terms.

But besides these there are frequent cases in the mofussil stations of persons pulled down after severe sickness or suffering from obstinate disease, who are unable to take the change to sea which richer persons could afford, but for whom a change and careful medical attendance are absolutely necessary. There are also persons who could undergo operations in the cool climate of the hills, which they could not bear in the heat of the plains. Lastly, there are patients convalescing in the Calcutta hospitals, to whom a change to a convalescent ward in Darjeeling would be of the utmost importance.

It therefore seems to me that as a European hospital has to be built, we should not keep in mind only the requirements of Darjeeling, but of the province generally. It will in the long run be a saving to Government if a number of its servants can be sent up here for a few weeks' treatment in a European climate, instead of having to take leave to Europe or to linger on in a condition of inefficiency from ill-health at stations in the plains.

The experiment of paying wards for first-class patients has been tried on a small scale in Darjeeling, as also in Calcutta, and with the greatest promise of success.

I think that the best plan of dealing with the matter will be by appointing a Committee to consider the whole subject—the site, the classes and quantity of accommodation, the rate of charges, the mode of admission, etc., etc.

I accordingly appoint the following gentlemen to be members of a Committee for this purpose:—

The Hon'ble A. Mackenzie, *President*.  
Colonel Trevor.  
The Deputy Commissioner of Darjeeling.  
Mr. Martin.  
Dr. Birch.  
Mr. Christie.

They should consult the present Hospital Committee, who have already given the subject their attention.

There are several sites which suggest themselves—

1. Vale Pleasant, which could at once be made available for the purpose. It has every advantage except that the houses are entirely out of repair. It has a bright look-out, and is near the Mall. There are three houses; one has seven rooms with ample bath-room accommodation, which could be made into a hospital for paying-patients of the first class.

Then there is one large ward in a separate building which would do for patients of the third class, who would be inmates of a general ward. It is airy, light, and has a teak-boarded floor; it would hold probably 14 or 16 beds at least. There is a row of little separate rooms attached to this, which would be very comfortable for second-class patients. And there is the Retreat, a very comfortable four-roomed cottage, which would be available for special cases requiring quiet, such as midwifery or operations.

This site, with the buildings, is, I believe, valued at Rs. 10,000, and I should be glad to transfer it to the Hospital Committee, and to make a grant towards its repair. Some of the buildings would require a new roofing, and a good deal is required in the way of repairs. Proper servants' quarters are required, and a room for the hospital assistant would also be necessary. But after inspecting the buildings, I am afraid that they are so much out of repair that practically they would have to be rebuilt; and if this is to be done, the money will be better spent in constructing an entirely new hospital, on the most improved principle, than in repairing and adapting old buildings—never a satisfactory process.

2. Then there is the Bhootea School site. A magnificent site might be secured by pulling down the old Post Office, now used as a Bhootea School, and cutting down the hill 12 or 14 feet. Upon this site a really good two-storied hospital might be constructed, capable of providing between 50 and 60 beds. Of these, about 15 or 16 probably should be separate rooms for Government officers and other first-class patients, 20 might be for second-class, and 20 for third-class patients.

3. Then there is the site at the back, or at the south, of the Bengal Office; but this is perhaps bringing the hospital too much into the station.

4. There is a Government site at Lowland's Place; but this is perhaps too far down the hill and is not very accessible; otherwise it is a very fine site.

I have indicated above the various classes which would probably have to be accommodated. I should say that—

First-class patients should pay Rs. 2 a day, making their own arrangements for diet.

Second-class patients should be men and the families of men drawing, say, less than Rs. 300 a month in salary, or an equivalent income from other sources. The charge for them might be Rs. 3 a day including diet. They should have a ward to themselves, or rather two wards—one for males, the other for females.

Third-class patients should be men of official or other incomes of less than Rs. 100 a month. They should pay probably Rs. 1-4 a day including diet, on the scale of the General Hospital. They must be inmates of the general ward set apart for their sex.

When patients of the third class are servants of a State or Guaranteed Railway, or public company or of a public department, they should be received only on a guarantee that their cost at the fixed rate per diem will be paid or recovered by their employers or the head of the department, who will make arrangements for recovering it when necessary from the patient. Where convalescents of the third class are sent up from Calcutta by the public hospitals, the hospitals must be responsible for their fees here.

I leave, however, the rate of fee to be settled by the Committee, but have merely suggested these rates for their guidance.

It seems to me to be of great importance to give the scheme an *immediate* trial, and I am therefore willing to make a grant of Rs. 2,000, which should enable the Hospital Committee to adapt the whole of the Police Hospital at once for the reception of European patients. The Executive Engineer could arrange for accommodating the few police patients there are elsewhere.

A proper establishment would have to be provided and eventually paid for by the Hospital Committee. I think a good English nurse or matron essential. A trustworthy woman could probably be induced to take the place in this climate on very favourable terms. If no one is available locally, the Ladies' Committee at Calcutta might find some one suited to the place. I do not wish the hospital to be a charity hospital. It should pay its expenses, the building having been once provided and equipped. I am disposed to give a grant from Provincial Services of Rs. 50,000 to Rs. 60,000 for the purpose of establishing the hospital provided such a hospital is erected as shall afford accommodation to invalids from all parts of the Lower Provinces. For a merely local hospital, or for accommodation for the railway servants, I could not sanction more than half the amount. I gather from the Civil Surgeon that he thinks a considerable sum might be raised from subscription for such a useful purpose as this. The fees should be so fixed that they afford a reasonable prospect of the hospital covering its expenses. Five or six first-class, five second-class, and twelve or fourteen third-class patients ought to cover every expense.

After the report of the Committee had been considered, the following Resolution was issued under Sir Ashley Eden's orders:—

In the note which is appended to this Resolution, the Lieutenant-Governor stated his reasons for thinking that Government should take measures to provide a European

\* Hon'ble A. Mackenzie, *President*.  
Colonel Trevor, R. S.  
The Deputy Commissioner of Dar-  
jeeling:  
Mr. Martin, Superintending Engineer.  
Dr. Birch, Civil Surgeon.  
Mr. Christie, Executive Engineer.

hospital at Darjeeling for the reception of patients and convalescents from the plains, and appointed a Committee to examine the subject, and to submit proposals for carrying the scheme into effect. The Lieutenant-Governor expressed his willingness to make a grant from Provincial Services of Rs. 50,000 to Rs. 60,000 for the establishment of such a

hospital as would afford accommodation to invalids from all parts of the Lower Provinces.

2. The Committee, after careful consideration of the different sites available, recommended that the site of the Bhooteah School should be adopted. They have considered a rough plan of a two-storied hospital to accommodate 16 first class, 20 second-class, and 20 third class patients at an estimated cost of about Rs. 52,000, and they propose that the plans and estimates should be completed by the Public Works Department for submission to the Lieutenant-Governor. They are of opinion that little difficulty would be found in raising public subscriptions to provide for the equipment of the hospital and the maintenance of the poorer classes of patients, and they recommend that measures should be taken to ascertain what assistance may be expected from the public.

3. The Lieutenant-Governor approves the suggestions put forward in the Committee's report. The Public Works Department will be requested to take measures at once to level the Bhooteah School site, demolishing the old buildings and cutting down the hill so as to secure sufficient space for a substantial structure of the dimensions proposed. Plans and estimates of the work should be prepared with as little delay as possible, and as soon as they have been approved by the Lieutenant-Governor, a special grant will be made of the amount required for the construction of the building. Meanwhile a grant of Rs. 2,000 is sanctioned to admit of the Police Hospital being at once adapted for the reception of European patients, so that accommodation may be available during the current season.

4. The Commissioner of the Division will be desired to submit suggestions regarding the constitution of the governing body of the new institution. It is necessary that a Committee should at once be formed with authority to receive subscriptions. The Committee will also have to consider various questions connected with the administration of the hospital, and to submit, for the approval of Government, a scheme for its general management. As recommended in paragraph 8 of the Committee's report, the Chamber of Commerce, Calcutta, the Trades' Association, and the Agents of the East Indian and Eastern Bengal Railways, will be invited to say to what extent the Committee may expect donations for furniture now, and subscriptions for other purposes hereafter. The Surgeon General will be requested to ascertain to what extent advantage would probably be taken of the hospital by the different classes of patients, and to offer suggestions regarding the system under which the officers in charge of the metropolitan hospitals should be authorized to transfer patients to the Darjeeling Hospital.

2. A Committee of Management was subsequently appointed, and the building was commenced in November 1881, but owing to the delay on the part of the contractors, it was not ready for occupation till the 22nd April 1883, when it was formally thrown open to the public. Meanwhile a temporary hospital was opened in a building adjoining the municipal dispensary at Darjeeling, partly at the cost of Government and partly from funds raised by private subscription, and from the proceeds of a bazar held in Darjeeling during the Doorga Poojah holidays of 1880. The accommodation provided in the temporary hospital was of a very limited character, but so great was the demand for it that the public appreciation of such an institution was placed beyond doubt.

3. On the opening of the Sanitarium, several patients were transferred to it from the temporary hospital, which was then closed, and their number was largely added to by patients and convalescents from the plains, who were only awaiting the opening of the Sanitarium. The Sanitarium being an institution where only paying patients are received, and being, therefore, unlike any ordinary hospital, the rules of the institution are of a special character. A liberal provision in the rules is that in all cases where this is desired, a relative or attendant is admitted with the patient, and no restriction is put upon the stay of such relative or attendant.

4. The following statement shows the number of patients and their relatives and attendants admitted into the Sanitarium during the past four years :—

|                          |     | 1883. | 1884. | 1885. | 1886. |
|--------------------------|-----|-------|-------|-------|-------|
| Patients                 | ... | 88    | 153   | 192   | 273   |
| Relatives and attendants | ... | 33    | 73    | 68    | 120   |
| Total                    | ... | 121   | 226   | 260   | 393   |

Infants in arms, of whom several have been admitted, are not included in the above figures. The steady increase in the number of admissions is an indication of the growing popularity of the institution, and it is hoped that as the benefits which it is capable of conferring on invalids become generally known, it will be more largely resorted to. Patients come to the Sanitarium not only from all parts of the Lower Provinces of Bengal, but from Assam, the North-Western Provinces, Burmah, and the Straits Settlements.

5. Experience having shown that the Sanitarium is only required by the public from about the beginning of March to the end of November, this period has been constituted the working season of the institution. During the winter months, December, January, and February, the Sanitarium is practically closed to the public, and with the view to economy the establishment is reduced to a minimum. Admission is, however, not denied to patients at this season, and as a matter of fact there have been on an average three patients in the Sanitarium during the winter months in each of the past three years.

6. The daily average number of persons in the Sanitarium during the working season was 18·54 in 1883, 25·87 in 1884, 38·22 in 1885, and 28·96 in 1886. These figures vary according to the length of stay of the patients. Thus it is that though the total number of admissions in 1885 was less than in 1886, the daily average was greater. The average stay of each patient in the Sanitarium was 39·2 days in 1883, 31·20 days in 1884, 28·04 days in 1885, and 20·26 days in 1886. The average, though gradually lessened since 1883, is still high in comparison with the average stay of patients in hospitals in the plains. This, as explained by the Committee of Management, will always be the case, as the Sanitarium is more apt to get chronic cases such as phthisis, paralysis, general debility and anæmia, which require a lengthened stay in a good climate before any real improvement is effected. Many cases of phthisis have been treated at the Sanitarium, and in nearly every instance great benefit has been derived by the patients. Experience has shown that the climate of Darjeeling is specially suited to persons suffering from this complaint.

7. The following statement shows the number of patients treated at the Sanitarium during the last four years and the results :—

| YEAR.       | PATIENTS TREATED. |         |           | Total. | Cured. | Relieved or improved. | Discharged or otherwise. | Died. | REMARKS.  |
|-------------|-------------------|---------|-----------|--------|--------|-----------------------|--------------------------|-------|---|
|             | Male.             | Female. | Children. |        |        |                       |                          |       |   |
| 1883 ... .. | 50                | 26      | 13        | 89     | 72     | 7                     | 5                        | 3     | * Three of these were cases admitted in a moribund state. |
| 1884 ... .. | 78                | 53      | 22        | 153    | 113    | 36                    | 5                        | 6     |   |
| 1885 ... .. | 108               | 55      | 29        | 192    | 132    | 44                    | 5                        | 5*    |   |
| 1886 ... .. | 129               | 57      | 57        | 243    | 230    | 42                    | 5                        | 0     |   |

This shows at a glance the benefit derived from the treatment at the Sanitarium. It speaks well for the institution that the average mortality has been only six in a year.

8. Of the three classes in the Sanitarium, the second is the most popular, judged from the results of the past four years, which are exhibited in the following table:—

| YEAR. |     |     |    | 1st class. | 2nd class. | 3rd class. |
|-------|-----|-----|----|------------|------------|------------|
| 1883  | ... | ... | .. | 44         | 41         | 37         |
| 1884  | ... | ... | .. | 53         | 107        | 66         |
| 1885  | ... | ... | .. | 24         | 107        | 69         |
| 1886  | ... | ..  | .. | 83         | 229        | 81         |

9. The Sanitarium is under the superintendence of the Civil Surgeon of Darjeeling, who is *ex officio* a member of, and Secretary to, the Committee of Management. The several officers who have occupied this position since the opening of the Sanitarium have performed their work with zeal and ability, and have done much to promote the welfare of the institution. The Resident Medical Officer, Mr. J. G. Fleming, who has been connected with the institution since April 1883, is spoken of by the Committee in the highest possible terms. He has conducted the duties of his post with considerable skill and tact, and the success of the Sanitarium has been greatly due to the confidence which his presence has inspired in the patients.

10. By an arrangement made with the Sister Superior of the Lady Canning Home in Calcutta, two sisters of the Clower community are attached to the Sanitarium during the working season in order to superintend the nursing and other domestic arrangements, in place of a matron. For want of funds the Committee have not yet been able to provide a permanent staff of under nurses for the Sanitarium, but nurses are engaged temporarily to attend any bad cases that may require special care. The services rendered by the sisters have invariably been acknowledged by the Committee in terms of approval and satisfaction.

11. The cost of the construction of the Sanitarium was borne by the Government of Bengal. The original estimate was for Rs. 1,30,000, but owing to certain necessary changes and additions it was increased to Rs. 1,67,752. Besides this, Government has provided the institution with surgical instruments, and for two years relieved it of all charge on account of European medicines. The general equipment and furnishing of the building was entrusted to the Committee of Management, and for the purpose of meeting the cost an appeal was made to the public to provide the necessary funds. This appeal was liberally responded to, and a sum of Rs. 23,750 was collected, nearly all of which was expended in the purchase of furniture. The Sanitarium is supported entirely by the receipts from the patients and by voluntary contributions. The financial position of the institution at the close of the year 1886 is shown in the following statements:—

## CAPITAL.

| INCOME.          |                       |          | EXPENDITURE.     |               |              | Balance.    |
|------------------|-----------------------|----------|------------------|---------------|--------------|-------------|
| From Government. | From private sources. | Total.   | On construction. | On furniture. | Total.       |             |
| Rs.              | Rs.                   | Rs.      | Rs.              | Rs. A. P.     | Rs. A. P.    | Rs. A. P.   |
| 1,67,762         | 23,750                | 1,91,502 | 1,67,947         | 21,910 2 2    | 1,89,857 2 2 | 1,644 13 10 |

## REVENUE.

## Income.

| YEAR. | Cash balance on 1st January. | From Government for medicines and instruments. | Subscriptions. | Receipts from patients. | Interest on investments. | Miscellaneous. | Total.       |
|-------|------------------------------|--|----------------|-------------------------|--------------------------|----------------|--------------|
|       | Rs. A. P.                    | Rs. A. P.                                      | Rs.            | Rs. A. P.               | Rs. A. P.                | Rs. A. P.      | Rs. A. P.    |
| 1883  | ...                          | 1,227 0 0                                      | 3,505          | 15,673 8 0              | 20 9 2                   | 1 8 0          | 18,476 9 2   |
| 1884  | 468 2 10                     | 375 10 0                                       | 3,327          | 19,908 0 0              | 10 15 0                  | ...            | 21,277 11 10 |
| 1885  | 1,576 2 10                   | ...  | 2,135          | 29,103 8 0              | 21 13 10                 | ...            | 29,884 3 0   |
| 1886  | 2,707 12 9                   | ...  | 2,485          | 25,714 11 3             | 28 7 0                   | ...            | 30,935 15 0  |

| Expenditure. |                |                |             |                                 |                |             |
|--------------|----------------|----------------|-------------|---------------------------------|----------------|-------------|
| YEAR.        | Establishment. | Medicines, &c. | Diet.       | Petty construction and repairs. | Miscellaneous. | Total.      |
|              | Rs. A. P.      | Rs. A. P.      | Rs. A. P.   | Rs. A. P.                       | Rs. A. P.      | Rs. A. P.   |
| 1883 ... ..  | 5,580 3 7      | 1,353 2 0      | 7,105 15 5  | .....                           | 3,955 1 4*     | 18,010 6 4  |
| 1884 ... ..  | 8,561 0 9      | 552 4 0        | 11,188 0 11 | 74 8 0                          | 5,245 0 6      | 25,653 14 8 |
| 1885 ... ..  | 8,438 3 6      | 560 3 0        | 12,876 14 6 | 29 0 0                          | 5,254 1 3      | 27,176 6 3  |
| 1886 ... ..  | 14,075 8 8     | 989 3 3        | 11,135 7 11 | 158 5 9                         | 3,859 9 1      | 30,166 2 8  |

\* Includes Rs. 1,000 on account of passage of two sisters from England.

Balance.

|                | 1883.     | 1884.     | 1885.      | 1886.     |
|----------------|-----------|-----------|------------|-----------|
|                | Rs. A. P. | Rs. A. P. | Rs. A. P.  | Rs. A. P. |
| Credit ... ..  | 466 2 10  | .....     | 2,707 12 9 | 769 12 4  |
| Deficit ... .. | ...       | 376 2 10  | .....      | .....     |

It is a matter for regret that the subscriptions from firms and private individuals should show so considerable a falling off in the last two years, more especially as the want of funds is reported to have rendered it impossible for the Committee of Management to make any payment to the Superintendent, Dr. Mathew, for the very efficient services rendered by him during the past year, or even to discharge fully their liability to his predecessor.

13. The thanks of Government are due to the successive Committees of Management and Superintendents who have contributed to place the institution on a footing of such efficiency, and to merit for it so large a share of the public confidence.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

Secretary to the Government of Bengal.

LIBERALITY OF BABOO BRIJ BEHARI LAL OF DURBHUNGAH.

MUNICIPAL DEPARTMENT—MUNICIPAL.

Calcutta, the 16th August 1887.

RESOLUTION.

READ—

A letter from the Commissioner of the Patna Division, No. 4096, dated the 29th July 1887, forwarding a letter from the Collector of Durbhungah.

With the view of commemorating the visit of His Honour the Lieutenant-Governor to Durbhungah, Baboo Brij Behari Lal has contributed a sum of Rs. 5,000 to the cost of a complete survey of the town for the purpose of a scheme of drainage. The Lieutenant-Governor is pleased to accept the gift on behalf of the Durbhungah Municipality, and tenders his thanks to Baboo Brij Behari Lal for his liberality and public spirit.

ORDER.—Ordered that a copy of this Resolution be published in the *Calcutta Gazette*, and that a copy of it be forwarded to the Commissioner of Patna for information and for communication to the donor.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

Secretary to the Govt. of Bengal.



## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 13th August 1887.

| No.                      | District and date of return. | Rainfall at Sudder station in inches. | Character of the weather, state and prospects of the crops, and state of health at late.  |
|--------------------------|------------------------------|---------------------------------------|---|
| <b>BENGAL.</b>           |                              |                                       |   |
| <i>Western Districts</i> |                              |                                       |   |
| <b>BURDWAN DIV.</b>      | 1 Burdwan, Aug. 13, '87      | 3.06                                  | Weather—seasonable with break in rains at end of week. State of crops favourable. Price of common rice falling, about 21 to 22 seers per rupee. Cholera in three thanas in the Sudder sub-division.   |
|                          | Culina                       | 2.51                                  |   |
|                          | Cutwa                        | 2.62                                  |   |
|                          | Raneegunge                   | 5.17                                  |   |
|                          | 2 Bankura „ 13, '87          | 3.40                                  | Weather—seasonable. Transplantation of <i>aman</i> still going on. Prospects of <i>bhadoi</i> and other standing crops good. Common rice now selling at the Bankura market at 24 seers per rupee. Public health good.   |
|                          | Bishenpore                   | 6.44                                  |   |
|                          | 3 Beerbhoom „ 13, „          | 2.95                                  | Weather—cool and showery with intervals of sunshine. It is very favourable to crops on the ground. Paddy seedlings look healthy and sugarcane flourishing. Some damage has been done by floods in the south-eastern portions of the district; whence, too, cholera is also reported. Public health generally good. Prices stationary. |
|                          | Rampore Haut                 | 3.57                                  |   |
|                          | 4 Midnapore „ 13 '87         | 2.37                                  | Weather—dry and sultry with intervals of heavy rain. Flood in Ghatal subsiding gradually. Crops damaged in the flooded parts in Ghatal and Tumlook. Some deaths from cholera reported from Ghatal.  |
|                          | 5 Hooghly „ 13, „            | 0.94                                  | Weather—seasonable, but drier than usual. Prospects of all crops are favourable so far. Public health good for the time of year.  |
| <b>PRESIDENCY DIV.</b>   | Serampur                     | 2.18                                  |   |
|                          | Jehanabad                    | 0.68                                  |   |
|                          | Howrah „ 13, „               | 3.08                                  | Weather—cool with rain almost daily, though not heavy. Ploughing and transplanting continue. Prospects good.  |
|                          | Oooloobish                   | 0.53                                  |   |
|                          | <i>Central Districts</i>     |                                       |   |
|                          | 6 24-Pergha, Aug. 13, '87    | 2.50                                  | Weather—seasonable with occasional showers. Rainfall insufficient. Prospects of <i>aus</i> , jute and sugarcane good, but more rain required for <i>aman</i> crop. Public health good, but a few cases of cholera and fever reported.   |
|                          | 7 Nudda „ 13, „              | 0.94                                  | Weather—cloudy, but with more sun and less rain than last week. Transplantation of <i>aman</i> in progress. Prospects fair. Flood level very high for the time of year, and inundation anticipated.   |
|                          | Kushtea                      | 4.79                                  |   |
|                          | Ranaghat                     | 1.28                                  |   |
|                          | 8 Khoolna „ 13, '87          | 2.46                                  | Weather—first part of the week cloudy and showery, latter part bright. Prospects of <i>aman</i> and <i>aus</i> paddy good. Public health favourable.  |
| <b>RAJSHAHY DIV.</b>     | 9 Jessore „ 13, „            | 3.73                                  | Weather—hot with occasional showers. Prospects of <i>aus</i> good. Transplanting of <i>aman</i> going on, but rain is still wanted. Public health fair.   |
|                          | Jhenidah                     | 4.85                                  |   |
|                          | Magurah                      | 0.83                                  |   |
|                          | Narail                       | 2.66                                  |   |
|                          | Bongong                      | 2.5                                   |   |
|                          | 10 Moorshedabad „ 13 '87     | 5.66                                  | Weather—very hot; rain at intervals. Transplantation of <i>aman</i> paddy still going on. <i>Til</i> , sugarcane and jute progressing. Public health good.  |
|                          | Jungipur                     | 5.20                                  |   |
|                          | 11 Dinagopore „ 13, '87      | 6.74                                  | Weather—close and cloudy. <i>Bhadoi</i> harvest in progress. Transplanting of <i>haimanti</i> paddy much benefited by rain.   |
|                          | 12 Rajshahy „ 13, '87        | 2.79                                  | Weather—dry. Cutting of <i>aus</i> paddy continues. Condition of <i>haimanti</i> rice and jute generally good. Public health fair.  |
|                          | Nattore                      | 5.14                                  |   |
| <b>RAJSHAHY DIV.</b>     | 13 Rangpur „ 13, „           | 8.29                                  | Weather—cool. Transplantation of <i>aman</i> going on. Recent rain has done good to this crop. <i>Aus</i> and jute are being cut. Public health continues fair in all sub-divisions, but in the head-quarters fever prevails.   |
|                          | Gaibanda                     | 2.17                                  |   |
|                          | Ulipur                       | 8.61                                  |   |
|                          | Kurigram                     | 9.54                                  |   |
|                          | 14 Bogra „ 13, '87           | 1.80                                  | Weather—somewhat dry for this time of the year. State and prospects of standing crops on the whole satisfactory. Public health fair.  |
|                          | Sherpur                      | 0.69                                  |   |
|                          | Nowkhilla                    | 1.60                                  |   |
|                          | 15 Pubna „ 13, '87           | 1.97                                  | Weather—seasonable. Harvesting of <i>aus</i> commenced; an average crop expected. Rivers rising rapidly. Prospects of jute, sugarcane and <i>aman</i> paddy good.   |
|                          | Perajgunge                   | 1.06                                  |   |
|                          | 16 Daryeehng „ 13, '87       | 13.43                                 | Heavy rain; weather cloudy and cool. State and prospects of crops good.   |
| <b>DACCA DIVISION.</b>   | 17 Julpigoree „ 13 „         | 7.13                                  | Weather—seasonable. Autumn rice and jute promise fairly well.   |
|                          | <i>Eastern Districts.</i>    |                                       |   |
|                          | 18 Dacca, Aug. 13, '87       | 1.22                                  | Weather—first part of week cloudy, latter part fine. Jute and <i>aus</i> paddy are being harvested. <i>Aman</i> paddy thriving. Rivers rising again. Prospects on the whole continue good. Public health good.  |
|                          | Manickgunge                  | 5.27                                  |   |
|                          | Munshigunge                  | 2.26                                  |   |
|                          | 19 Furreedpore „ 13, '87     | 1.35                                  | Weather—hot and cloudy. River has risen. Prospects of standing crops fair. General health good.   |
|                          | Goulundo                     | 2.49                                  |   |
|                          | Madaripore                   | 0.83                                  |   |
|                          | 20 Backergunge „ 12, '87     | 1.92                                  | Weather—hot and rainy. Prospects of crops good. Cultivation of <i>aman</i> going on. General health good.   |
|                          | 21 Mymensingh „ 12, '87      | 2.80                                  | River again rising. State and prospects of crops good.  |
|                          | Jamalpur                     | 9.73                                  |   |
|                          | Kishoregunge                 | 5.71                                  |   |
|                          | Attea                        | 3.71                                  |   |
|                          | Netrokona                    | 3.32                                  |   |

| No.                                | District and date of return.        | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|------------------------------------|-------------------------------------|---------------------------------------|--|
| <b>BENGAL—contd.</b>               |                                     |                                       |  |
| <i>Eastern Districts—contd.</i>    |                                     |                                       |  |
| CHITTAGONG DIV.                    | 22 Chittagong, Aug. 16, '87         | 0.26                                  | Weather—seasonable. Outturn of <i>aus</i> expected eight annas. <i>Aus</i> being transplanted. Prices stationary. Public health fair. Cholera still reported.  |
|                                    | 23 Noakhali, " 12, "                | 10.95                                 | Weather—seasonable. Reaping of <i>aus</i> continues. Transplantation of <i>aus</i> progressing. Prospects good. Public health very fair.   |
|                                    | 24 Tipperah, " 11, '87              | 9.43                                  | Weather—seasonable. Prospects of crops favourable. Transplantation of <i>aus</i> progressing well. Jute and <i>aus</i> have been reaped to the extent of about 12 annas. Public health good.   |
|                                    | 25 Chittagong Hill Tracts, " 9, '87 | 4.72                                  | Weather—rainy throughout the week with occasional sunshine. <i>Joom</i> paddy doing well. Transplanting of plough-paddy still in progress. Fever prevalent.  |
|                                    | Hill Tipperah, " 10, "              | 2.27                                  | Weather—hot; more rain wanted. Transplantation of <i>aus</i> paddy still continues. Prospects of sugarcane and <i>joom</i> crops fair. Some cases of fever here and there; public health otherwise good.   |
| <b>BEHAR.</b>                      |                                     |                                       |  |
| PATNA DIV.                         | 26 Patna, Aug. 13, '87              | 1.29                                  | Weather—cloudy and rainy. Paddy transplantation going on. <i>Bhadai</i> crops promising. In some places <i>makai</i> is being reaped. Cholera still continues in the Behar sub-division, and has increased in the Dinapore sub-division; a few cases reported from other parts.  |
|                                    | Barh, ...                           | 1.80                                  |  |
|                                    | Dinapore, ...                       | 3.49                                  |  |
|                                    | 27 Gya, " 13, "                     | 6.64                                  | Weather—cloudy. Prospect of <i>bhadai</i> and paddy crops good. Cholera still in most of the thanas. Fever also reported.  |
|                                    | 28 Shahabad, " 13, "                | 1.92                                  | Weather—cloudy and rainy almost the whole week with occasional breaks. Paddy transplantation actively going on, rain having very much facilitated the operation. <i>Bhadai</i> crops looking well, and prospects are satisfactory. Cholera greatly decreased. Prices continue stationary, tending to fall.                               |
|                                    | Buxar, ...                          | 4.00                                  |  |
|                                    | Sasaram, ...                        | 9.80                                  |  |
|                                    | Bhabuah, ...                        | 2.85                                  |  |
|                                    | 29 Darbhanga, " 13, "               | 7.85                                  | Weather—cloudy. There has now been sufficient rain, and transplantation of paddy is progressing rapidly. <i>Bhadai</i> crops continue very favourable. Prices remain stationary. Public health generally good.   |
|                                    | Madhubani, ...                      | 7.75                                  |  |
| BAGHUPUR DIV.                      | Tajpur, ...                         | 4.31                                  |  |
|                                    | 30 Monrotpore, " 13, '87            | 4.23                                  | Weather—cloudy and rainy. Rain beneficial to the crops. Maize, <i>kodo</i> , <i>marua</i> , <i>sama</i> , <i>kauni</i> , &c., in ear. Cholera still reported from the interior. Rivers rising.   |
|                                    | Hajipur, ...                        | 0.76                                  |  |
|                                    | Sitamarhi, ...                      | 8.82                                  |  |
|                                    | 31 Saran, " 13, "                   | 1.79                                  | Weather—cloudy and rainy. Prospects of crops improved. Cholera still reported.   |
|                                    | Sewan, ...                          | 3.14                                  |  |
|                                    | Gopalgunge, ...                     | 5.43                                  |  |
|                                    | 32 Chumna, " 13, "                  | 5.36                                  | Weather—cloudy and rainy. Bright sunshine at intervals. Rain has much improved prospects of crops. Transplantation of paddy going on vigorously. <i>Bhadai</i> rice is being harvested in Bettiah sub-division. Fever and cholera prevalent in the district. Prices rising.  |
|                                    | Bettiah, ...                        | 4.35                                  |  |
|                                    | 33 Monghyr, Aug. 13, '87            | 3.13                                  | Weather—seasonable. Transplanting of winter rice still going on. <i>Bhadai</i> crops ripening. Cholera abating.  |
| BAGHUPUR DIV.                      | Begusarai, ...                      | 7.27                                  |  |
|                                    | Jamui, ...                          | 3.96                                  |  |
|                                    | 34 Bhagulpore, " 13, "              | 3.10                                  | Weather—seasonable. Transplantation of late rice is being pushed to completion. Outturn of <i>makai</i> poor. Prospects of <i>marua</i> and early rice very fair. Cholera decreasing.  |
|                                    | 35 Purneah, " 13, "                 | 4.98                                  | Several heavy showers. Rain has done much good. Crops have recovered and transplanting going on rapidly.   |
|                                    | Kishengunge, ...                    | 6.55                                  |  |
|                                    | Arrareah, ...                       | 6.54                                  |  |
|                                    | 36 Maldah, " 13, "                  | 2.36                                  | Weather—seasonable. Harvesting of <i>bhadai</i> paddy has begun, with good outturn, except in thanas Rains and Kharin, where it is reported to be 12 and 14 annas respectively. Transplantation of winter paddy going on. Common rice sowing at 21 seers per rupee. Public health good.  |
|                                    | Chanchal, ...                       | 2.94                                  |  |
|                                    | Shibgunge, ...                      | 2.81                                  |  |
|                                    | 37 Sonthal Pargna, " 13, "          | 3.00                                  | Weather—seasonable. <i>Bhadai</i> crops ripening. Prospects fair except in Rajmehal, where only 8-anna crop expected. Late rain has helped transplanting of paddy on the high lands.   |
| ORISSA.                            | Godda, ...                          | 3.97                                  |  |
|                                    | Rajmehal, ...                       | 3.52                                  |  |
|                                    | 38 Cuttack, " 12, '87               | 2.41                                  | Weather—fair. <i>Biali</i> rice in ear, and in some places ripening. <i>Sarad</i> rice is being sown and doing well. Price of rice almost unchanged. Common rice 16½ to 18 seers per rupee in town. Public health generally good; cases of cholera still reported from all sides.  |
|                                    | 39 Poores, Aug. 11, "               | 1.40                                  | Weather—cloudy with occasional showers. State and prospects of crops not good and very backward. Transplantation of <i>sarad</i> crop going on. Common rice 21 seers 6 chittacks per rupee in the Sudder sub-division, and 21 seers 13 chittacks in the Khoorda sub-division. Cases of cholera reported from most parts of the district. |
|                                    | Khoorda, ...                        | 2.01                                  |  |
|                                    | 40 Balasore, " 12, "                | 0.25                                  | Weather—hotter than previous week. Prospects of crops good. <i>Biali</i> in ear. A few cases of cholera reported from north; public health otherwise good.   |
|                                    |                                     |                                       |  |
|                                    |                                     |                                       |  |
|                                    |                                     |                                       |  |
|                                    |                                     |                                       |  |
| <b>CHOTA NAGPORE.</b>              |                                     |                                       |  |
| <i>South-West Frontier Agency.</i> |                                     |                                       |  |
| 41                                 | Hasaribagh, Aug. 13, '87            | 4.28                                  | Incessant rain. Transplanting of rice still going on. All crops doing well and prospects very favourable so far. Cases of cholera still continue to be reported from several thanas.   |
| 42                                 | Lohardigha, " 13, "                 | 4.40                                  | Weather—seasonable. Transplanting of rice still continues; prospects good. Prices easy. Cholera abating in Palamow, otherwise general health good.   |
|                                    | Palamow, ...                        | 4.05                                  |  |
| 43                                 | Singbhum, " 12, "                   | 7.41                                  | Heavy rain throughout district; weather cool. Prospects excellent. Public health generally good.   |
| 44                                 | Manbhum, " 13, "                    | 3.59                                  | Weather—seasonable. Rain has fallen where needed and transplanting is nearly finished. Prospects of paddy so far good, and those of the autumn crops excellent. Public health good.  |
|                                    | Govindpore, ...                     | 3.87                                  |  |

**Results of the Meteorological Observations taken at the Alipore Observatory from  
7th to 13th August 1887.**

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 55° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain.   | WEATHER.                 |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|--------------------------|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |         |                          |
| 1887.  |       | °               |                                     | Inches.                              | °            | °        | °      | °        | °              | Inches          | °          | %         |                       |                 | Inches. |                          |
| Aug.   | 7th   | 150.3           | 4.2                                 | 29.625                               | 83.2         | 88.0     | 8.9    | 79.1     | 79.7           | 0.971           | 78.3       | 86        | SSW and SW            | 164             | 0.12    | Cloudy, o, g, d          |
| "      | 8th   | 142.7           | 1.2                                 | 566                                  | 82.6         | 85.5     | 7.4    | 78.1     | 79.5           | .967            | 78.2       | 87        | SW and SSW            | 132             | 1.50    | Cloudy, o, g, d, p.      |
| "      | 9th   | 151.4           | 0.5                                 | .581                                 | 81.5         | 85.9     | 8.2    | 77.7     | 78.7           | .944            | 77.5       | 88        | W and W by S          | 119             | 0.34    | Chiefly cloudy, o, g, p. |
| "      | 10th  | 154.8           | 3.4                                 | .632                                 | 81.5         | 86.6     | 9.6    | 77.0     | 78.4           | .934            | 77.2       | 87        | SSE and SE            | 163             | 0.68    | Chiefly cloudy, o, g, p. |
| "      | 11th  | 149.9           | 11.3                                | .688                                 | 83.0         | 88.0     | 11.0   | 77.6     | 78.9           | .937            | 77.2       | 83        | ESE and SE            | 207             | 0.05    | Chiefly cloudy, d.       |
| "      | 12th  | 152.3           | 8.2                                 | .716                                 | 83.3         | 88.7     | 10.9   | 77.8     | 79.7           | .970            | 78.3       | 85        | SE and S              | 111             | 0.10    | Chiefly cloudy, d, p.    |
| "      | 13th  | 150.8           | 11.9                                | .704                                 | 83.7         | 89.5     | 11.8   | 77.7     | 78.4           | .903            | 76.2       | 78        | S and SSW             | 89              | Nil     | Chiefly cloudy, d.       |

|  |     |         |                  |
|--|-----|---------|------------------|
| The mean pressure of the seven days  | ... | Inches. | 29.645           |
| The average pressure of the corresponding period for 24 years, S. G.'s Office          | ... | ...     | 29.587           |
| The total number of hours of bright sunshine   | ... | Hours   | 40.7             |
| The maximum possible number of hours of sunshine                                       | ... | ...     | 90.8             |
| The mean temperature of the seven days   | ... | °       | 82.7             |
| The average temperature of the corresponding period for 24 years, S. G.'s Office       | ... | ...     | 83.1             |
| The extreme variation of temperature   | ... | ...     | 12.5             |
| The maximum temperature  | ... | ...     | 89.5             |
| The highest velocity of the wind in one hour   | ... | Miles.  | 14               |
| The highest pressure of wind on one square foot  | ... | Lbs.    | Not measureable. |
| The mean relative humidity   | ... | %       | 85               |
| The average relative humidity of the corresponding period for 24 years, S. G.'s Office | ... | ...     | 86               |
| The total fall of rain from 7th to 13th August 1887                                    | ... | Inches. | 2.79             |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ...     | 2.84             |
| The total fall from 1st January to 13th August 1887                                    | ... | ...     | 41.16            |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ...     | 40.27            |

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, Δ dew.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 15th August 1887.

# Meteorological Report of the Province of Ben

| DISTRICT.          | Representative station. | STATION OBSERVATIONS.           |                            |                      |                         |                     |                      |                 |                     |                |                           |                                   |                                 |                                     |              |
|--------------------|-------------------------|---------------------------------|----------------------------|----------------------|-------------------------|---------------------|----------------------|-----------------|---------------------|----------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|--------------|
|                    |                         | AIR PRESSURE.                   |                            |                      | WIND.                   |                     | TEMPERATURE.         |                 |                     |                |                           |                                   |                                 |                                     |              |
|                    |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction.   | Mean wind velocity. | Highest during week. | Date.           | Lowest during week. | Date.          | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean 10 A.M. |
| oree               | Gopalpore               | 29.664                          | 29.714                     | +0.050               | SSW                     | 216.0               | 89.2                 | 7th Aug.        | 77.8                | 10th 11th Aug. | 88.8                      | 78.8                              | 82.3                            | -1.4                                | 81.8         |
|                    | False Point             | 29.711                          | 29.730                     | +0.019               | WSW                     | 223.0               | 88.5                 | 11th "          | 75.1                | 9th "          | 86.0                      | 76.8                              | 81.7                            | -0.9                                | 81.8         |
| ttack              | Cuttack                 | 29.626                          | 29.707                     | +0.081               | WSW                     | 69.0                | 93.4                 | 6th "           | 74.3                | 9th "          | 90.4                      | 77.1                              | 83.8                            | 0                                   | 81.8         |
| lasore             | Balasore                | 29.632                          | 29.691                     | +0.059               | S                       | 113.1               | 90.4                 | 6th "           | 75.7                | 9th "          | 87.3                      | 77.3                              | 82.3                            | -0.3                                | 81.8         |
| th-West Midnapore  | Saugor Island           | 29.684                          | 29.710                     | +0.026               | SW                      | 473.0               | 90.2                 | 6th "           | 78.0                | 10th "         | 87.3                      | 79.4                              | 83.4                            | -0.2                                | 81.8         |
| th 24-Pargunnahs   | Midnapore               | 29.566                          | 29.716                     | +0.150               | S                       | 106.4               | 91.3                 | 6th "           | 75.3                | 9th "          | 88.7                      | 76.9                              | 82.8                            | -0.8                                | 81.8         |
| ergunnahs          | Calcutta                | 29.673                          | 29.694                     | +0.021               | SW                      | 165.0               | 88.5                 | 6, 7, 12th Aug. | 77.2                | 10th "         | 87.4                      | 78.0                              | 82.7                            | 0                                   | 81.8         |
| rrah               | Burdwan                 | 29.590                          | 29.690                     | +0.100               | S                       | 79.0                | 91.1                 | 6th "           | 77.9                | 7th, 11th Aug. | 88.6                      | 78.3                              | 83.5                            | -0.6                                | 81.8         |
| ghly               | Bankoora                | 29.361                          | —                          | —                    | Southerly               | 21.1                | 91.1                 | 6th "           | 75.1                | 11th "         | 87.4                      | 76.6                              | 82.0                            | —                                   | 81.8         |
| dwana              | Raneegunge              | 29.345                          | 29.654                     | +0.309               | SSW                     | 105.0               | 89.5                 | 7th "           | 75.9                | 7th 10th Aug.  | 87.3                      | 76.7                              | 82.0                            | -1.7                                | 81.8         |
| shadabad           | Berhampore              | 29.626                          | 29.694                     | +0.068               | SW                      | 90.1                | 89.1                 | 12th "          | 76.3                | 7th "          | 86.3                      | 77.1                              | 81.9                            | -2.3                                | 81.8         |
| dea                | Krishnagur              | 29.637                          | 29.703                     | +0.066               | WSW                     | 104.2               | 90.8                 | 6th "           | 76.3                | 11th "         | 88.2                      | 77.3                              | 82.8                            | —                                   | 81.8         |
| re                 | Jessore                 | 29.678                          | 29.712                     | +0.034               | SSW                     | 165.6               | 90.7                 | 6th "           | 76.9                | 7th "          | 88.6                      | 77.8                              | 83.2                            | -0.4                                | 81.8         |
| ina                | Chittagong              | 29.699                          | 29.789                     | +0.090               | Southerly               | 144.0               | 87.1                 | 12th "          | 74.0                | 9th "          | 83.1                      | 75.4                              | 79.2                            | -1.8                                | 80.0         |
| gong Hill Tracts   | Demaigiri               | 29.711                          | 29.723                     | +0.012               | SE                      | 176.0               | 84.3                 | 6th "           | 76.8                | 9th, 10th Aug. | 86.0                      | 77.9                              | 82.0                            | +0.1                                | 82.0         |
| rgunge             | Noakholly               | 29.667                          | 29.711                     | +0.044               | SE                      | 70.9                | 85.5                 | 12th "          | 73.3                | 12th "         | 83.9                      | 74.9                              | 79.4                            | —                                   | 81.8         |
| holly              | Furreedpore             | 29.674                          | 29.714                     | +0.040               | SSE                     | 130.0               | 86.5                 | 9th, 12th Aug.  | 76.4                | 11th "         | 86.0                      | 77.8                              | 81.9                            | -0.5                                | 81.8         |
| edpore             | Dacca                   | 29.704                          | 29.727                     | +0.023               | SSE                     | 185.0               | 89.6                 | 6th "           | 77.2                | 7, 9, 10 "     | 87.6                      | 78.4                              | 83.0                            | -0.2                                | 83.0         |
| illah              | Cominillah              | 29.713                          | 29.749                     | +0.036               | SE                      | 111.2               | 88.4                 | 12th "          | 74.8                | 6, 7, 9, 11 "  | 86.2                      | 75.5                              | 80.9                            | +0.7                                | 82.0         |
| minugh             | Mymensingh              | 29.680                          | 29.758                     | +0.078               | SE                      | 143.0               | 88.3                 | 12th "          | 76.1                | 9th "          | 86.2                      | 77.2                              | 81.7                            | -0.2                                | 82.0         |
|                    | Bogra                   | 29.627                          | 29.690                     | +0.063               | E                       | 97.7                | 88.8                 | 7th, 12th Aug.  | 76.8                | 6, 10-12 Aug.  | 86.6                      | 77.2                              | 81.9                            | —                                   | 81.8         |
|                    | Serajgunge              | 29.670                          | 29.717                     | +0.047               | SSE                     | 109.2               | 88.6                 | 12th "          | 76.7                | 9th "          | 87.0                      | 77.9                              | 82.5                            | +0.2                                | 81.8         |
| hye                | Rampore Beau-           | 29.615                          | 29.688                     | +0.073               | SE, NE                  | 108.7               | 85.3                 | 7th, 12th Aug.  | 70.7                | 6th "          | 86.7                      | 73.3                              | 80.0                            | -2.3                                | 81.8         |
| a                  | Maldah                  | 29.527                          | —                          | —                    | Calm,                   | —                   | 83.3                 | 9th "           | 77.1                | 11th "         | 86.8                      | 77.8                              | 82.3                            | —                                   | 81.8         |
| pore               | Dinapore                | 29.581                          | 29.701                     | +0.120               | Easterly                | 18.0                | 87.6                 | 10th "          | 75.1                | 6th "          | 85.9                      | 77.4                              | 81.6                            | -1.8                                | 82.0         |
| ore                | Rungpore                | 29.682                          | 29.707                     | +0.025               | E                       | 78.0                | 89.8                 | 12th "          | 74.7                | 6th "          | 86.4                      | 76.8                              | 81.6                            | -0.7                                | 82.0         |
| ree                | Julpigoree              | 29.445                          | 29.733                     | +0.288               | E                       | 116.9               | 87.9                 | 8th "           | 73.8                | 11th "         | 84.5                      | 75.2                              | 80.1                            | -0.8                                | 79.6         |
| ing Hill Districts | Darjeeling              | 29.637                          | —                          | +0.030               | Calm, Easterly          | 30.0                | 63.0                 | 8th "           | 54.6                | 12th "         | 63.0                      | 56.6                              | 59.8                            | -1.3                                | 60.0         |
| h                  | Purneah                 | 29.580                          | 29.713                     | +0.133               | Calm                    | 27.5                | 89.2                 | 9th, 10 "       | 75.0                | 10th 11th Aug. | 85.5                      | 76.8                              | 81.2                            | -3.3                                | 82.3         |
| Bhagulpore         | Mozufferpore            | —                               | —                          | —                    | Observations suspended. |                     |                      |                 |                     |                |                           |                                   |                                 |                                     |              |
| rpore              | Durbhunga               | 29.631                          | 29.689                     | +0.058               | ESE                     | 157.0               | 87.4                 | 6th, 10th Aug.  | 77.0                | 9th "          | 85.5                      | 78.2                              | 81.8                            | -1.7                                | 80.4         |
| nga                | Motihari                | 29.435                          | 29.663                     | +0.228               | SE                      | 219.1               | 88.7                 | 8th "           | 76.4                | 7th "          | 85.9                      | 77.3                              | 81.6                            | -1.5                                | 82.3         |
| xun                | Chupra                  | 29.460                          | 29.656                     | +0.196               | Easterly                | 8.6                 | 87.5                 | 12th "          | 76.1                | 7th "          | 86.1                      | 77.7                              | 81.4                            | -3.3                                | 81.9         |
|                    | Dehree                  | 29.327                          | 29.683                     | +0.356               | Southerly               | 100.6               | 87.9                 | 8th "           | 74.0                | 6th "          | 83.9                      | 77.0                              | 80.5                            | -2.0                                | 81.7         |
| d                  | Buxar                   | 29.411                          | 29.654                     | +0.243               | Variable                | 184.9               | 90.4                 | 10th "          | 76.2                | 6th "          | 80.7                      | 77.6                              | 82.3                            | -1.6                                | 83.5         |
|                    | Arrah                   | 29.448                          | 29.641                     | +0.193               | SE                      | 110.3               | 91.9                 | 12th "          | 75.6                | 6th "          | 87.3                      | 77.6                              | 81.9                            | -2.3                                | 82.1         |
|                    | Gya                     | 29.274                          | 29.653                     | +0.379               | NW                      | 48.0                | 88.4                 | 6th "           | 75.8                | 7th "          | 85.8                      | 77.2                              | 81.5                            | -2.7                                | 83.0         |
|                    | Bankipore               | 29.401                          | 29.675                     | +0.274               | Southerly               | 89.0                | 87.9                 | 11th "          | 77.7                | 6th "          | 86.0                      | 78.6                              | 82.3                            | -2.6                                | 83.6         |
| hagulpore          | Bhagulpore              | 29.504                          | 29.686                     | +0.182               | E                       | 41.0                | 87.4                 | 9th "           | 77.0                | 6, 7, 10 "     | 86.8                      | 77.7                              | 81.8                            | -1.2                                | 82.9         |
| g                  | Dankota                 | 29.169                          | —                          | —                    | Calm                    | 36.5                | 87.6                 | 8th "           | 76.1                | 7th "          | 85.5                      | 76.7                              | 81.1                            | —                                   | 82.4         |
| ugh                | Hazaribagh              | 27.678                          | 29.683                     | +0.005               | SSE                     | 22.3                | 83.9                 | 8th "           | 71.7                | 6, 9-11 "      | 80.8                      | 72.1                              | 76.5                            | -1.8                                | 76.9         |
| gna                | Ranchos                 | 27.651                          | 29.670                     | +0.019               | Westerly                | 134.0               | 85.5                 | 7th "           | 76.9                | 8, -11 "       | 81.2                      | 71.5                              | 76.4                            | -2.3                                | 77.1         |
| om                 | Chyobassa               | 28.008                          | —                          | —                    | SSW & SK                | 51.1                | 92.2                 | 6th "           | 75.0                | 7th "          | 88.0                      | 70.0                              | 82.5                            | —                                   | 82.1         |
|                    | Sibsagar                | 29.438                          | 29.772                     | +0.334               | SW                      | 58.0                | 90.1                 | 7th "           | 76.5                | 10, 11 "       | 86.5                      | 76.5                              | 81.5                            | -2.3                                | 82.3         |
|                    | Dhubr                   | 29.617                          | 29.736                     | +0.119               | SW                      | 158.0               | 88.7                 | 12th "          | 75.3                | 6th "          | 83.3                      | 76.4                              | 79.9                            | -1.0                                | 80.3         |
|                    | Silchar                 | 29.673                          | 29.779                     | +0.106               | Calm                    | 69.0                | 90.5                 | 12th "          | 74.3                | 10th "         | 107.5                     | 70.1                              | 81.8                            | -0.8                                | 81.9         |

Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the same place. The normal means of air pressure are expressed in percentage, saturated air being represented by 100. A change of 100 in the normal means of air pressure is equivalent to a change of 100 in the normal means of temperature.

for the week ending Friday, the 12th August 1887.

| DISTRICT OBSERVATIONS.      |   |  |                    |              |                     |              |            |                      |              |            |                               |                              |                 |     | Representative station.   | DISTRICT. |
|-----------------------------|---|--|--------------------|--------------|---------------------|--------------|------------|----------------------|--------------|------------|-------------------------------|------------------------------|-----------------|-----|---------------------------|-----------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | RAINFALL.          |              |                     |              |            |                      |              |            |                               |                              |                 |     |                           |           |
|                             |   |  | Of week.           |              | Since 1st of month. |              |            | Since 15th May 1887. |              |            | Average number of rainy days. | Normal number of rainy days. |                 |     |                           |           |
|                             |   |  | Mean for district. | Normal mean. | Mean for district.  | Normal mean. | Variation. | Mean for district.   | Normal mean. | Variation. |                               |                              |                 |     |                           |           |
| 81                          | 5.9                                       | 1.70                                   | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | Gopalpore       | ... | Pooroo                    |           |
| 89                          | 8.9                                       | 1.17                                   | —                  | 2.67         | —                   | 4.98         | —          | —                    | 27.51        | —          | 4.0                           | 4.0                          | False Point     | ... | Cuttack                   |           |
| 72                          | 8.0                                       | 2.51                                   | —                  | 2.40         | —                   | 4.23         | —          | —                    | 24.27        | —          | 4.0                           | 4.0                          | Cuttack         | ... | Balasore                  |           |
| 78                          | 4.9                                       | 0.51                                   | —                  | 2.42         | —                   | 5.08         | —          | —                    | 24.05        | —          | 4.0                           | 4.0                          | Balasore        | ... | South-West Midnapore      |           |
| 85                          | 8.9                                       | 3.16                                   | 2.34               | 3.43         | 5.41                | 5.56         | —0.15      | 33.90                | 33.00        | +0.90      | 3.7                           | 4.5                          | Saugor Island   | ... | South 24-Pergunnahs       |           |
| 81                          | 5.7                                       | 2.45                                   | 1.44               | 3.00         | 0.66                | 5.98         | +0.08      | 30.97                | 29.84        | +7.13      | 4.0                           | 4.1                          | Midnapore       | ... | Midnapore                 |           |
| 83                          | 8.9                                       | 3.20                                   | 2.20               | 2.87         | 5.02                | 5.22         | —0.20      | 27.61                | 30.31        | —2.70      | 4.3                           | 4.9                          | Caleutta        | ... | 24-Pergunnahs             |           |
| 78                          | 9.3                                       | 2.53                                   | 1.99               | 2.98         | 5.41                | 4.85         | +0.56      | 33.22                | 26.50        | +6.63      | 5.3                           | 4.2                          | Burdwan         | ... | Howrah                    |           |
| 85                          | 7.9                                       | 3.66                                   | 4.08               | 3.13         | 13.50               | 5.95         | +7.63      | 40.15                | 30.71        | +9.44      | 6.3                           | 4.4                          | Bankoora        | ... | Hoghly                    |           |
| 83                          | 8.4                                       | 5.30                                   | 3.65               | 2.78         | 7.43                | 5.11         | +2.32      | 34.45                | 29.84        | +4.60      | 5.3                           | 4.9                          | Rancegunge      | ... | Burdwan                   |           |
| 88                          | 9.7                                       | 5.06                                   | 5.68               | 2.25         | 7.61                | 4.79         | +2.82      | 41.40                | 27.21        | +14.19     | 5.3                           | 4.4                          | Berhampore      | ... | West Burdwan              |           |
| 81                          | 8.3                                       | 1.18                                   | 2.42               | 2.1          | 5.19                | 1.58         | +3.61      | 120.55               | 28.20        | —1.65      | 4.8                           | 4.1                          | Krishnaghur     | ... | Moorsheadabad             |           |
| 80                          | 9.1                                       | 3.73                                   | 2.72               | 2.95         | 4.02                | 5.12         | —0.50      | 24.62                | 32.33        | —7.71      | 4.4                           | 4.6                          | Jessore         | ... | Nuddea                    |           |
| 86                          | 9.0                                       | 11.85                                  | —                  | 6.50         | —                   | 10.57        | —          | —                    | 77.17        | —          | 5.5                           | 5.5                          | Chittagong      | ... | Jessore                   |           |
| 87                          | 9.4                                       | 1.80                                   | 2.08               | 3.75         | 5.75                | 6.87         | —1.12      | 31.56                | 48.71        | —17.15     | 4.3                           | 5.6                          | Barrisal        | ... | Khoolna                   |           |
| 86                          | 5.0                                       | 10.34                                  | —                  | 7.65         | —                   | 11.00        | —          | —                    | 68.60        | —          | 5.9                           | 5.9                          | Nonkholly       | ... | Chittagong Hill Tracts    |           |
| 82                          | 3.3                                       | 1.35                                   | 1.45               | 2.71         | 2.90                | 4.98         | —1.99      | 23.61                | 43.94        | —10.33     | 3.0                           | 4.6                          | Furzedpore      | ... | Backergunge               |           |
| 83                          | 8.6                                       | 2.04                                   | 2.80               | 3.25         | 4.00                | 6.05         | —2.05      | 26.48                | 37.50        | —11.01     | 4.8                           | 5.4                          | Dacca           | ... | Nonkholly                 |           |
| 81                          | 6.3                                       | 4.21                                   | —                  | 4.11         | —                   | 7.01         | —          | —                    | 43.19        | —          | 5.4                           | 5.4                          | Commallah       | ... | Furzedpore                |           |
| 83                          | 8.0                                       | 3.49                                   | 3.25               | 3.96         | 6.12                | 5.43         | +0.69      | 42.72                | 30.61        | +12.11     | 4.6                           | 4.8                          | Mymensingh      | ... | Dacca                     |           |
| 85                          | 9.4                                       | 1.71                                   | 1.26               | 2.82         | 3.27                | 4.43         | —1.16      | 41.36                | 31.93        | +9.43      | 3.3                           | 4.6                          | Bogra           | ... | Tipperah                  |           |
| 85                          | 7.0                                       | 0.79                                   | 1.40               | 2.85         | 4.50                | 4.30         | +0.20      | 28.92                | 29.98        | —1.06      | 3.0                           | 4.1                          | Serajunge       | ... | Mymensingh                |           |
| 84                          | 4.9                                       | 3.21                                   | 3.7                | 2.51         | 6.11                | 4.34         | +1.77      | 31.02                | 29.63        | +1.39      | 4.0                           | 4.5                          | Rampore Beaulah | ... | Bogra                     |           |
| 84                          | 7.0                                       | 2.36                                   | 2.57               | 2.41         | 4.10                | 4.65         | —0.55      | 35.65                | 31.24        | +4.41      | 5.0                           | 4.4                          | Maldah          | ... | Pubna                     |           |
| 87                          | 7.1                                       | 7.43                                   | 3.70               | 2.55         | 8.53                | 4.49         | +4.04      | 50.81                | 33.42        | +17.39     | 5.0                           | 4.5                          | Dinapore        | ... | Rajshahye                 |           |
| 85                          | 5.9                                       | 5.13                                   | 3.26               | 2.75         | 9.33                | 4.38         | +4.95      | 61.35                | 44.41        | +16.94     | 5.0                           | 4.1                          | Rungpore        | ... | Maldah                    |           |
| 91                          | 9.1                                       | 6.90                                   | 6.55               | 6.55         | 1.70                | 9.15         | +1.87      | 81.91                | 68.53        | +13.38     | 6.2                           | 5.4                          | Jalpigoree      | ... | Dinapore                  |           |
| 90                          | 9.9                                       | 13.77                                  | 12.18              | 8.26         | 18.19               | 15.44        | +2.75      | 83.00                | 77.16        | +5.84      | 6.0                           | 6.0                          | Darjeeling      | ... | Rungpore                  |           |
| 80                          | 7.9                                       | 4.08                                   | 5.41               | 3.19         | 6.61                | 5.37         | +1.24      | 41.14                | 33.03        | +8.11      | 5.0                           | 4.5                          | Purneah         | ... | Jalpigoree                |           |
| 86                          | 8.9                                       | 7.35                                   | —                  | 2.78         | —                   | 4.43         | —          | —                    | 21.50        | —          | 5.0                           | 3.9                          | Mozufferpore    | ... | Cooch Behar               |           |
| 83                          | 9.7                                       | 6.04                                   | 4.09               | 3.46         | 6.45                | 5.46         | +0.99      | 28.58                | 26.52        | +2.06      | 4.0                           | 3.7                          | Mothari         | ... | Darjeeling Hill Districts |           |
| 80                          | 9.0                                       | 1.89                                   | 2.79               | 2.85         | 6.19                | 4.46         | +1.73      | 24.81                | 21.45        | +3.36      | 4.0                           | 3.7                          | Chura           | ... | Purneah                   |           |
| 87                          | 7.9                                       | 3.67                                   | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | Dehradoon       | ... | North Bhagulpore          |           |
| 84                          | 7.9                                       | 3.88                                   | 4.01               | 2.55         | 8.92                | 4.81         | +4.11      | 25.73                | 22.67        | +3.06      | 4.5                           | 3.9                          | Buxar           | ... | Mozufferpore              |           |
| 88                          | 9.6                                       | 2.02                                   | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | Arrah           | ... | Durbhunga                 |           |
| 81                          | 9.4                                       | 6.04                                   | 5.72               | 2.77         | 7.11                | 4.88         | +2.23      | 27.31                | 21.82        | +5.49      | 5.3                           | 3.7                          | Gya             | ... | Chumparun                 |           |
| 94                          | 10.0                                      | 1.45                                   | 2.26               | 2.50         | 5.73                | 4.15         | +1.58      | 27.02                | 21.09        | +5.93      | 4.8                           | 3.6                          | Bankipore       | ... | Sarun                     |           |
| 16                          | 5.3                                       | 4.56                                   | 3.45               | 2.92         | 6.41                | 4.74         | +1.67      | 30.85                | 24.70        | +6.15      | 4.6                           | 4.2                          | Bankipore       | ... | Dehradoon                 |           |
| 86                          | 6.1                                       | 3.33                                   | 3.90               | 2.69         | 7.59                | 4.65         | +2.94      | 28.42                | 28.56        | +0.14      | 5.5                           | 4.2                          | Doonka          | ... | Buxar                     |           |
| 91                          | 10.0                                      | 5.28                                   | 5.58               | 0.270        | 10.17               | 5.18         | +4.99      | 32.85                | 28.59        | +4.26      | 5.6                           | 4.5                          | H. zariouh      | ... | Shahabad                  |           |
| 86                          | 9.6                                       | 4.40                                   | —                  | 3.12         | —                   | 5.81         | —          | —                    | 27.60        | —          | 4.0                           | 4.0                          | Ranchee         | ... | Arrah                     |           |
| 80                          | 8.4                                       | 7.91                                   | 6.80               | 3.58         | 10.03               | 6.00         | +3.93      | 39.01                | 31.51        | +7.50      | 6.0                           | 5.1                          | Chyabassa       | ... | Gya                       |           |
| 80                          | 10.0                                      | 4.65                                   | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | Sibsagar        | ... | Putna                     |           |
| 89                          | 8.1                                       | 5.61                                   | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | Dhubri*         | ... | South Bhagulpore          |           |
| 85                          | 9.7                                       | 5.01                                   | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | Slichar         | ... | Monghyr                   |           |

10. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.  
11. The means of the district are two numerical averages of the rainfall returns received in the district. i.e. first the total rainfall at the station is taken, and then the average of the whole is taken, the whole sky being denoted by 10. Under the head District observations of rainfall, the normal mean is given. The means of the district are two numerical averages of the rainfall returns received in the district. i.e. first the total rainfall at the station is taken, and then the average of the whole is taken, the whole sky being denoted by 10. Under the head District observations of rainfall, the normal mean is given.









**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS  
TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
12TH OF AUGUST 1887.**

THE meteorological conditions prevailing over the province for the previous week were almost normal for the rainy season, and a fairly strong monsoon current had been blowing, which had given rise to good general rain. The two branches of the monsoon current had alternately increased and decreased in strength, and on the 5th the province was about equally influenced by the current blowing from the Bay of Bengal and by the Bombay monsoon current, and westerly winds from the Arabian Sea current were blowing in Chutia Nagpur and South Behar and over parts of South-West Bengal and Orissa. On the 6th the monsoon current blowing from the Bay of Bengal commenced to increase in strength, and the interaction between the two currents over the central parts of the province produced a distinct cyclonic circulation of winds over part of Behar, and also produced more or less disturbed weather generally over the province, and rather heavy and general rain was reported. On the following day there was a slight increase in the strength of the westerly monsoon current, but otherwise conditions were unaltered, and again rainfall was general, though the amounts received were rather irregular. On the 8th there was a distinct tendency to the formation of a cyclonic circulation of winds over the central parts of the province, and rainfall continued general in all districts, and also rather heavy, except in the south-western districts. Conditions remained practically unchanged on the 9th, and rainfall continued, and on the 10th a great decrease in the strength of the westerly current took place, and rather strong south-easterly and easterly winds prevailed at almost all stations. On this day also general rainfall was reported, and very heavy falls were received in some of the districts of North Bengal and North Behar. On the 11th similar conditions as to the direction and intensity of the monsoon current obtained, but the area of rainfall commenced distinctly to contract, and parts of the east and north of the province became to a great extent rainless. On the 12th the westerly element again commenced to make itself felt slightly, but it was evident that both branches of the monsoon had become decidedly weaker as rain-bearing currents, and on this day the area of rainfall again rapidly contracted, and the greater part of the province received little or no rain.

It will thus be seen that the meteorology of the week has again been of very simple nature, and that a good monsoon current has been blowing over the province throughout the week: first one branch of the current predominating, and then the other, but at the close of the week the two currents were rapidly decreasing in force as measured by the amount of rainfall received.

**Pressure.**—As is usual when the conditions of the atmosphere are nearly normal, the variations of pressure have been of a more or less oscillating nature, but, with the reduction in the strength of the monsoon current blowing over the province, these oscillations have had an upward tendency, and pressure at the close of the week was very decidedly above the normal. For the first two days pressure generally rose, it then fell for one or two days, and rose generally for the remainder of the week, and on the 12th the average pressure was decidedly more than a tenth of an inch in excess of the normal, and at some stations, such as Purneah and Durbhanga, the excess was larger than 0·17". Taking only those stations into consideration from which observations have been received for a considerable number of years, and which therefore furnish reliable averages, the mean pressure of the whole province of Bengal for the week may be said to have been 0·058" in excess of the normal, while the extreme variations are from an excess of 0·089" at Durbhanga to about 0·04" in the extreme west of the province. In Assam the mean pressure has also been in excess of the normal by 0·057", and the smallest excess is at Silchar, where it equals 0·047", and the largest at Sibsagar, where it is 0·067".

**Temperature.**—Variations during the week have been of little importance, but owing to the heavy rainfall the mean temperature has been below the normal in all districts. The largest defects are in North and South Behar and in Chutia Nagpur, where they range from 2° to 2½°; in North Bengal the defect is 1·1°, while in East and South-West Bengal and Orissa the defects are less than 1°. For the whole province of Bengal the mean temperature has been below the normal by 1·4°. In Assam also temperature has been below the normal by an average amount of 1·5°.

**Rainfall.**—The daily distribution of the rain has already been referred to, and with the general and rather heavy falls that have occurred, rainfall has been in excess of the normal over the greater part of the province. Compared with the normal fall for the period, and expressed as a percentage of this amount, the actual falls in each meteorological district will become in Orissa 85 per cent.; in South-West Bengal 105 per cent.; in East Bengal 95 per cent.; in North Bengal 109 per cent.; in North Behar 153 per cent.; in South Behar 126 per cent, and in Chutia Nagpur 159 per cent. Taking each of these districts to have an equal value in the calculation, the actual average rainfall of the whole province for the past week has equalled 119 per cent. of the normal. Taking up the rainfall more in detail, the following are the districts which have received very heavy rain, that is amounts largely in excess of the normal:—Bankoorah, Moorshedabad, Chittagong, Dinagepur, Rungpur,

Purneah, North Bhagulpore, Darbhunga, Chumparun, Shahabad, Gya, Sonthal Pergunnahs, Hasaribagh and Chyebassa; while the following have received decidedly defective falls:—Balasore, Midnapur, Burdwan, Burrisal, Furreedpur, Bogra, and Pubna.

A few very heavy falls have been reported during the week, and thus on the 10th, Darjeeling received 6 inches, and on the 7th Buxar in the Darjeeling hills district reported the excessive fall of 16·10 inches. At many stations falls in excess of three inches have been received on single days, while in several instances four and five inches have been recorded.

At the Assam stations the following are the amounts recorded during the week:—At Dhubri 5·61 inches, at Silchar 5·01 inches and at Sibsagar 4·65 inches.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 12th of August 1887:—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                          |                         |                       |  |          |                 | RAINFALL.  |                         |                                |            |                     |                 |                      |       |
|------------------------------|-------------------------------|------------------------------|--------------------------|-------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.       |                         |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 15th May 1887. |       |
|                              |                               |                              | (1) highest of each day. | (1) lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. |                      |       |
|                              |                               |                              |                          |                         |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |       |
|                              |                               |                              |                          |                         |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |       |
| Orissa                       | 93·4                          | 74·3                         | 87·5                     | 77·5                    | 82·5                  | −0·7   | 2·10     | 2·48            | −0·38      | 4·4                     | 3·9                            | +0·5       | 3·75                | 1·77            | 26·24                | 28·59 |
| South-West Bengal            | 91·3                          | 75·1                         | 87·9                     | 77·4                    | 82·7                  | −0·9   | 3·02     | 2·88            | +0·14      | 4·7                     | 4·6                            | +0·1       | 6·41                | 5·18            | 32·25                | 29·71 |
| East Bengal                  | 89·6                          | 73·3                         | 85·6                     | 76·7                    | 81·2                  | −0·3   | 4·10     | 4·30            | −0·20      | 4·4                     | 5·3                            | −0·9       | 6·95                | 6·88            | 36·17                | 40·53 |
| North Bengal                 | 89·8                          | 70·7                         | 86·2                     | 76·5                    | 81·4                  | −1·1   | 3·71     | 3·41            | +0·30      | 4·8                     | 4·0                            | +0·8       | 8·29                | 5·44            | 52·94                | 42·19 |
| North Behar                  | 88·7                          | 75·6                         | 85·5                     | 77·5                    | 81·5                  | −2·4   | 4·78     | 3·13            | +1·65      | 4·8                     | 4·0                            | +0·8       | 6·68                | 4·86            | 34·09                | 27·48 |
| South Behar                  | 91·9                          | 74·0                         | 85·7                     | 77·5                    | 81·6                  | −2·1   | 3·52     | 2·79            | +0·73      | 4·9                     | 4·0                            | +0·9       | 7·17                | 4·71            | 29·99                | 24·97 |
| Chutia Nagpur                | 85·9*                         | 70·9*                        | 81·0*                    | 71·8*                   | 76·4*                 | −2·1*  | 4·70     | 3·94            | +1·76      | 5·5                     | 4·7                            | +0·8       | 9·19                | 5·64            | 31·08                | 28·48 |
| Assam                        | 90·5                          | 74·3                         | 85·8                     | 76·3                    | 81·1                  | −1·5   |          |                 |            |                         |                                |            |                     |                 |                      |       |

\* Chyebassa not included.

METEOROLOGICAL OFFICE, BENGAL;

The 16th August 1887.

A. PEDLER,

Offg. Meteorological Reporter to the Govt. of Bengal.

### Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 7th to 13th August 1887.

| MONTH. | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|--------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|        |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.  |       |              |          |        |          |                | Inches.         |            | %         | Inches. |
| August | 7th   | 82·5         | 90·0     | 11·4   | 78·6     | 79·9           | ·983            | 78·9       | 89        | .....   |
| "      | 8th   | 81·2         | 88·5     | 9·7    | 78·8     | 79·3           | ·977            | 78·5       | 91        | 0·37    |
| "      | 9th   | 80·3         | 87·1     | 9·5    | 77·6     | 78·3           | ·943            | 77·5       | 91        | 0·84    |
| "      | 10th  | 81·6         | 88·8     | 11·4   | 77·4     | 79·4           | ·976            | 78·5       | 90        | 0·0     |
| "      | 11th  | 83·0         | 91·0     | 13·4   | 77·6     | 78·6           | ·920            | 76·7       | 81        | 0·03    |
| "      | 12th  | 82·3         | 91·2     | 13·2   | 78·0     | 79·5           | ·972            | 78·4       | 88        | .....   |
| "      | 13th  | 84·5         | 92·8     | 15·0   | 77·8     | 79·5           | ·942            | 77·4       | 79        | .....   |

The mean temperature of the seven days

The extreme variation of temperature

The maximum temperature

The mean relative humidity

The total fall of rain from 7th to 13th August 1887

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA;

The 15th August 1887.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

## MEMORANDUM.

THE leading facts in connection with the mortuary statistics of the districts in Bengal, for the month of April 1887, are the following:—

1. That 126,212 persons died among a population of 66,163,884, representing a casualty-rate of 22·80 per 1,000 per annum, against 19·08 per 1,000 in the preceding month, and 20·88 per 1,000 during the corresponding month of the past year, indicating, as compared with both the periods, a considerable improvement in the registration of deaths.

2. That the highest death-rates were reported to have occurred in the following districts:—

| <i>Districts.</i> |     |                  | <i>Districts.</i> |     |                  |
|-------------------|-----|------------------|-------------------|-----|------------------|
|                   |     | Ratio per mille. |                   |     | Ratio per mille. |
| Backergunge       | ... | 47·88            | Maldah            | ... | 28·20            |
| Jalpaiguri        | ... | 41·04            | Rajshahye         | ... | 27·84            |
| Pubna             | ... | 37·32            | Birbhum           | ... | 27·60            |
| Rungpore          | ... | 35·88            | Faridpore         | ... | 27·60            |
| Dinajpur          | ... | 33·48            | Darjiling         | ... | 27·36            |
| Murshidabad       | ... | 31·32            | Bogra             | ... | 25·56            |
| Puri              | ... | 30·00            | Noakhali          | ... | 25·44            |
| Bhagulpore        | ... | 29·40            | Jessore           | ... | 25·08            |
| Monghyr           | ... | 29·16            |                   |     |                  |

3. That in comparison with the results of the corresponding month of the preceding year, the mortality from fever had increased to a noticeable extent, the death-rates from bowel-complaints and injury exhibited no variations, and there were no marked differences in fatal results from the rest of the diseases above specified, *vide* figures given below:—

|                  |     |     |     | Ratio per mille during— |             |
|------------------|-----|-----|-----|-------------------------|-------------|
|                  |     |     |     | April 1887.             | April 1886. |
| Cholera          | ... | ... | ... | 3·72                    | 3·24        |
| Small-pox        | ... | ... | ... | ·10                     | ·12         |
| Fever            | ... | ... | ... | 15·00                   | 13·02       |
| Bowel-complaints | ... | ... | ... | ·72                     | ·72         |
| Injury           | ... | ... | ... | ·24                     | ·24         |
| Other causes     | ... | ... | ... | 2·76                    | 2·40        |

4. That the following districts returned conspicuously high mortality from cholera and fever, and that no districts exhibited any noticeable high suffering from the other diseases mentioned in the above table, excepting Puri, where 12·24 per 1,000 of the population died from the unspecified diseases coming under the head of "Other causes":—

| <i>Cholera.</i> |     |                  | <i>Fever.</i> |     |                  |
|-----------------|-----|------------------|---------------|-----|------------------|
|                 |     | Ratio per mille. |               |     | Ratio per mille. |
| Backergunge     | ... | 21·72            | Jalpaiguri    | ... | 32·40            |
| Faridpore       | ... | 14·64            | Pubna         | ... | 30·12            |
| Puri            | ... | 9·60             | Dinajpur      | ... | 29·88            |
| Rungpore        | ... | 7·32             | Rungpore      | ... | 26·62            |
| Jessore         | ... | 6·84             | Rajshahye     | ... | 26·68            |
| Jalpaiguri      | ... | 6·84             | Murshidabad   | ... | 23·16            |
| Balasore        | ... | 6·60             | Bogra         | ... | 23·04            |
| 24-Pergunnahs   | ... | 6·48             | Maldah        | ... | 22·20            |
| Dacca           | ... | 5·76             | Monghyr       | ... | 21·84            |
| Murshidabad     | ... | 5·52             |               |     |                  |
| Bhagulpore      | ... | 5·00             |               |     |                  |
| Pubna           | ... | 5·28             |               |     |                  |
| Maldah          | ... | 5·04             |               |     |                  |
| Khulna          | ... | 4·80             |               |     |                  |
| Serampore       | ... | 4·32             |               |     |                  |
| Chumparun       | ... | 4·20             |               |     |                  |
| Tipperah        | ... | 3·96             |               |     |                  |
| Monghyr         | ... | 3·48             |               |     |                  |
| Nuddea          | ... | 3·36             |               |     |                  |
| Gya             | ... | 3·12             |               |     |                  |

5. That under the heads of *Sex*, *Class* and *Age*, the mortality stood as follows:—

| <i>According to Sex.</i>                        |                  | <i>According to Class.</i> |                  | <i>According to Age.</i> |                  |
|---|------------------|----------------------------|------------------|--------------------------|------------------|
|   | Ratio per mille. |                            | Ratio per mille. |                          | Ratio per mille. |
| Males   | 25·20            | Christians                 | 12·48            | Under 1 year             | 135·96           |
| Females   | 20·52            | Hindus                     | 21·48            | 1 and under 5 years      | 28·68            |
| Ratio of male deaths to every 100 female deaths | 121              | Mahomedans                 | 25·80            | 5 " " 10 " "             | 12·60            |
|   |                  | Budhists                   | 13·20            | 10 " " 15 " "            | 10·92            |
|   |                  | Other classes              | 20·88            | 15 " " 20 " "            | 15·48            |
|   |                  |                            |                  | 20 " " 30 " "            | 16·20            |
|   |                  |                            |                  | 30 " " 40 " "            | 18·00            |
|   |                  |                            |                  | 40 " " 50 " "            | 21·96            |
|   |                  |                            |                  | 50 " " 60 " "            | 30·12            |
|   |                  |                            |                  | 60 years and upwards     | 48·00            |

R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

The 15th August 1887.

MORTALITY ACCORDING TO—

Disease.

POPULATION.

DISTRICTS.

DIVISIONS.

| DIVISIONS.             | DISTRICTS.                         | POPULATION. |            | DEATHS FROM— |            |          |            |        |                   |         |                 |             |          | RATIO PER 1,000 OF POPULATION PER ANNUM. |        | COMPARISON WITH PREVIOUS PERIOD. |         | DEATHS AMONG—   |             | RATIO PER 1,000 OF POPULATION PER ANNUM.                         |   | Ratio of male deaths to every 100 female deaths. |          |       |
|------------------------|------------------------------------|-------------|------------|--------------|------------|----------|------------|--------|-------------------|---------|-----------------|-------------|----------|--|--------|----------------------------------|---------|-----------------|-------------|--|---|--|----------|-------|
|                        |                                    | Males.      | Females.   | Total.       |            | Cholera. | Small-pox. | Fever. | Howel-complaints. | Injury. | Other diseases. | All causes. | Cholera. | Small-pox.                               | Fever. | Howel-complaints.                | Injury. | Other diseases. | All causes. | Ratio of deaths in the corresponding month of the previous year. | Ratio of deaths per 1,000 of population in the previous year. | Males.   | Females. |       |
|                        |                                    |             |            |              |            |          |            |        |                   |         |                 |             |          |  |        |                                  |         |                 |             |  |   |  |          |       |
| WAV.                   | Burdwan                            | 668,595     | 725,549    | 1,394,144    | 1,394,144  | 75       | .....      | 1,745  | 41                | 18      | 448             | 2,380       | 60       | .....                                    | 15,000 | 71                               | 19      | 854             | 90,04       | 19,90  | 1,277   | 1,103  | 21,96    | 19,24 |
|                        | Bankura                            | 807,130     | 834,610    | 1,641,740    | 1,641,740  | 18       | .....      | 1,974  | 20                | 10      | 288             | 1,316       | 12       | .....                                    | 11,16  | 24                               | 19      | 324             | 19,90       | 19,90  | 702   | 614  | 21,96    | 19,24 |
|                        | Birbhum                            | 811,565     | 834,610    | 1,646,175    | 1,646,175  | 92       | .....      | 2,468  | 11                | 10      | 288             | 1,316       | 12       | .....                                    | 11,16  | 24                               | 19      | 324             | 19,90       | 19,90  | 702   | 614  | 21,96    | 19,24 |
|                        | Midnapore                          | 811,565     | 834,610    | 1,646,175    | 1,646,175  | 291      | .....      | 2,468  | 248               | 58      | 521             | 4,085       | 132      | .....                                    | 19,90  | 71                               | 19      | 324             | 19,90       | 19,90  | 1,004   | 890  | 21,96    | 19,24 |
| DEBT.                  | Hughli                             | 811,565     | 834,610    | 1,646,175    | 1,646,175  | 107      | .....      | 784    | 57                | 24      | 128             | 1,086       | 192      | .....                                    | 13,90  | 18                               | 36      | 228             | 17,76       | 17,76  | 2,113   | 1,945  | 20,94    | 18,24 |
|                        | Baranpore                          | 174,366     | 177,589    | 351,955      | 351,955    | 125      | .....      | 904    | 57                | 8       | 83              | 599         | 4,32     | .....                                    | 10,32  | 1,02                             | 21      | 2,76            | 19,90       | 19,90  | 571   | 517  | 21,96    | 17,76 |
|                        | Total (Hughli including Serampore) | 400,081     | 524,974    | 925,055      | 925,055    | 235      | .....      | 1,608  | 154               | 32      | 206             | 1,693       | 2,76     | .....                                    | 13,24  | 1,80                             | 36      | 2,40            | 19,90       | 19,90  | 821   | 776  | 22,96    | 17,40 |
| ARIS.                  | Hovrah                             | 316,470     | 318,902    | 635,372      | 635,372    | 124      | .....      | 1,831  | 129               | 39      | 142             | 868         | 2,58     | .....                                    | 8,25   | 2,28                             | 36      | 2,64            | 16,32       | 16,32  | 892   | 776  | 21,96    | 17,40 |
|                        | 24 Pergunnahs                      | 874,430     | 894,430    | 1,768,860    | 1,768,860  | 1,028    | .....      | 2,279  | 311               | 45      | 640             | 4,210       | 5,74     | .....                                    | 12,00  | 1,32                             | 36      | 2,64            | 16,32       | 16,32  | 1,579   | 998  | 18,34    | 13,80 |
|                        | Nadua                              | 805,770     | 840,943    | 1,646,713    | 1,646,713  | 472      | .....      | 2,781  | 30                | 67      | 370             | 3,437       | 6,48     | .....                                    | 19,48  | 2,4                              | 36      | 2,64            | 16,32       | 16,32  | 2,013   | 1,579  | 20,94    | 13,80 |
|                        | Jessore                            | 805,770     | 840,943    | 1,646,713    | 1,646,713  | 1,115    | .....      | 2,781  | 30                | 67      | 370             | 3,437       | 6,48     | .....                                    | 19,48  | 2,4                              | 36      | 2,64            | 16,32       | 16,32  | 2,013   | 1,579  | 20,94    | 13,80 |
| CORE.                  | Khanna                             | 805,770     | 840,943    | 1,646,713    | 1,646,713  | 571      | .....      | 2,781  | 30                | 67      | 370             | 3,437       | 6,48     | .....                                    | 19,48  | 2,4                              | 36      | 2,64            | 16,32       | 16,32  | 2,013   | 1,579  | 20,94    | 13,80 |
|                        | Dumuria                            | 805,770     | 840,943    | 1,646,713    | 1,646,713  | 440      | .....      | 2,781  | 30                | 67      | 370             | 3,437       | 6,48     | .....                                    | 19,48  | 2,4                              | 36      | 2,64            | 16,32       | 16,32  | 2,013   | 1,579  | 20,94    | 13,80 |
|                        | Rajshahi                           | 805,770     | 840,943    | 1,646,713    | 1,646,713  | 274      | .....      | 1,778  | 24                | 11      | 124             | 1,800       | 9,90     | .....                                    | 10,1   | 1,25                             | 36      | 2,64            | 16,32       | 16,32  | 1,487   | 1,311  | 20,94    | 13,80 |
|                        | Barisal                            | 805,770     | 840,943    | 1,646,713    | 1,646,713  | 86       | .....      | 2,808  | 20                | 32      | 138             | 3,528       | 7,32     | .....                                    | 20,94  | 1,2                              | 12      | 1,80            | 16,32       | 16,32  | 1,845   | 1,311  | 20,94    | 13,80 |
| FROM.                  | Burgha                             | 1,007,701   | 678,412    | 1,686,113    | 1,686,113  | 1,297    | .....      | 4,419  | 65                | 32      | 323             | 5,419       | 7,32     | .....                                    | 20,94  | 1,2                              | 12      | 1,80            | 16,32       | 16,32  | 1,845   | 1,311  | 20,94    | 13,80 |
|                        | Barisal                            | 1,007,701   | 678,412    | 1,686,113    | 1,686,113  | 8        | .....      | 1,412  | 5                 | 2       | 117             | 1,527       | 1,19     | .....                                    | 20,94  | 1,2                              | 12      | 1,80            | 16,32       | 16,32  | 1,845   | 1,311  | 20,94    | 13,80 |
|                        | Feni                               | 645,511     | 683,417    | 1,328,928    | 1,328,928  | 596      | .....      | 3,374  | 38                | 4       | 51              | 4,451       | 5,15     | .....                                    | 1,44   | 1,32                             | 36      | 2,64            | 16,32       | 16,32  | 2,219   | 1,796  | 20,94    | 13,80 |
|                        | Darjiling                          | 805,770     | 840,943    | 1,646,713    | 1,646,713  | 337      | .....      | 1,878  | 5                 | 4       | 70              | 1,949       | 6,84     | .....                                    | 1,44   | 1,32                             | 36      | 2,64            | 16,32       | 16,32  | 2,219   | 1,796  | 20,94    | 13,80 |
| KASPORE.               | Jalpaiguri                         | 1,007,701   | 678,412    | 1,686,113    | 1,686,113  | 1,035    | .....      | 2,279  | 311               | 45      | 640             | 4,210       | 5,74     | .....                                    | 12,00  | 1,32                             | 36      | 2,64            | 16,32       | 16,32  | 1,579   | 998  | 18,34    | 13,80 |
|                        | Malda                              | 805,770     | 840,943    | 1,646,713    | 1,646,713  | 1,092    | .....      | 2,279  | 311               | 45      | 640             | 4,210       | 5,74     | .....                                    | 12,00  | 1,32                             | 36      | 2,64            | 16,32       | 16,32  | 1,579   | 998  | 18,34    | 13,80 |
|                        | Medinipur                          | 805,770     | 840,943    | 1,646,713    | 1,646,713  | 1,092    | .....      | 2,279  | 311               | 45      | 640             | 4,210       | 5,74     | .....                                    | 12,00  | 1,32                             | 36      | 2,64            | 16,32       | 16,32  | 1,579   | 998  | 18,34    | 13,80 |
|                        | Chittagong                         | 805,770     | 840,943    | 1,646,713    | 1,646,713  | 3,444    | .....      | 2,279  | 311               | 45      | 640             | 4,210       | 5,74     | .....                                    | 12,00  | 1,32                             | 36      | 2,64            | 16,32       | 16,32  | 1,579   | 998  | 18,34    | 13,80 |
| TOTAL FOR THE PROVINCE |                                    | 32,832,116  | 33,331,868 | 66,163,984   | 66,163,984 | 621      | .....      | 58,132 | 4,380             | 1,624   | 15,344          | 1,36,312    | 8,72     | .....                                    | 13,00  | 7,2                              | 2,4     | 2,76            | 22,80       | 22,80  | 57,064  | 25,20  | 20,94    | 13,80 |

## MORTALITY ACCORDING TO-

[illegible]

OFFICE OF SANITARY COMMISSIONER FOR BENEAL,

*The 15th August 1887.*

R. LIDDERDALE, M.D.,  
Deputy Surgeon-General, Sanitary Commissioner for Bengal.

## MEMORANDUM.

THE table annexed to this memorandum indicates—

1. That during the week ending 30th July 1887, the birth and death-rates of the principal Municipalities in Bengal amounted to 21·9 and 39·1 per 1,000 of population, respectively, as opposed to 16·5 and 29·2 per 1,000, respectively, in the preceding week ending 23rd July, showing a very considerable increase in the registration of both the events, notably of deaths.

2. That the following Municipalities returned the highest proportions of births and deaths :—

| <i>Births.</i> |     |                  | <i>Deaths.</i>      |     |                  |
|----------------|-----|------------------|---------------------|-----|------------------|
|                |     | Ratio per mille. |                     |     | Ratio per mille. |
| Patna          | ... | 68·1             | Patna               | ... | 124·0            |
| Comillah       | ... | 30·8             | Gya                 | ... | 69·7             |
| Puri           | ... | 29·4             | Puri                | ... | 54·6             |
|                |     |                  | Arrah               | ... | 46·7             |
|                |     |                  | Suburbs of Calcutta | ... | 35·6             |
|                |     |                  | Beauleah            | ... | 34·1             |
|                |     |                  | Purneah             | ... | 31·1             |
|                |     |                  | Midnapore           | ... | 31·0             |
|                |     |                  | Bhagulpore          | ... | 30·8             |
|                |     |                  | Serampore           | ... | 29·4             |

3. That, contrasted with the results of the preceding week, it appears that there occurred much increase of mortality from fever, the diseases classed under the head of "Other causes" and bowel-complaints, in the order named; fractional increases in fatal results for cholera and injury; and no variation in fatality from small-pox :—

|                  |     |     |     |     | Ratio per mille during the weeks ending— |                 |
|------------------|-----|-----|-----|-----|--|-----------------|
|                  |     |     |     |     | 30th July 1887.                          | 23rd July 1887. |
| Cholera          | ... | ... | ... | ... | 8·0                                      | 7·4             |
| Small-pox        | ... | ... | ... | ... | 1  | 1               |
| Fever            | ... | ... | ... | ... | 14·2                                     | 10·3            |
| Bowel-complaints | ... | ... | ... | ... | 5·1                                      | 3·5             |
| Injury           | ... | ... | ... | ... | 7  | 3               |
| Other causes     | ... | ... | ... | ... | 11·0                                     | 7·5             |

4. That while the following Municipalities exhibited conspicuously high mortality from cholera, fever and the maladies classed as "Other causes," in the rest of the Municipalities no noticeable severity from the other diseases, indicated above, occurred, excepting in Patna, where 13·3 per 1,000 of the population died from bowel-complaints :—

| <i>Cholera.</i> |                  | <i>Fever.</i> |                  | <i>Other Causes.</i> |                  |
|-----------------|------------------|---------------|------------------|----------------------|------------------|
|                 | Ratio per mille. |               | Ratio per mille. |                      | Ratio per mille. |
| Patna           | 30·5             | Patna         | 43·5             | Patna                | 32·8             |
| Puri            | 29·4             | Beauleah      | 31·0             | Gya                  | 19·0             |
| Gya             | 25·3             |               |                  | Puri                 | 18·9             |
| Arrah           | 21·6             |               |                  | Suburbs of Calcutta  | 12·0             |
| Bhagulpore      | 7·2              |               |                  | Arrah                | 10·8             |
| Midnapore       | 6·2              |               |                  |                      |                  |
| Howrah          | 4·0              |               |                  |                      |                  |

5. That the mortality of the week, classified under the heads of *Sex*, *Class* and *Age*, stood as follows :—

| <i>According to Sex.</i>                        |                  | <i>According to Class.</i> |                  | <i>According to Age.</i> |                  |
|---|------------------|----------------------------|------------------|--------------------------|------------------|
|   | Ratio per mille. |                            | Ratio per mille. |                          | Ratio per mille. |
| Males   | 40·1             | Christians                 | 39·1             | Under 1 year             | 293·3            |
| Females   | 37·9             | Hindus                     | 41·9             | 1 and under 5 years      | 80·1             |
| Ratio of male deaths to every 100 female deaths | 119              | Mahomedans                 | 32·9             | 5 " " 10 "               | 27·0             |
|   |                  |                            |                  | 10 " " 15 "              | 23·5             |
|   |                  |                            |                  | 15 " " 20 "              | 24·6             |
|   |                  |                            |                  | 20 " " 30 "              | 19·0             |
|   |                  |                            |                  | 30 " " 40 "              | 23·7             |
|   |                  |                            |                  | 40 " " 50 "              | 24·6             |
|   |                  |                            |                  | 50 " " 60 "              | 40·4             |
|   |                  |                            |                  | 60 years and upwards     | 86·6             |

R. LIDDERDALE, M.D., *Deputy Surgeon-General*,

The 15th August 1887.

*Sanitary Commissioner for Bengal.*

| DISTRICTS.   | NAMES OF MUNICIPALITIES. | POPULATION. |          | BIRTHS.    |          |  |   | MORTALITY ACCORDING TO—                  |            |        |                   |         |                 |             |            |           |        |                   |         |                 |             | Sex.    |          |  |     |      |      |                   |     |
|--------------|--------------------------|-------------|----------|------------|----------|--|---|--|------------|--------|-------------------|---------|-----------------|-------------|------------|-----------|--------|-------------------|---------|-----------------|-------------|---------|----------|--|-----|------|------|-------------------|-----|
|              |                          | Total.      | Females. | NUMBER OF— |          | RATIO PER 1,000 OF POPULATION PER ANNUM.         |   | DISEASE.                                 |            |        |                   |         |                 |             |            |           |        |                   |         |                 |             | DEATHS. |          |  |     |      |      |                   |     |
|              |                          |             |          | Males.     | Females. | RATIO PER 1,000 OF POPULATION PER ANNUM.         |   | RATIO PER 1,000 OF POPULATION PER ANNUM. |            |        |                   |         |                 |             |            |           |        |                   |         |                 |             | DEATHS. |          |  |     |      |      |                   |     |
|              |                          |             |          |            |          | Ratio of male births to every 100 female births. | Ratio of deaths per annum in the previous week. | Cholera.                                 | Small-pox. | Fever. | Bowel-complaints. | Injury. | Other diseases. | All causes. | (Typhoid). | Hemiplex. | Rever. | Bowel-complaints. | Injury. | Other diseases. | All causes. | Males.  | Females. | Ratio of male deaths to every 100 female deaths. |     |      |      |                   |     |
| Burdwan      | Burdwan                  | 18,063      | 16,017   | 34,080     | 1        | 3  | 4   | 15                                       | 46         | 61     | 33                | 7       | ...             | 7           | ...        | 107       | ...    | ...               | ...     | ...             | 107         | 229     | 1        | 6  | 29  | 195  | 16   |                   |     |
| Midnapore    | Midnapore                | 16,927      | 16,683   | 33,610     | 7        | 8  | 10  | 108                                      | 46         | 155    | 233               | 6       | ...             | 6           | 4          | ...       | 93     | ...               | ...     | ...             | ...         | 93      | 217      | 13   | 7   | 309  | 219  | 135               |     |
| Hughli       | Hughli and Chinnurah     | 16,179      | 12,539   | 28,718     | 3        | 6  | 9   | 40                                       | 51         | 121    | 60                | ...     | ...             | 8           | ...        | ...       | 107    | ...               | ...     | ...             | ...         | 81      | 148      | 10   | 4   | 271  | 108  | 220               |     |
| Serampore    | Serampore                | 13,529      | 12,937   | 26,466     | 6        | 3  | 9   | 115                                      | 59         | 177    | 200               | 3       | ...             | 3           | 3          | ...       | 59     | 59                | 19      | ...             | ...         | 98      | 216      | 6  | 9   | 230  | 363  | 66                |     |
| Howrah       | Howrah                   | 3,046       | 2,464    | 5,510      | 2        | ...  | 2   | 189                                      | ...        | ...    | No female births. | ...     | ...             | 1           | ...        | ...       | 94     | ...               | ...     | ...             | ...         | 94      | 94       | 1  | ... | 170  | ...  | No female deaths. |     |
| 24-Pargannas | Suburbs of Calcutta      | 53,153      | 37,680   | 90,833     | 16       | 8  | 22  | 92                                       | 54         | 126    | 266               | 7       | 10              | 4           | 1          | ...       | 57     | 23                | 6       | ...             | ...         | 57      | 97       | 19   | 14  | 186  | 193  | 135               |     |
| Kuddee       | Kuddee                   | 7,836       | 6,979    | 14,815     | 2        | 1  | 3   | 70                                       | 35         | 105    | 200               | 1       | ...             | 4           | 1          | ...       | 140    | 35                | ...     | ...             | ...         | 70      | ...      | 4  | 4   | 263  | 298  | 100               |     |
| Jessore      | Jessore                  | 13,768      | 12,937   | 26,705     | 35       | 36   | 71  | 72                                       | 74         | 147    | 97                | 67      | 37              | 1           | ...        | ...       | 138    | 76                | 2       | ...             | ...         | 138     | 329      | 93   | 76  | 339  | 379  | 136               |     |
| Bahadur      | Bahadur                  | 4,628       | 4,655    | 9,283      | 5        | 1  | 6   | 95                                       | 19         | 114    | 500               | ...     | ...             | 5           | ...        | ...       | 95     | ...               | ...     | ...             | ...         | 37      | 56       | 4  | 3   | 157  | 110  | 133               |     |
| Darjiling    | Darjiling                | 13,768      | 12,937   | 26,705     | 2        | 1  | 3   | 35                                       | 17         | 52     | No female births. | ...     | ...             | ...         | ...        | ...       | ...    | ...               | ...     | ...             | ...         | ...     | ...      | ...  | ... | ...  | ...  | No female deaths. |     |
| Deca         | Deca                     | 4,830       | 3,635    | 8,465      | 1        | 1  | 2   | 61                                       | 61         | 122    | 100               | ...     | ...             | 2           | ...        | ...       | 132    | ...               | ...     | ...             | ...         | ...     | ...      | ...  | ... | ...  | ...  | 116               |     |
| Chittagong   | Chittagong               | 10,768      | 9,025    | 19,793     | 7        | 3  | 10  | 154                                      | 79         | 263    | 233               | 1       | ...             | 8           | ...        | ...       | 210    | ...               | ...     | ...             | ...         | 145     | 184      | 7  | 6   | 338  | 346  | 200               |     |
| Comilla      | Comilla                  | 5,029       | 2,647    | 7,676      | ...      | ...  | ...   | ...                                      | ...        | ...    | ...               | ...     | ...             | 1           | 2          | ...       | 65     | 130               | ...     | ...             | ...         | ...     | 65       | 2  | 1   | 206  | 176  | 160               |     |
| Patna City   | Patna City               | 42,753      | 37,379   | 80,132     | 9        | 10   | 19  | 58                                       | 68         | 123    | 90                | ...     | ...             | 5           | 5          | ...       | 32     | 32                | ...     | ...             | ...         | 71      | 102      | 15   | 10  | 182  | 139  | 50                |     |
| Gya          | Gya                      | 7,693       | 4,966    | 12,659     | 3        | 3  | 6   | 124                                      | 124        | 248    | 100               | ...     | ...             | 2           | ...        | ...       | 83     | ...               | ...     | ...             | ...         | 41      | 248      | 1  | 2   | 68   | 310  | No female deaths. |     |
| Arrah        | Arrah                    | 13,540      | 8,790    | 22,330     | 2        | 4  | 6   | 47                                       | 94         | 141    | 50                | ...     | ...             | 3           | 1          | ...       | 70     | 23                | ...     | ...             | ...         | 94      | 235      | 4  | ... | 156  | ...  | No female deaths. |     |
| Muzaffarpore | Muzaffarpore             | 8,133       | 5,353    | 13,486     | 3        | 5  | 8   | 115                                      | 102        | 308    | 60                | ...     | ...             | 1           | ...        | ...       | 38     | ...               | ...     | ...             | ...         | 38      | 77       | 1  | 1   | 64   | 97   | 100               |     |
| Benares      | Benares                  | 73,768      | 61,475   | 135,243    | 119      | 91   | 210   | 330                                      | 295        | 681    | 130               | 94      | 2               | 131         | 41         | 10        | 435    | 153               | 52      | ...             | ...         | 328     | 382      | 208  | 173 | 1360 | 1104 | 130               |     |
| Varanasi     | Varanasi                 | 39,290      | 37,831   | 77,121     | 18       | 17   | 35  | 123                                      | 116        | 239    | 105               | 38      | ...             | 26          | 12         | ...       | 171    | 82                | ...     | ...             | ...         | 190     | 887      | 772  | 40  | 53   | 663  | 749               | 92  |
| Allahabad    | Allahabad                | 29,960      | 22,608   | 52,568     | 6        | 3  | 9   | 72                                       | 36         | 108    | 200               | 18      | ...             | 9           | 3          | ...       | 108    | 36                | ...     | ...             | ...         | 108     | 467      | 682  | 13  | 31   | 447  | 485               | 86  |
| Meerut       | Meerut                   | 28,964      | 19,058   | 48,022     | 3        | 2  | 5   | 36                                       | 24         | 60     | 150               | ...     | ...             | 5           | ...        | ...       | 60     | ...               | ...     | ...             | ...         | 12      | 36       | 61   | 6   | 3    | 135  | 79                | 200 |
| Mathura      | Mathura                  | 33,774      | 32,322   | 66,096     | 17       | 18   | 35  | 133                                      | 142        | 275    | 84                | ...     | ...             | 14          | 3          | 1         | 110    | 23                | 8       | ...             | ...         | 89      | 181      | 106  | 15  | 8    | 231  | 129               | 137 |
| Aligarh      | Aligarh                  | 26,044      | 27,305   | 53,349     | 3        | 6  | 9   | 39                                       | 58         | 97     | 60                | 2       | ...             | ...         | ...        | ...       | ...    | 19                | ...     | ...             | ...         | ...     | ...      | ...  | ... | ...  | ...  | ...               | ... |
| Meerut       | Meerut                   | 29,010      | 27,313   | 56,323     | 8        | 10   | 18  | 72                                       | 31         | 163    | 80                | 6       | ...             | 13          | 3          | ...       | 118    | 27                | ...     | ...             | ...         | ...     | ...      | ...  | ... | ...  | ...  | ...               | ... |
| Meerut       | Meerut                   | 26,151      | 25,568   | 51,719     | 17       | 10   | 27  | 154                                      | 90         | 244    | 170               | 1       | ...             | 15          | 4          | 2         | 136    | 36                | 18      | ...             | ...         | ...     | ...      | ...  | ... | ...  | ...  | ...               | ... |
| Meerut       | Meerut                   | 4,463       | 6,353    | 10,816     | 1        | 2  | 3   | 85                                       | 69         | 104    | 50                | ...     | ...             | 4           | ...        | ...       | 138    | 69                | ...     | ...             | ...         | ...     | ...      | ...  | ... | ...  | ...  | ...               | ... |
| Puri         | Puri                     | 12,247      | 11,337   | 23,584     | 8        | 6  | 14  | 168                                      | 126        | 294    | 183               | 14      | ...             | 1           | ...        | ...       | 21     | 42                | ...     | ...             | ...         | ...     | ...      | ...  | ... | ...  | ...  | ...               | ... |
| TOTAL        | TOTAL                    | 702,890     | 519,691  | 1,222,581  | 306      | 251  | 557   | 120                                      | 99         | 219    | 131               | ...     | ...             | 368         | 129        | 17        | 280    | 994               | 80      | ...             | ...         | ...     | ...      | ...  | ... | ...  | ...  | ...               | ... |

\* A special census of the Europeans in the Darjiling Municipality was recently taken, as the census of this section of the community, taken in February 1881, was not reliable owing to the erroneous heading of a memorandum in that census. The ratio have consequently been recalculated.

## MORTALITY ACCORDING TO-

[illegible]

**R. TAMMERIAK** и **Доктор Сурсон-Генерал.**

# NUMBER OF CITIES IN COUNTRIES WITH RURAL



FLOOD WORKS DEPARTMENT, BENGAL.

## IRRIGATION BRANCH.

IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1887-88.

Areas leased for Irrigation up to end of June 1887.

| CIRCLE.            | DISTRICT. | CANAL.  | Estimated full discharge. | Average discharge in month. | Discharge utilised. | Approxi-<br>mate area<br>of land<br>irrigated<br>during<br>the year<br>up to the<br>end of the<br>month. | Approxi-<br>mate area<br>under<br>irrigation<br>up to the<br>same date<br>of the<br>last year. | DETAILS OF AREAS LEASED. |                             |          |       |                 |                     |        |                 |                  |                           | RAINFALL,<br>1887-88. |                           | RAINFALL,<br>1886-87. |       | REMARKS. |
|--------------------|-----------|---|---------------------------|-----------------------------|---------------------|--|--|--------------------------|-----------------------------|----------|-------|-----------------|---------------------|--------|-----------------|------------------|---------------------------|-----------------------|---------------------------|-----------------------|-------|----------|
|                    |           |   |                           |                             |                     |  |  | Five<br>years<br>Kharif. | Five<br>years<br>all crops. | Kharif.  | Rabi. | Sugar-<br>cane. | Bhadai.<br>weather. | Total. | Grand<br>total. | During<br>month. | Up to<br>end of<br>month. | During<br>month.      | Up to<br>end of<br>month. |                       |       |          |
|                    |           |   |                           |                             |                     |  |  |                          |                             |          |       |                 |                     |        |                 |                  |                           |                       |                           | Acre.                 | Acre. |          |
| DINA               | Cuttack   | Taldanda, 1st<br>Reach, 2nd<br>Reach.                     | 1,342                     | 205                         | ...                 | 51   | ...  | 3,976                    | ...                         | 46       | 8     | ...             | 54                  | 4,030  | 8.35            | 16.77            | 12.06                     | 15.68                 |                           |                       |       |          |
|                    |           | Machong   | 776                       | 93                          | ...                 | 12   | ...  | 18,010                   | ...                         | 9        | 4     | ...             | 13                  | 18,023 | 6.00            | 12.80            | 8.45                      | 9.98                  |                           |                       |       |          |
|                    |           | Kendrapara  | 1,209                     | 86                          | 135.77              | 735  | 123  | 37,310                   | ...                         | 408      | 8     | ...             | 502                 | 37,312 | 6.35            | 7.95             | 15.00                     | 16.06                 |                           |                       |       |          |
|                    |           | Gobri   | 372.82                    | 144.10                      | ...                 | 7  | ...  | ...                      | ...                         | ...      | ...   | ...             | ...                 | ...    | 11.13           | 19.10            | 11.98                     | 16.34                 |                           |                       |       |          |
|                    |           | Pattamondoo   | 1,042                     | 113.25                      | ...                 | 117  | 110  | 8,230                    | ...                         | ...      | ...   | ...             | ...                 | 8,290  | ...             | ...              | ...                       | ...                   |                           |                       |       |          |
|                    |           | High I. Level,  | 675                       | 68.40                       | ...                 | 1,255  | 9.40   | 13,964                   | ...                         | ...      | ...   | ...             | ...                 | 13,964 | 4.40            | 12.60            | 9.15                      | 13.15                 |                           |                       |       |          |
|                    |           | High II. Level,   | 727.16                    | 38.08                       | ...                 | 314  | 113  | 385                      | ...                         | ...      | ...   | ...             | ...                 | 419    | ...             | ...              | ...                       | ...                   |                           |                       |       |          |
|                    |           | High III. Level,  | 727.16                    | 61.64                       | ...                 | 190  | 140  | 6,416                    | ...                         | ...      | ...   | ...             | ...                 | 51     | 6,467           | 8.17             | 15.19                     | 11.75                 | 14.35                     |                       |       |          |
|                    |           | Total   | ...                       | ...                         | ...                 | 2,671  | 1,385  | 88,291                   | ...                         | 497      | 71    | ...             | 654                 | 88,945 | ...             | ...              | ...                       | ...                   |                           |                       |       |          |
|                    |           | Total of the corresponding<br>period of last year.        | ...                       | ...                         | ...                 | ...  | ...  | 71,833                   | ...                         | 2,433    | 116   | ...             | 2,554               | 74,443 | ...             | ...              | ...                       | ...                   |                           |                       |       |          |
| SOUTH-<br>WESTERN. | Midnapore | Midnapore   | 1,411                     | 311                         | 297                 | 13,673   | 30,081   | 48,835                   | ...                         | ...      | ...   | ...             | 48,835              | 4.38   | 13.43           | 7.47             | 14.87                     |                       |                           |                       |       |          |
|                    |           | Panchgaurah   | 522                       | 14                          | 12                  | 890  | 553  | 4,205                    | ...                         | ...      | ...   | ...             | 4,205               | 7.40   | 18.57           | 6.85             | 12.46                     |                       |                           |                       |       |          |
|                    |           | Tidal Reaches,<br>Rangas I and II.                        | ...                       | ...                         | ...                 | ...  | ...  | 880                      | ...                         | ...      | ...   | ...             | ...                 | ...    | ...             | ...              | ...                       | ...                   |                           |                       |       |          |
|                    |           | Total   | ...                       | ...                         | ...                 | 14,558   | 30,573   | 53,611                   | ...                         | ...      | ...   | ...             | 53,611              | ...    | ...             | ...              | ...                       | ...                   |                           |                       |       |          |
|                    |           | Total of the corresponding<br>period of last year.        | ...                       | ...                         | ...                 | ...  | ...  | 67,389                   | ...                         | ...      | ...   | ...             | 67,389              | ...    | ...             | ...              | ...                       | ...                   |                           |                       |       |          |
|                    |           | SOUTH   | Shahabad                  | Western Main                | 4,342               | 830  | 4  | 10,705                   | 11,090                      | 14,415   | ...   | ...             | ...                 | ...    | 15,150          | 6.28             | 10.38                     | 7.98                  | 8.22                      |                       |       |          |
|                    |           |   |                           | Rural                       | 1,355               | 231  | 107  | 37,632                   | 29,203                      | 46,081   | ...   | ...             | ...                 | ...    | 43,310          | 5.28             | 16.65                     | 5.72                  | 7.38                      |                       |       |          |
|                    |           |   |                           | Patna and Eastern Main      | 1,550               | 511  | 286  | 66,333                   | 46,383                      | 82,382   | ...   | ...             | ...                 | ...    | 92,078          | 5.93             | 18.33                     | 4.77                  | 6.48                      |                       |       |          |
|                    |           |   |                           | Patna                       | 1,496               | 294  | 210  | 133                      | 8,325                       | 20,476   | ...   | ...             | ...                 | ...    | 20,942          | 8.30             | 18.33                     | ...                   | ...                       |                       |       |          |
|                    |           |   |                           | Total                       | ...                 | ...  | ...  | 1,08,469                 | 19,133                      | 1,67,230 | ...   | ...             | ...                 | ...    | 181,358         | ...              | ...                       | ...                   | ...                       |                       |       |          |
| SOUTH              | Shahabad  | Total of the corresponding<br>period of last year.        | ...                       | ...                         | ...                 | ...  | ...  | 1,40,673                 | ...                         | ...      | ...   | 155,102         | ...                 | ...    | ...             | ...              |                           |                       |                           |                       |       |          |
|                    |           | Grand Total   | ...                       | ...                         | ...                 | 1,26,893   | 1,31,151   | 1,67,220                 | ...                         | ...      | ...   | ...             | 323,944             | ...    | ...             | ...              | ...                       |                       |                           |                       |       |          |
| SOUTH              | Shahabad  | Grand total of the correspond-<br>ing period of last year | ...                       | ...                         | ...                 | ...  | ...  | 139,257                  | ...                         | ...      | ...   | ...             | 206,943             | ...    | ...             | ...              | ...                       |                       |                           |                       |       |          |

No reading taken from 14th to 28th June 1887, as the rain-gauge has been sent to Cuttack workshop for repair.

Whole month discharging.  
Twelve days discharging.

The 16th August 1887.

A. D. McARTHUR, Major, R.E.,  
Under-Secretary to the Govt. of Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate return of traffic for the week ending Saturday, the 13th August 1887, compared with the corresponding week of the previous year.

| NATURE OF CARGO.      | WEEK ENDING SATURDAY, THE<br>13TH AUGUST 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>14TH AUGUST 1886. |                     |          |
|-----------------------|--|---------------------|----------|--|---------------------|----------|
|                       | Number of<br>boats.                            | Weight of<br>cargo. | Tollage. | Number of<br>boats.                            | Weight of<br>cargo. | Tollage. |
|                       | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... .. | 519  | 98,950              | 1,711    | 242  | 48,190              | 796      |
| Jute ... ..           | 29   | 9,547               | 171      | 14   | 3,100               | 57       |
| Firewood ... ..       | 152  | 79,175              | 1,193    | 115  | 62,450              | 809      |
| Other articles ... .. | 748  | 1,62,780            | 2,440    | 726  | 1,47,375            | 2,090    |
| Total ... ..          | 1,448  | 3,50,452            | 5,455    | 1,097  | 2,61,115            | 3,752    |



*General remarks on the fluctuation of principal staples carried over the East Indian Railway  
during the month ended 30th June 1887.*

**INCREASES.**

**Coal and coke.**—There was an increase in both upwards and downwards despatches; that in the former was due to demands by the Public and Foreign Railways. The downward increase may be ascribed to the facilities afforded by the new route over the Jubilee Bridge; a considerable quantity was despatched to stations on the Eastern Bengal State Railway and to Sealdah.

**Rice (husked and unhusked).**—The reason for the increase in this commodity is much the same as that given in previous reports, namely, full stocks at stations and high prices prevailing up-country.

**Other rain and spring crops.**—The increases were principally from stations on the Allahabad district to meet demands at Howrah and also local requirements.

**Lae.**—This increase can be accounted for in no other way than that the traffic in June 1886 was very poor.

**Railway Material, Foreign.**—Due to despatches from Howrah for the Oudh and Rohilkund and Indian Midland Railways, and from *via* Jubbulpore for the latter system only.

**DECREASES.**

**Cotton.**—The cotton season closed at about the middle of May 1887, somewhat earlier than in 1886, hence this decrease.

**Turmeric.**—This small decrease may be attributed to competition by river steamers and to the diversion by the Bengal and North-Western Railway.

**Piece-goods, European.**—Due to slack demand, which is usual at this time of the year.

**Wheat.**—The decrease is attributable to a bad crop, sudden collapse in the home markets, and to dealers holding back for better prices.

**Grain and Pulses.**—The decrease was principally in the despatches from the Punjab owing to the produce being required for local consumption, and to heavy despatches from Cawnpore in 1886 to meet a demand in Calcutta partly for shipment to Madras.

**Iron.**—The decrease was due to a falling off in the despatches from Howrah, whence considerable quantities of machinery were sent to Cawnpore in 1886.

**Opium.**—Due to the arrangements made by the Government Opium Department.

**Salt.**—This decrease is assignable to the diversion from this system of the Sambhar salt by the Bombay Baroda and Central India Railway to Cawnpore.

**Sugar, refined and unrefined.**—There was an increase in the weight carried attended with a decrease in earnings, and this is due to the following causes:—

(1).—Better crops in the North Western Provinces.

(2).—Cheaper market rates up-country, which deterred sales of Shahabad produce.

(3).—A poor crop in the Shahabad district.

**Tobacco.**—This decrease is attributable to bad crops in Tirhoot.

**Seeds.**—Due to low prices quoted in Calcutta and stocks being kept back for a rise in the market prices.

TRAFFIC MANAGER'S OFFICE, JAMALPUR, the 9th August 1887.

N. ST. L. CARTER, Traffic Manager.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 6th August 1887, on 1,519 miles open.

|   | COACHING TRAFFIC.     |                | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |          |
|---|-----------------------|----------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|----------|
|   | Number of passengers. | Receipts.      | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.   |
|   |                       | Rs. A. P.      | Mds. S.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |          |
| all traffic for the week                                | 242,748*              | 2,30,800 14 0* | 18,48,168 10                     | 3,72,305 13 0 | 20,347 2 0                  | 6,32,762 13 0   | 61,722½                  | 76,43½       | 141,161½ |
| per mile of railway                                     | .....                 | 157 14 0       | .....                            | 245 1 7       | 13 9 6                      | 416 9 1         | .....                    | .....        | .....    |
| previous 4 weeks of half-year                           | 1,048,511             | 10,50,121 13 0 | 95,88,990 0                      | 20,83,730 4 6 | 88,407 0 9                  | 32,22,259 2 3   | 281,092                  | 379,150½     | 660,242½ |
| Total for 5 weeks                                       | 1,291,259             | 12,80,931 11 0 | 1,14,37,158 10                   | 21,56,036 1 6 | 1,09,054 2 9                | 38,55,021 15 3  | 345,914½                 | 455,680½     | 801,595½ |
| COMPARISON.   |                       |                |                                  |               |                             |                 |                          |              |          |
| all for corresponding week of previous year             | 207,520½              | 2,00,483 3 6   | 18,02,873 20                     | 4,01,217 14 9 | 18,061 6 3                  | 6,89,362 8 6    | 65,369                   | 82,846       | 148,445  |
| per mile of railway corresponding week of previous year | .....                 | 138 4 3        | .....                            | 304 7 0       | 13 5 1                      | 455 0 5         | .....                    | .....        | .....    |
| all to corresponding date of previous year              | 1,248,306½            | 12,16,674 13 2 | 1,18,97,546 10                   | 27,25,604 8 6 | 90,549 14 1                 | 40,38,820 3 9   | 3,00,095                 | 511,534      | 872,249  |

\* The coaching traffic shows an increase over the corresponding period of last year to the extent of Rs. 30,000 which is principally due to the moon eclipses.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 7TH AUGUST 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 6TH AUGUST 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                                 | Per mile worked. | Mean mileage worked. | Receipts.                                 | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Rs.                     | Rs.                     |
| Rs.                                       | Rs.              |                      | Rs.                                       | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              |                      | Rs.                     | Rs.                     |
| 6,89,303                                  | 455              | 1,519                | 6,32,763                                  | 417              | 1,515                | 1,68,22,412  | 11,101           | 1,519                | 1,63,29,758*   | 10,750           | .....                | .....                   | 4,92,659                |

\* Added Rs. 10,259-0-0 on account of difference between the approximate and audited figures from 1st May to 30th June 1887.

## PATNA-GYA STATE RAILWAY

Approximate Return of Traffic for week ended 6th August 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| all traffic for the week                                | 10,577                | 4,000 8 0   | 28,572 30                        | 1,866 1 0  | 30 12 0                     | 6,883 5 0       | 1,598                    | 796          | 2,394  |
| per mile of railway                                     | 183                   | 69 13 3     | 499 20                           | 32 15 7    | 0 8 7                       | 120 5 5         | .....                    | .....        | .....  |
| previous 4 weeks of half-year                           | 48,105                | 23,273 4 0  | 1,80,722 20                      | 11,074 6 0 | 116 7 0                     | 35,063 1 0      | 6,051½                   | 3,653½       | 10,605 |
| Total for 5 weeks                                       | 58,682                | 28,278 12 0 | 2,15,295 10                      | 13,560 7 0 | 147 3 0                     | 41,946 6 0      | 8,349½                   | 4,412½       | 12,762 |
| COMPARISON.   |                       |             |                                  |            |                             |                 |                          |              |        |
| all for corresponding week of previous year             | 11,420½               | 6,211 1 7   | 35,923 20                        | 1,700 6 0  | 23 7 0                      | 8,029 14 7      | 1,784                    | 880          | 2,664  |
| per mile of railway corresponding week of previous year | 200                   | 108 9 4     | 628 0                            | 31 4 10    | 0 8 0                       | 140 6 2         | .....                    | .....        | .....  |
| all to corresponding date of previous year              | 58,976½               | 29,858 8 0  | 2,52,460 10                      | 15,036 3 0 | 195 12 6                    | 45,090 7 0      | 8,017                    | 5,104        | 13,751 |

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 7TH AUGUST 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 6TH AUGUST 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                                 | Per mile worked. | Mean mileage worked. | Receipts.                                 | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Rs.                     | Rs.                     |
| Rs.                                       | Rs.              |                      | Rs.                                       | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              |                      | Rs.                     | Rs.                     |
| 8,030                                     | 140              | 57½                  | 6,883                                     | 120              | 57½                  | 1,71,778   | 3,003            | 57½                  | 1,60,690*  | 2,869            | .....                | .....                   | 11,068                  |

\* Deducted Rs. 1,408 on account of difference between the approximate and audited figures from 1st May to 30th June 1887.

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 6th August 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       | Rs.                      |              |        |
| Total traffic for the week ...                              | 3,093                 | 547 14     | 6,504 10                         | 146 7 0    | 8 5 0                       | 700 10 0        | 363½                     | 180          | 493½   |
| Or per mile of railway ...                                  | .....                 | 45 10 6    | .....                            | 12 3 3     | 0 8 5                       | 58 6 2          | .....                    | .....        | .....  |
| For previous 4 weeks of half-year                           | 13,009                | 2,250 10 0 | 41,205 30                        | 1,113 13 0 | 30 0 0                      | 3,403 7 0       | 1,541                    | 574          | 2,116  |
| Total for 5 weeks ...                                       | 16,092                | 2,798 8 0  | 47,770 0                         | 1,260 4 0  | 45 5 0                      | 4,104 1 0       | 1,904½                   | 704          | 2,608½ |
| COMPARISON.   |                       |            |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,493                 | 423 4 1    | 6,453 10                         | 173 7 0    | 6 15 3                      | 604 11 1        | 408                      | 85           | 493    |
| Per mile of railway corresponding week of previous year ... | .....                 | 35 3 1     | .....                            | 14 9 11    | 0 9 3                       | 50 6 3          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 14,637                | 2,441 6 6  | 60,662 0                         | 1,445 8 0  | 60 0 0                      | 3,940 15 0      | 1,983                    | 964          | 2,947  |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 7TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 6TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. |                         |                         |
| 12  | Rs. 605   | Rs. 50           | 12  | Rs. 701   | Rs. 58           | 12   | Rs. 21,310      | Rs. 1,768        | 12   | Rs. 18,704*     | Rs. 1,559        | .....                   | Rs. 2,515               |

\* Added Rs. 271 on account of difference between the approximate and audited figures from 1st May to 30th June 1887.

## SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 6th August 1887, on 74½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       | Rs.                      |              |        |
| Total traffic for the week ...                              | 5,361                 | 3,966 8 0   | 80,853 0                         | 1,922 15 0 | 54 0 0                      | 5,843 7 0       | 272½                     | 814½         | 1,526½ |
| Or per mile of railway ...                                  | .....                 | 54 0 5      | .....                            | 24 5 11    | 0 11 7                      | 78 1 11         | .....                    | .....        | .....  |
| For previous 4 weeks of half-year                           | 21,368                | 17,162 13 0 | 3,71,074 0                       | 10,829 5 0 | 325 14 0                    | 28,247 15 0     | 2,022½                   | 5,304½       | 8,327½ |
| Total for 5 weeks ...                                       | 27,129                | 21,119 4 0  | 4,51,926 0                       | 12,652 4 0 | 319 14 0                    | 34,091 6 0      | 3,040½                   | 6,209½       | 9,250½ |
| COMPARISON.   |                       |             |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 6,124                 | 3,630 11 11 | 54,705 0                         | 2,191 3 0  | 71 4 9                      | 5,902 3 8       | 686                      | 720          | 1,406  |
| Per mile of railway corresponding week of previous year ... | .....                 | 48 10 7     | .....                            | 20 4 8     | 0 15 3                      | 78 14 6         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 27,081½               | 19,570 0 7  | 3,00,963 10                      | 13,070 9 0 | 480 1 6                     | 34,029 11 1     | 3,804                    | 4,001        | 8,405  |

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 7TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 6TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. |                         |                         |
| 74½                                       | Rs. 5,908 | Rs. 79           | 74½                                       | Rs. 5,843 | Rs. 78           | 74½  | Rs. 1,30,405    | Rs. 1,743        | 74½  | Rs. 1,48,287*   | Rs. 1,982        | Rs. 17,882              | .....                   |

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 6th August 1887, on 22½ miles open.*

|   | COACHING TRAFFIC.     |                      | MERCHANDISE AND MINERAL TRAFFIC. |                  | Other earnings (estimated). | Total earnings.      | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|----------------------|----------------------------------|------------------|-----------------------------|----------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.            | Weight carried.                  | Receipts.        |                             |                      | Coaching.                | Merchandise. | Total. |
| Total traffic for the week ...                              | 13,667                | Rs. A. P. 4,004 12 0 | Mds. s. 2,958 20                 | Rs. A. P. 80 9 0 | Rs. A. P. 8 0 0             | Rs. A. P. 4,109 13 0 | 912                      | 66           | 968    |
| Or per mile of railway ...                                  | .....                 | 179 16 10            | .....                            | 4 7 7            | 0 2 11                      | 184 11 4             | .....                    | .....        | .....  |
| For previous 4 weeks of half-year ...                       | 60,408                | 19,159 7 0           | 16,587 10                        | 564 10 0         | 27 13 0                     | 19,751 14 0          | 3,967½                   | 332½         | 4,300  |
| Total for 5 weeks ...                                       | 83,165                | 23,164 3 0           | 19,316 30                        | 664 3 0          | 33 5 0                      | 23,861 11 0          | 4,869½                   | 388½         | 5,258  |
| COMPARISON.   |                       |                      |                                  |                  |                             |                      |                          |              |        |
| Total for corresponding week of previous year ...           | 13,439½               | 3,761 16 10          | 3,101 30                         | 120 3 0          | 8 6 9                       | 3,490 9 7            | 950                      | 18           | 968    |
| Per mile of railway corresponding week of previous year ... | .....                 | 151 1 7              | .....                            | 5 6 6            | 0 0 1                       | 156 14 1             | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 63,893½               | 22,717 0 2           | 16,479 10                        | 614 15 0         | 34 9 0                      | 23,386 8 11          | 5,241                    | 105          | 5,346  |

*Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 7TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 6TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. |                         |                         |
| 22½                                       | Rs. 3,491 | Rs. 157          | 22½                                       | Rs. 4,1   | Rs. 186          | 22½  | Rs. 96,000      | Rs. 4,319        | 22½  | Rs. 1,00,918*   | Rs. 4,536        | Rs. 4,819               | .....                   |

\* Added Rs. 2,324 on account of difference between the approximate and audited figures from 1st May to 30th June 1887.

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 6th August 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                    | Other earnings (estimated). | Total earnings.     | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|--------------------|-----------------------------|---------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.          | Weight carried.                  | Receipts.          |                             |                     | Coaching.                | Merchandise. | Total. |
| Total traffic for the week ...                              | 1,941                 | Rs. A. P. 801 10 6 | Mds. s. 3,323 0                  | Rs. A. P. 192 15 0 | Rs. A. P. 27 0 0            | Rs. A. P. 1,021 9 6 | 291                      | 237          | 528    |
| Or per mile of railway ...                                  | .....                 | 19 1 5             | .....                            | 4 9 6              | 0 10 3                      | 24 5 2              | .....                    | .....        | .....  |
| For previous 4 weeks of half-year ...                       | 9,284                 | 4,226 1 0          | 38,067 10                        | 4,073 10 0         | 105 14 0                    | 8,405 9 0           | 1,052                    | 1,468        | 2,520  |
| Total for 5 weeks ...                                       | 11,225                | 5,027 11 6         | 41,390 10                        | 4,266 0 0          | 132 14 0                    | 9,427 2 6           | 1,343                    | 1,765        | 3,108  |
| COMPARISON.   |                       |                    |                                  |                    |                             |                     |                          |              |        |
| Total for corresponding week of previous year ...           | 2,316                 | 938 13 1           | 4,837 30                         | 318 8 0            | 12 6 9                      | 1,319 11 10         | 368                      | 220          | 588    |
| Per mile of railway corresponding week of previous year ... | .....                 | 22 13 3            | .....                            | 8 4 9              | 0 4 9                       | 31 6 9              | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 13,076½               | 5,894 2 3          | 21,273 10                        | 1,644 15 0         | 104 15 0                    | 7,644 0 3           | 2,230                    | 963          | 3,193  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 7TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 6TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. |                         |                         |
| 42  | Rs. 1,320 | Rs. 31           | 42  | Rs. 1,022 | Rs. 24           | 42   | Rs. 35,757      | Rs. 804          | 42   | Rs. 59,141*     | Rs. 1,408        | Rs. 25,384              | .....                   |

\* Deducted Rs. 2,896 on account of difference between the approximate and audited figures from 1st May to 30th June 1887.

# EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

*Approximate Return of Traffic for week ended 30th July 1887, on 645 miles open.*

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated), including Steam-bowl. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |          |
|--|-----------------------|--------------------|----------------------------------|--------------|---|-----------------|--------------------------|--------------|----------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |   |                 | Coaching.                | Merchandise. | Total.   |
|  |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.    | Rs. A. P.   | Rs. A. P.       |                          |              |          |
| Total traffic for the week ..                                | 141,930†              | 57,300 0 0         | 8,81,600 0                       | 1,18,000 0 0 | 32,370 0 0*                                       | 2,07,670 0 0    | 19,432                   | 31,433‡      | 50,865   |
| Or per mile of railway ..                                    | 220                   | 89 0 0             | 1,371 0                          | 183 0 0      | 29 0 0§   | 321 0 0         | .....                    | .....        | .....    |
| For previous 5 weeks of half-year ..                         | 382,800               | 1,60,750 0 0       | 13,71,830 0                      | 2,20,000 0 0 | 38,540 0 0  | 4,28,290 0 0    | 63,658                   | 80,453       | 1,14,411 |
| Total for 4 weeks ..   | 624,780               | 2,27,050 0 0       | 22,56,530 0                      | 3,38,000 0 0 | 70,910 0 0  | 6,35,960 0 0    | 83,390                   | 81,886       | 1,65,276 |
| COMPARISON.  |                       |                    |                                  |              |   |                 |                          |              |          |
| Total for corresponding week of previous year ..             | 102,304               | 45,534 0 0         | 6,21,563 0                       | 74,073 0 0   | 11,257 0 0  | 1,30,864 0 0    | 16,007                   | 20,888‡      | 37,895   |
| Per mile of railway corresponding period of previous year .. | 160                   | 75 0 0             | 1,026 0                          | 122 0 0      | .....   | 197 0 0         | .....                    | .....        | .....    |
| Total to corresponding date of previous year ..              | 618,810               | 2,15,557 0 0       | 10,33,378 0                      | 2,56,096 0 0 | 42,146 0 0  | 5,13,799 0 0    | 75,230                   | 72,133       | 1,47,363 |

Note.—Dacca and Assam-Behar sections are also published separately.

\* Includes Rs. 10,700 on account of East Indian Railway running-powers being granted at Rs. 2 per train-mile.

† Ditto .. 38,000 monthly tickets.

‡ Ditto ballast train.

§ Steam-bowl earnings, Rs. 13,300, have been excluded from the calculation.

a Includes Rs. 8,500 for monthly tickets and haulage of mails.

## FINANCIAL YEAR.

*Approximate Statement of Gross Receipts of the Eastern Bengal State Railway.*

| RECEIPTS FOR WEEK ENDING 31st JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30th JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1st APRIL 1886 TO WEEK ENDING 31st JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1st APRIL 1887 TO WEEK ENDING 30th JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 606                                      | 1,30,864  | 216              | 645                                      | 2,07,670  | 322              | 606   | 23,57,240       | 229              | 615   | 24,11,998       | 220              | 54,758                  | .....                   |

## BENGAL CENTRAL RAILWAY.

*Approximate Return of Traffic for week ended 6th August 1887, on 125 miles open.*

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ..                                | 23,485                | 7,040 0 0          | 55,754 0                         | 2,400 0 0  | 20 0 0                      | 9,460 0 0       | 3,501                    | 1,709        | 5,210  |
| Or per mile of railway ..                                    | 188                   | 56 0 0             | 286 0                            | 19 0 0     | .....                       | 75 0 0          | .....                    | .....        | .....  |
| For previous 4 weeks of half-year ..                         | 104,200               | 33,800 0 0         | 1,61,009 0                       | 11,300 0 0 | 370 0 0                     | 45,470 0 0      | 15,013                   | 7,338        | 22,350 |
| Total for 5 weeks ..   | 127,685               | 40,840 0 0         | 1,66,764 0                       | 13,700 0 0 | 390 0 0                     | 54,930 0 0      | 18,513                   | 9,047        | 27,560 |
| COMPARISON.  |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ..             | 20,445                | 6,081 0 0          | 11,939 0                         | 853 0 0    | 24 0 0                      | 7,858 0 0       | 4,014                    | 1,806        | 5,820  |
| Per mile of railway corresponding period of previous year .. | 164                   | 56 0 0             | 96 0                             | 7 0 0      | .....                       | 63 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ..              | 126,769               | 42,461 0 0         | 81,166 0                         | 5,451 0 0  | 141 0 0                     | 48,060 0 0      | 21,097                   | 7,887        | 28,984 |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Bengal Central Railway.*

| RECEIPTS FOR WEEK ENDING 7th AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6th AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1st APRIL 1886 TO WEEK ENDING 7th AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1st APRIL 1887 TO WEEK ENDING 6th AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125                                       | 7,858     | 63               | 125                                       | 9,460     | 76               | 125  | 2,22,024        | 99               | 125  | 2,24,110*       | 100              | 486                     | .....                   |

\* Audited up to week ending 11th June 1887.



## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 30th July 1887, on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 10,900                | 3,500 0 0          | (b) 30,300 0                     | (b) 2,200 0 0 | 40 0 0                      | 5,740 0 0       | 2,161                    | (b) 2,103    | 4,264  |
| Or per mile of railway ...                                    | 116                   | 41 0 0             | 352 0                            | 25 0 0        | 1 0 0                       | 67 0 0          | .....                    | .....        | .....  |
| For previous 3 weeks of half-year ...                         | 35,500                | 11,600 0 0         | 14,430 0                         | 1,500 0 0     | 410 0 0                     | 13,510 0 0      | 7,110                    | 2,608        | 9,718  |
| Total for 4 weeks ...   | 45,500                | 15,100 0 0         | 44,730 0                         | 3,700 0 0     | 450 0 0                     | 19,250 0 0      | 9,271                    | 4,709        | 13,980 |
| COMPARISON.   |                       |                    |                                  |               |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 9,608                 | 2,925 0 0          | (a) 33,524 0                     | 400 0 0       | 351 0 0                     | 3,746 0 0       | 1,201                    | (a) 3,362    | 4,513  |
| Per mile of railway corresponding period of previous year ... | 112                   | 35 0 0             | 390 0                            | 4 0 0         | .....                       | 39 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 41,613                | 13,018 0 0         | 41,498 0                         | 1,576 0 0     | 717 0 0                     | 15,311 0 0      | 5,025                    | 4,708        | 9,733  |

(a) Includes 30,236 mounds and 3,003 train miles for ballast trains.

(b) Ditto 25,000 " Rs. 1,500 and 1,300 train miles on account of ballast trains.

## FINANCIAL YEAR.

*Approximate Statement of Gross Receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 31ST JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 31ST JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 30TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 86                                       | 3,746     | 44               | 86                                       | 5,740     | 67               | 86  | 81,711          | 86               | 86  | 81,335          | 56               | .....                   | 376                     |

## ASSAM-BEHAR STATE RAILWAY.

## PURNEAH SECTION.

*Approximate Return of Traffic for week ended 30th July 1887, on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,930                 | 1,000 0 0          | 14,000 0                         | 1,300 0 0 | 30 0 0                      | 2,330 0 0       | 668                      | 410          | 1,078  |
| Or per mile of railway ...                                    | 75                    | 26 0 0             | 359 0                            | 33 0 0    | 1 0 0                       | 60 0 0          | .....                    | .....        | .....  |
| For previous 3 weeks of half-year ...                         | 9,100                 | 2,900 0 0          | 67,000 0                         | 6,750 0 0 | 130 0 0                     | 9,780 0 0       | 2,202                    | 1,340        | 3,543  |
| Total for 4 weeks ...   | 12,030                | 3,900 0 0          | 81,000 0                         | 8,050 0 0 | 160 0 0                     | 12,110 0 0      | 2,870                    | 1,750        | 4,620  |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....     | .....                       | .....           | .....                    | .....        | .....  |

\* Audited up to week ending

188 .

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 31ST JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30TH JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 31ST JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 30TH JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   |                 |                  |   | Rs.             | Rs.              | Rs.                     |                         |
| .....                                    | .....     | .....            | 30                                       | 2,350     | 60               | .....   | .....           | .....            | 30  | 52,626          | 79               | 52,626                  | .....                   |

## TIRHOOT STATE RAILWAY.

*Approximate Return of Traffic for the week ending 30th July 1887, on 240 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week on 240 miles open ... ..             | 36,812                | 12,263 0 0         | 1,37,140 0                       | 12,276 0 0 | 2,340 0 0                   | 26,879 0 0      | 6,173                    | 5,230        | 11,411 |
| Or per mile of railway ... ..                                   | 148                   | 49 4 0             | 551 0                            | 49 5 0     | 3 0 0                       | 101 0 0         | .....                    | .....        | .....  |
| For previous 3 week of half-year ... ..                         | 119,960               | 39,263 0 0         | 5,03,347 0                       | 42,706 0 0 | 8,378 0 0                   | 90,347 0 0      | 21,905                   | 18,705       | 40,730 |
| Total for 4 weeks ... ..  | 166,772               | 51,526 0 0         | 6,40,486 0                       | 54,982 0 0 | 10,718 0 0                  | 1,17,226 0 0    | 28,137                   | 24,004       | 52,141 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year on 240 miles open | 20,022½               | 10,813 9 2         | 1,28,170 0                       | 13,011 1 0 | 2,334 11 11                 | 26,089 6 1      | 5,032                    | 5,018        | 10,050 |
| Per mile of railway corresponding week of previous year         | 122                   | 43 15 0            | 521 0                            | 52 14 0    | 0 10 0                      | 97 7 0*         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ... ..             | 145,864½              | 48,060 4 4         | 5,64,963 20                      | 60,300 3 0 | 15,860 0 10                 | 1,25,121 0 2    | 21,872                   | 20,343       | 42,215 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of railway."

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tirhoot State Railway.*

| RECEIPTS FOR WEEK ENDING 31st JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30th JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1st APRIL 1886 TO 31st JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1st APRIL 1887 TO 30th JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 246                                      | 26,650    | 108              | 240                                      | 26,879    | 108              | 246   | 5,73,240        | 2,334            | 24,804  | 5,05,603        | 2,397            | 22,254                  | .....                   |

## NALHATI STATE RAILWAY.

*Approximate Return of Traffic for the week ending 30th July 1887, on 27½ miles open.*

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ... ..                              | 2,044                 | 1,165 0 0          | 6,899 0                          | 472 0 0   | 5 0 0                       | 1,612 0 0       | 509                      | 254          | 763    |
| Or per mile of railway ... ..                                  | 101                   | 42 12 0            | 253 0                            | 17 5 0    | 0 3 0                       | 60 4 0          | .....                    | .....        | .....  |
| For previous 3 week of half-year ... ..                        | 10,266                | 4,012 0 0          | 25,095 0                         | 1,722 0 0 | 40 0 0                      | 5,783 0 0       | 1,700                    | 1,070½       | 2,779½ |
| Total for 4 weeks ... ..                                       | 13,210                | 5,177 0 0          | 31,994 0                         | 2,194 0 0 | 54 0 0                      | 7,425 0 0       | 2,218                    | 1,324½       | 3,542½ |
| COMPARISON.  |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ... ..           | 2,035                 | 815 11 0           | 8,015 10                         | 552 15 0  | 18 10 3                     | 1,387 4 3       | 509                      | 254          | 763    |
| Per mile of railway corresponding week of previous year ... .. | 75                    | 29 15 0            | 294 0                            | 20 5 0    | 0 11 0                      | 60 15 0         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ... ..            | 0,084                 | 4,020 11 7         | 31,653 10                        | 2,377 9 0 | 58 10 3                     | 6,464 14 10     | 2,254                    | 1,179½       | 3,433½ |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Nalhati State Railway.*

| RECEIPTS FOR WEEK ENDING 31st JULY 1886. |           |                  | RECEIPTS FOR WEEK ENDING 30th JULY 1887. |           |                  | TOTAL RECEIPTS FROM 1st APRIL 1886 TO 31st JULY 1886. |                 |                  | TOTAL RECEIPTS FROM 1st APRIL 1887 TO 30th JULY 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                     | Receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. | Mean mileage worked.                                  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 27½                                      | 1,387     | 51               | 27½                                      | 1,643     | 60               | 27½   | 30,790          | 1,130            | 27½   | 32,763          | 1,203            | 1,972                   | .....                   |



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, AUGUST 24, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## RESOLUTION ON THE REPORT OF THE PROTECTOR OF EMIGRANTS ON EMIGRATION TO BRITISH AND FOREIGN COLONIES FOR THE YEAR 1886.

GENERAL DEPARTMENT—COLONIAL EMIGRATION.

*Calcutta, the 23rd August 1887.*

### RESOLUTION.

READ—

The Report by the Protector of Emigrants on emigration to British and Foreign Colonies for the year 1886.

THE year 1886 is marked in the history of Emigration from India to the Colonies by the coming into force of Act XXI of 1883 which repealed the Indian Emigration Act of 1871. The introduction of the Act of 1883 was postponed until rules had been framed for its administration. Draft rules under the Act were published in January 1885, and were considered at a Conference held in August of the same year, in which the Agents for Colonies receiving Indian emigrants took part. The alterations approved at the Conference were for the most part adopted by Government, and the Act and Rules framed under it came into force simultaneously from 1st April 1886. The changes made by the new law are chiefly matters of detail with regard to the registration of emigrants, appointment of registering officers, execution of contracts, the accommodation to be required on emigrant vessels, and the fees to be levied on emigration. The Protector reports that the new provisions of the law have generally worked smoothly, with the exception of the provisions contained in section 35 of the Act, and section IV of Chapter II of the Rules which require that emigrants' agreements shall be executed in triplicate. The Lieutenant-Governor has recently called on Commissioners of Divisions to report on the

working of the present system of registration and execution of contracts, and he reserves for the present remarks on this subject.

Among the administrative measures of the year may be mentioned—

(a).—The notification of the Government of India, of April 1886, fixing Rs. 2-8 as the fee leviable under sections 38 and 73 of the Act on account of each emigrant embarked.

(b).—The orders of this Government, of September 1886, sanctioning, as an experimental measure, the payment of remuneration to magisterial clerks for the registration of emigrants to the Colonies at rates of one-anna for each labourer and half-an-anna for each dependent, when the numbers exceed 50 in a month, and within a limit of Rs. 15.

2. Emigration to the Colonies during 1886 was on a somewhat larger scale than in the preceding year, but the number of emigrants did not nearly come up to that of 1884-85, before the decline of the sugar industry, when ten Colonies had agencies working in Calcutta. Only four Colonies indented last season for labourers, viz., British Colonies—Demerara, Trinidad, Fiji, and the Dutch Colony of Surinam. On the whole, requisitions were received for 7,010 labourers against 6,430 in 1885-86 and 18,639 in 1884-85. Of the total number for whom requisitions were received in the year under review, Demerara indented for 3,710, or a little more than half, Trinidad indented for 2,050, Fiji 930, and Surinam 320. The increased demand for Indian labour in Fiji, noticed in last year's Resolution, has not been fully maintained.

From the recent official reports received from the Colonies which import Indian labour, it does not appear that there is likelihood of an early return to the large requisitions for labour which were received some years ago. In Jamaica, Government—directed immigration has been suspended. The Protector of Immigrants in Natal reported in March last that there was no immediate prospect of improvement in the sugar industry. In the last report received from St. Lucia, the Protector of Immigrants writes:—"The prospect of sugar is so bad that it cannot be known how soon one or more of the central factories may be forced to abandon operations. In such an event, if Demerara or Trinidad do not relieve us of the coolies thrown out of work, the one course for the Colony will be to send them back to India without the loss of a day." The same report states that the Indian immigrants in St. Lucia have suffered considerably from sickness caused by employment in malarious lands and from want of work. The authorities of this Colony refused to sanction the departure of labourers no longer under indenture to Panama, where high wages, which have attracted large numbers of immigrant labourers from Jamaica, are paid on the Panama Canal Works. This refusal was prompted by considerations of the interests of the immigrants for whom the Colony is bound to provide work for five years after the term of their first indenture.

3. The Colonial Agencies employed 466 recruiters during the year. Dr. Grant reports that applications have been more freely made for recruiting licenses since Act XXI of 1883 came into force, no fee being now leviable. It is noticed with satisfaction that the licenses of only four recruiters were cancelled for misconduct. The 466 recruiters collected 8,302 persons, an average of 18 persons to each recruiter.

4. The total number of persons registered during the year as intending to emigrate to the Colonies was 8,302. In the classification of these according to the provinces where they were registered, the North-Western Provinces with Oudh come first with 4,271 registrations, while Bengal and Behar had 4,031. The largest numbers of emigrants were registered in the 24 Pergunnahs (1,388), Shahabad (1,038), Patna (990), Benares (931), Allahabad (725), and Faizabad (538). Classified according to districts of birth or residence, the largest numbers of emigrants came from Shahabad (1,060), Ghazipore (504), Patna (478), Basti (463), Azamgarh (435), Gya (332), and Allahabad (328). With regard to these figures, Dr. Grant remarks:—

"If the two emigration seasons of 1884 and 1885 be excluded, it may be said that for years past natives of the North-Western Provinces and Oudh have responded in the largest numbers to the labour requisition of the Colonies, for excepting the natives of Behar, those of the Lower Provinces generally, unless pressed by privation, have always proved, more or less, reluctant to

emigrate to the Colonies, notwithstanding the favourable terms offered by the recruiters. It may be noticed, accordingly, that Colonial emigration from the districts of the Lower Provinces, which rose into prominence during the scarcity that prevailed in them in 1884 and 1885, subsided during the comparative abundance that followed in 1886, when Colonial recruiters had therefore to revert for the majority of their recruits to the North-Western Provinces and Oudh. But in so doing they obviated the competition, however slight, that may have arisen between themselves and licensed recruiters for the tea districts. \* In 1886, as in 1885, the Colonial recruiters in Bengal and Behar were most active during the months—June to October—when licensed inland recruiters—sardars were least so; and the work of the one set was drawing to a close, when that of the other was extending.”

5. Out of 8,302 persons registered, 8,121\* were admitted into the Calcutta depôts. Of the casualties accounting for this decrease, 96 were desertions *en route*, 34 were detained in the mofussil depôts, and 49 were rejected by the agencies as unfit; these figures compare favourably with the casualties of the preceding year. Including persons remaining at the end of the preceding year, 8,171 persons were accommodated in the depôts during the year, 22 of whom died, 187 deserted, and 911 were rejected or discharged by the recruiting agencies for one cause or another; these figures also compare favourably with those of the preceding year. The year was healthy in the depôts, and the general average mortality was much below that of former years. Cholera, which was prevalent during the year in Calcutta and the Suburbs, caused only one of the 22 deaths in the depôts. The Medical Inspector writes:—

“It is remarkable that not a single case of cerebro-spinal fever occurred in any of the depôts; the contrast in this respect with the preceding year being noteworthy, although it is difficult to suppose that the general hygienic condition of the depôts was very different from that which obtained in 1885. There is no doubt that the etiology of this disease has not yet been determined.”

The average period for which emigrants are detained in the depôts is not given, but from the statement on page 12 of the report, it appears that only 113 persons were detained for a period exceeding three months; an outbreak of measles in the Surinam depôt was the chief cause of delay in embarkation. The general sanitary arrangements in all the depôts are reported by the Medical Inspector to be excellent.

6. Of the 6,423 persons who actually embarked for the Colonies during the year, 3,964 were men, 1,613 women (or 40·6 women for every 100 men) and 846 children. Calculating the percentage of females on the whole number embarked, including children, the proportion was 45·4 females for every 100 males. Nine hundred and fifty-nine persons of both sexes and all ages, or 14·93 per cent of the whole number, were “return emigrants,” the majority having come back from Demerara, St. Vincent and Trinidad. The emigrants were carried to the Colonies in sailing vessels (no steamers were employed on this service in 1886), and the voyages varied in length from 69 days—the fastest voyage to Fiji, to 106 days—the slowest voyage to Demerara. The aggregate mortality\* on the voyages was 77, giving the not excessive percentage of 1·19 on the whole number embarked. On six of the 12 ships the death-rate was below 1 per cent., and only on two ships did the percentage of deaths exceed two. Cerebro-spinal fever caused six deaths, and measles caused much of the mortality amongst infants and young children.

\* Not 2·21 as stated on page 13 of Dr. Grant's Report

Five thousand six hundred and twenty-one emigrants re-embarked from the Colonies for India during the year, bringing with them savings amounting to six and a quarter lakhs of rupees, an average of Rs 111·4·4 per head. As in former years, those returning from Trinidad and Demerara brought back most money, and those returning from Mauritius had saved least. The death-rate on the return voyages was below 2 per cent. on all the voyages, except those of the *Mount Tabor* and *Mairi Bhan*. The emigrants who returned in the *Mount Tabor* had embarked from Guadaloupe in the *Jorawar*, which was dismasted by a violent gale whilst rounding the Cape of Good Hope, and at Port Elizabeth they were transferred to the *Mount Tabor*. The excessive mortality of 9 per cent. on this voyage appears to have been due to the

Return emigrants.

severity of the passage, which lasted five-and-a-half months, and to the feeble health of some of the passengers. The voyage of the *Mairi Bhan* from Trinidad, which lasted six-and-a-half months, was also a trying voyage on account of the insubordination of the crew and the defective state of the water condenser; the mortality of this ship was 5·8 per cent., chiefly among invalids.

The work of the Protector in the tracing of heirs to vacant estates of emigrants who had died in the Colonies or on the return voyage continued to increase, 235 vacant estates, valued at Rs. 38,823, having come under his administration during the year.

The Lieutenant-Governor's acknowledgments are due to Dr. Grant for his efficient discharge of his duties.

By order of the Lieutenant-Governor of Bengal,

W. C. MACPHERSON,

*Offg. Secretary to the Govt. of Bengal.*

## RETURNS OF JOINT-STOCK COMPANIES FOR THE YEAR 1886-87.

*Statement showing the Name and Number on the Register borne by each Joint-Stock Company registered in the Calcutta Registry Office, with its Object, Nominal Capital, and date of Registration during the year ending 31st March 1887.*

| Number on this list. | Number borne by each Company in the general register. | Name of the Company.                | Object of each Company.                                       | Date of registration. | Nominal capital. | REMARKS. |
|----------------------|---|-------------------------------------|---|-----------------------|------------------|----------|
|                      |   |                                     |   |                       | Rs.              |          |
| 1                    | 528   | Amicable Insurance Office, Ltd. ... | To carry on business of Marine and Fire Insurances.           | 26th May 1886 ...     | 10,00,000        |          |
| 2                    | 530   | Shakomato Tea Co., Ltd. ...         | To cultivate tea, &c. ...                                     | 26th June ...         | 2,50,000         |          |
| 3                    | 531   | Singlo Tea Co., Ltd. ...            | Ditto ...   | 8th July ...          | 12,00,000        |          |
| 4                    | 532   | Chapaguri Tea Co., Ltd. ...         | Ditto ...   | 12th ...              | 1,50,000         |          |
| 5                    | 533   | Chalouni Tea Co., Ltd. ...          | Ditto ...   | 29th ...              | 1,20,000         |          |
| 6                    | 535   | Sherghur Co., Ltd. ...              | To prospect coal and other minerals.                          | 14th Dec. ...         | 10,000           |          |
| 7                    | 536   | Green & Co., Ltd. ...               | To carry on business of oil factory, to sell oil and oilseed. | 5th Feb. 1887 ...     | 8,000            |          |
| 8                    | 537   | Tangail Loan Office, Ltd. ...       | Banking business, &c. ...                                     | 12th ...              | 50,000           |          |
|                      |   |                                     |   | Total ...             | 27,88,000        |          |

## No. II.

*Statement showing the Register Number and Names of Companies that have increased their Capital during the year ending 31st March 1887.*

| Number on this list. | Register number borne by each Company. | Date of registration. | Amount of original capital. | NAMES OF COMPANIES.                | Date of increase. | Amount of increased capital. | REMARKS. |
|----------------------|--|-----------------------|-----------------------------|------------------------------------|-------------------|------------------------------|----------|
|                      |  |                       | Rs.                         |                                    |                   | Rs.                          |          |
| 1                    | 341                                    | 25th July 1876        | 3,75,000                    | Amluckie Tea Co., Ltd. ...         | 20th April 1886   | 71,500                       |          |
| 2                    | 384                                    | 25th March 1879       | 1,00,000                    | Kettela Tea Co., Ltd. ...          | 10th July ...     | 50,000                       |          |
| 3                    | 484                                    | 19th September 1883   | 20,000                      | Kishorekunge Loan Office, Ltd. ... | 17th ...          | 30,000                       |          |
| 4                    | 513                                    | 16th May 1885         | 25,000                      | Arya Tea Co., Ltd. ...             | 14th August ...   | 8,975                        |          |
|                      |  |                       |                             |                                    | Total ...         | 1,61,475                     |          |

## No. III.

*Statement showing the Register Number and Names of Companies that have commenced winding up have been finally dissolved, or are otherwise defunct, with their Capital, Date of Registration, winding up, or final dissolution during the year ending 31st March 1887.*

| Number of this list. | Number borne by each Company in the general register. | NAMES OF COMPANIES.                        | Nominal capital. | Date of registration. | Date of winding up. | Date of final dissolution. | Date on which written off defunct. | REMARKS. |
|----------------------|---|--|------------------|-----------------------|---------------------|----------------------------|------------------------------------|----------|
|                      |   |  | Rs.              |                       |                     |                            |                                    |          |
| 1                    | 396   | Tellichapori Tea Association, Ltd. ...     | 50,000           | 5th Feb. 1880         | 20th April 1886     | 30th Nov. 1886             |                                    |          |
| 2                    | 441   | Raneegunge Tea Manufacturing Co., Ltd. ... | 40,000           | 5th July 1882         | 1st May ..          |                            |                                    |          |
| 3                    | 483   | Debrughur Stores Co., Ltd. ...             | 10,000           | 16th Aug. 1883        | 18th .. ..          |                            |                                    |          |
| 4                    | 406   | Single Tea Co., Ltd. ...                   | 11,00,000        | 18th April 1881       | 10th .. ..          | 16th July 1886             |                                    |          |
| 5                    | 521   | Amicable Insurance Office, Ltd. ...        | 10,00,000        | 7th Jan. 1886         | 26th .. ..          |                            |                                    |          |
| 6                    | 379   | United Medical Association, Ltd. ...       | 5,000            | 7th Feb. 1879         | 31st .. ..          |                            |                                    |          |
| 7                    | 180   | Labor Transport Co., Ltd. ...              | 1,00,000         | 24th Oct. 1873        | 10th June ..        |                            |                                    |          |
| 8                    | 472   | Calcutta Trading Co., Ltd. ...             | 50,000           | 19th June 1883        | 10th July ..        | 31st July 1886             |                                    |          |
| 9                    | 200   | Gowhaty Tea Co., Ltd. ...                  | 4,00,000         | 2nd May 1873          | 27th .. ..          |                            |                                    |          |
| 10                   | 454   | Bengal Rice Mills Association, Ltd. ...    | 10,00,000        | 17th Oct. 1882        | 17th Sept. ..       |                            |                                    |          |
|                      |   | Total ...                                  | 37,55,000        |                       |                     |                            |                                    |          |

## No. IV.

*Statement showing the Register Number and Names of Companies that have reduced their Capital during the year ending 31st March 1887.*

| Number of this list. | Register number borne by each Company. | Date of registration. | Amount of original capital. | NAMES OF COMPANIES.                                 | Date of reduction.  | Amount of capital reduced. | REMARKS. |
|----------------------|--|-----------------------|-----------------------------|---|---|----------------------------|----------|
|                      |  |                       | Rs.                         |   |   | Rs.                        |          |
| 1                    | 463                                    | 2nd February 1883...  | 2,50,000                    | Darjeeling and Kurseong Hotel and Trading Co., Ltd. | 4th March 1887, by order of the High Court, dated 21st February 1887. | 2,00,000                   |          |

## No. VI.

*Statement showing the Number and Name of existing Companies working in Bengal for the year ending 31st March 1887.*

## BANKING AND INSURANCE COMPANIES.

| Serial number. | Number. | NAMES OF COMPANIES.                            | When registered. | Nominal capital. | Paid up capital. | Date of last balance sheet filed. | REMARKS. |
|----------------|---------|--|------------------|------------------|------------------|-----------------------------------|----------|
|                |         |  |                  | Rs.              | Rs.              |                                   |          |
| 1              | 1       | Hong-Kong and Shanghai Banking Corporation ... | 7th April 1869   | 1,68,75,000      | 1,68,75,000      | 31st Dec. 1886                    |          |
| 2              | 2       | Farruckpore Loan Office, Ltd. ...              | 13th June 1870   | 20,000           | 18,200           | 12th April ..                     |          |
| 3              | 3       | Tipperah Loan Office, Ltd. ...                 | 25th March 1871  | 1,00,000         | 84,500           | 12th .. ..                        |          |
| 4              | 4       | Mynensang Loan Office, Ltd. ...                | 2nd Sept. 1871   | 1,00,000         | 63,200           | 12th .. ..                        |          |
| 5              | 5       | Barisal Loan Office, Ltd. ...                  | 17th Nov. ..     | 20,000           | 18,000           | 13th March 1887                   |          |
| 6              | 6       | Bogra Loan Office, Ltd. ...                    | 5th .. 1871      | 21,000           | 20,000           | 13th April 1886                   |          |
| 7              | 7       | Nasirabad Loan Office, Ltd. ...                | 26th Sept. 1871  | 50,000           | 20,130           | 12th .. ..                        |          |
| 8              | 8       | Jessore Loan Co., Ltd. ...                     | 12th April 1876  | 1,20,000         | 1,00,000         | 30th .. ..                        |          |
| 9              | 9       | Sahar Sherpur Loan Office, Ltd. ...            | 29th June ..     | 20,000           | 15,170           | 12th .. ..                        |          |
| 10             | 10      | Moondshegunce Loan Office, Ltd. ...            | 29th July ..     | 20,000           | 12,010           | 12th Jan. 1887                    |          |
| 11             | 11      | Rindoo Union Bank, Ltd. ...                    | 26th Feb. 1880   | 20,000           | 1,530            | 31st Dec. 1886                    |          |
| 12             | 12      | Dacca Loan Office, Ltd. ...                    | 29th March ..    | 2,00,000         | 1,47,030         | 12th April ..                     |          |
| 13             | 13      | Sylhet Loan Co., Ltd. ...                      | 14th Aug. 1881   | 20,000           | 6,120            | 15th July ..                      |          |
| 14             | 14      | Chota Nagpore Banking Association, Ltd. ...    | 21st Feb. 1883   | 20,000           | 7,035            | 31st Dec. ..                      |          |
| 15             | 15      | Palma Bank, Ltd. ...                           | 8th Aug. ..      | 20,000           | 5,550            | 12th April ..                     |          |
| 16             | 16      | Kishoregunce Loan Office, Ltd. ...             | 19th Sept. ..    | 50,000           | 20,000           | 12th .. ..                        |          |
| 17             | 17      | Noakhali Loan Office, Ltd. ...                 | 2nd March 1885   | 20,000           | ...              | ...                               |          |
| 18             | 18      | Tungai Loan Office, Ltd. ...                   | 12th Feb. 1887   | 50,000           | ...              | ...                               |          |
| 19             | 19      | Amicable Insurance Office, Ltd. ...            | 26th May 1886    | 10,00,000        | 18,020           | 28th Feb. 1887                    |          |
|                |         | Total ...                                      | .....            | 1,37,45,000      | 1,74,83,305      | .....                             |          |

## TRADING COMPANIES.

| Serial number.          | Number. | NAMES OF COMPANIES.   | When registered. | Nominal capital. | Paid up capital. | Date of last balance sheet filed. | REMARKS.  |
|-------------------------|---------|---|------------------|------------------|------------------|-----------------------------------|---|
|                         |         |   |                  | Rs.              | Rs.              |                                   |   |
| 20                      | 1       | Darjeeling-Himalayan Railway Co., Ltd.                        | 10th April 1870  | 17,50,000        | 17,50,000        | 31st Dec. 1885                    |   |
| 21                      | 2       | Deoghur Railway Co., Ltd.                                     | 30th Jan. 1882   | 2,75,000         | 2,75,000         | 31st Dec. 1886                    |   |
| 22                      | 3       | Tarkagar Railway Co., Ltd.                                    | 18th Feb. 1884   | 16,50,000        | 16,09,820        | 28th Feb. 1885                    |   |
| 23                      | 4       | Behar Tramways Co., Ltd.                                      | 10th May "       | 4,00,000         | .....            | .....                             |   |
| 24                      | 5       | Assensolo E. I. K. Co-operative Society, Ltd.                 | 13th Feb. 1873   | 10,000           | 10,000           | 31st Dec. 1885                    |   |
| 25                      | 6       | Ruxar Co-operative Society, Ltd.                              | 25th May "       | 4,000            | 4,000            | 30th April 1886                   |   |
| 26                      | 7       | Northern Bengal Railway Co-operative Supply Association, Ltd. | 30th " 1882      | 8,000            | 8,000            | 31st Dec. 1886                    |   |
| 27                      | 8       | India General Steam Navigation Co., Ltd.                      | 25th Sept. 1858  | 80,00,000        | 54,61,450        | 31st " 1885                       |   |
| 28                      | 9       | Burma Steam Tug Co., Ltd.                                     | 12th July 1866   | 3,00,000         | 1,80,000         | 31st Oct. "                       |   |
| 29                      | 10      | Orissa Coasting Steam Navigation Co., Ltd.                    | 24th Aug. 1882   | 4,00,000         | 2,81,350         | 31st July 1886                    |   |
| 30                      | 11      | Calcutta Steam Navigation Co., Ltd.                           | 8th Nov. "       | 7,00,000         | 7,00,000         | 31st Dec. "                       |   |
| 31                      | 12      | Calcutta Landing and Shipping Co., Ltd.                       | 7th Aug. 1863    | 5,00,000         | 4,20,000         | 30th April 1886                   |   |
| 32                      | 13      | Bengal Unconventured Service Medical Hall Association, Ltd.   | 8th Dec. 1858    | 50,000           | 25,940           | 31st Dec. 1885                    |   |
| 33                      | 14      | R. Scott Thomson & Co., Ltd.                                  | 1st April 1863   | 5,00,000         | 4,65,000         | 31st March 1885                   |   |
| 34                      | 15      | Howrah Docking Co., Ltd.                                      | 15th Sept. 1873  | 8,00,000         | 8,00,000         | 31st Dec. 1885                    |   |
| 35                      | 16      | Agricultural Phosphates Co., Ltd.                             | 18th Dec. 1873   | 1,00,000         | 85,000           | 31st " 1886                       |   |
| 36                      | 17      | East Bengal Mercantile Co., Ltd.                              | 10th April 1877  | 20,000           | 1,135            | 12th April 1883                   |   |
| 37                      | 18      | Narail Trading Co., Ltd.                                      | 20th March 1870  | 20,000           | 6,084            | 31st Dec. 1886                    |   |
| 38                      | 19      | Pingmah Trading Co., Ltd.                                     | 7th Feb. 1881    | 1,00,000         | 50,000           | 12th April "                      |   |
| 39                      | 20      | Indian Kerosine Oil Co., Ltd.                                 | 14th Oct. "      | 10,00,000        | .....            | .....                             |   |
| 40                      | 21      | Sheik Ahmed & Co., Ltd.                                       | 11th April 1882  | 1,00,000         | .....            | .....                             |   |
| 41                      | 22      | Georgian Purveying Co., Ltd.                                  | 27th " "         | 50,000           | 20,390           | 30th April 1883                   |   |
| 42                      | 23      | Co-operative Pharmacy Co., Ltd.                               | 31st May "       | 50,000           | 10,815           | 30th June 1885                    |   |
| 43                      | 24      | W. Newman & Co., Ltd.   | 11th Feb. "      | 3,50,000         | 3,47,200         | 30th " 1886                       |   |
| 44                      | 25      | Gohra Tannery Co., Ltd.                                       | 9th Sept. "      | 1,50,000         | 1,50,000         | 31st Dec. 1885                    |   |
| 45                      | 26      | Calcutta Tanning Co., Ltd.                                    | 14th " "         | 2,00,000         | .....            | .....                             |   |
| 46                      | 27      | Darjeeling and Kurseong Hotel and Trading Co., Ltd.           | 2nd Feb. 1883†   | 2,00,000*        | 2,50,000         | 31st Dec. 1886                    | * Since reduced.                                |
| 47                      | 28      | Rumary Ice Machine Agency, Ltd.                               | 12th Jan. 1884   | 50,000           | .....            | .....                             |   |
| 48                      | 29      | Kerosine Oil Co., Ltd.  | 9th Dec. "       | 10,000           | 3,550            | 31st Dec. 1886                    | † Shown as liquidated in 1885-86 by over sight. |
| 49                      | 30      | Great Eastern Hotel Wine and General Purveying Co., Ltd.      | 4th Feb. 1886    | 12,00,000        | 12,00,000        | 30th April "                      |   |
| 50                      | 31      | Green & Co.   | 6th " 1887       | 8,000            | .....            | .....                             |   |
| Total Trading Companies |         |   |                  | 1,80,55,000      | 1,41,51,328      |                                   |   |

## MILLS AND PRESSES.

|    |    |   |                 |             |             |                 |  |
|----|----|---|-----------------|-------------|-------------|-----------------|--|
|    |    |   |                 | Rs.         | Rs.         |                 |  |
| 51 | 1  | Goosery Cotton Mills Co., Ltd.                | 9th Oct. 1863   | 15,00,000   | 15,00,000   | 31st Dec. 1886  |  |
| 52 | 2  | Howrah Cotton Mills Co., Ltd.                 | 7th Aug. 1872   | 18,00,000   | 18,00,000   | 28th Feb. "     |  |
| 53 | 3  | Dumbar Cotton Mill, Ltd.                      | 18th Dec. 1874  | 20,00,000   | 13,28,500   | 31st Dec. "     |  |
| 54 | 4  | Empress of India Cotton Mills Co., Ltd.       | 19th April 1877 | 8,75,000    | 8,75,000    | 31st " "        |  |
| 55 | 5  | Indee-Budke Jute Mills Co., Ltd.              | 21st " 1873     | 18,00,000   | 14,40,000   | 30th April "    |  |
| 56 | 6  | Fort Gloster Jute Manufacturing Co., Ltd.     | 6th May "       | 14,00,000   | 14,00,000   | 31st May 1885   |  |
| 57 | 7  | Sechpore Jute Manufacturing Co., Ltd.         | 1st Dec. "      | 15,00,000   | 15,00,000   | 31st Dec. 1886  |  |
| 58 | 8  | Howrah Mills Co., Ltd.                        | 14th July 1874  | 17,50,000   | 17,50,000   | 31st " "        |  |
| 59 | 9  | Gourapore Co., Ltd.                           | 12th April 1876 | 12,00,000   | 12,00,000   | 31st " "        |  |
| 60 | 10 | Kamarhatti Co., Ltd.                          | 28th Sept. 1877 | 8,00,000    | 4,00,000    | 31st " "        |  |
| 61 | 11 | Union Jute Co., Ltd.                          | 6th Oct. 1880   | 9,00,000    | 6,75,000    | 31st " "        |  |
| 62 | 12 | Hooghly Mills Co., Ltd.                       | 21st Sept. 1882 | 13,50,000   | 10,18,750   | 31st " "        |  |
| 63 | 13 | Kachnarrah Co., Ltd.                          | 30th Dec. "     | 14,00,000   | 6,97,075    | 31st " "        |  |
| 64 | 14 | Bomul Silk Co., Ltd.                          | 20th June 1881  | 3,50,000    | 3,50,000    | 31st " "        |  |
| 65 | 15 | Nasmyth's Patent Press Co., Ltd.              | 16th Sept. 1867 | 4,00,000    | 4,00,000    | 30th June 1885  |  |
| 66 | 16 | Calcutta Hydraulic Press Co., Ltd.            | 10th April 1873 | 1,70,000    | 1,70,000    | 30th " 1885     |  |
| 67 | 17 | Watson's Patent Press Co., Ltd.               | 23th Feb. 1874  | 3,00,000    | 3,00,000    | 31st Dec. 1886  |  |
| 68 | 18 | Ramkistopore Press Co., Ltd.                  | 23rd April "    | 1,50,000    | 1,50,000    | 31st " "        |  |
| 69 | 19 | Riverside Press Co., (Watson's Patent) Ltd.   | 13th July "     | 3,00,000    | 2,70,000    | 30th June "     |  |
| 70 | 20 | Strand Bank Press Co., (Watson's Patent) Ltd. | 24th " "        | 2,50,000    | 2,50,000    | 31st Jan. 1887  |  |
| 71 | 21 | Chitpore Hydraulic Pressing Co., Ltd.         | 17th March 1879 | 4,00,000    | 4,00,000    | 31st Dec. 1886  |  |
| 72 | 22 | Canal Press Co., Ltd.                         | 20th Sept. 1881 | 2,40,000    | 2,00,000    | 31st July "     |  |
| 73 | 23 | Coopdown Pressing Co., Ltd.                   | 27th July 1882  | 6,40,000    | 4,30,000    | 31st " "        |  |
| 74 | 24 | Jheel Press Co., Ltd.                         | 14th May 1883   | 1,50,000    | 1,50,000    | 31st Dec. "     |  |
| 75 | 25 | Agra Pressing Co., Ltd.                       | 30th June "     | 1,55,000    | 1,45,750    | 30th April 1885 |  |
| 76 | 26 | India Pressing Co., Ltd.                      | 13th Aug. "     | 1,50,000    | 1,42,770    | 31st Dec. 1885  |  |
| 77 | 27 | Goosery Pressing Co., Ltd.                    | 31st Dec. 1884  | 1,50,000    | .....       | .....           |  |
| 78 | 28 | Tingbar Paper Mills Co., Ltd.                 | 28th July 1882  | 6,00,000    | 6,00,000    | 30th April 1886 |  |
| 79 | 29 | Calcutta Central Press Co., Ltd.              | 21st April 1865 | 75,000      | 70,700      | 30th " "        |  |
|    |    |   |                 | 2,25,95,000 | 1,90,93,551 |                 |  |

## TEA, COFFEE, CINCHONA, OR OTHER PLANTING COMPANIES.

|    |    |                              |                |           |           |                |  |
|----|----|------------------------------|----------------|-----------|-----------|----------------|--|
|    |    |                              |                | Rs.       | Rs.       |                |  |
| 80 | 1  | Bengal Tea Co., Ltd.         | 23rd Nov. 1856 | 10,01,000 | 9,19,520  | 31st Dec. 1886 |  |
| 81 | 2  | Bahamu Tea Co., Ltd.         | 21st Feb. 1869 | 2,00,000  | 2,00,000  | 31st " "       |  |
| 82 | 3  | East India Tea Co., Ltd.     | 7th Aug. 1861  | 10,00,000 | 10,00,000 | 31st " "       |  |
| 83 | 4  | Kumchamper Tea Co., Ltd.     | 13th Nov. "    | 5,00,000  | 4,50,000  | 31st " "       |  |
| 84 | 5  | Sylhet Tea Co., Ltd.         | 18th Dec. "    | 1,50,000  | 1,40,633  | 1st Jan. 1887  |  |
| 85 | 6  | Ramguth Tea Co., Ltd.        | 13th May 1862  | 10,00,000 | 4,55,900  | 31st Dec. 1886 |  |
| 86 | 7  | Boon Tea Co., Ltd.           | 20th Nov. "    | 3,00,000  | 3,00,000  | 31st " "       |  |
| 87 | 8  | Pankabari Tea Co., Ltd.      | 9th Mar. 1863  | 2,50,000  | 2,18,312  | 31st " "       |  |
| 88 | 9  | Dehra Doon Tea Co., Ltd.     | 31st " "       | 20,00,000 | 8,78,000  | 31st " "       |  |
| 89 | 10 | Central Cachar Tea Co., Ltd. | 2nd May "      | 10,00,000 | 10,00,000 | 31st " "       |  |
| 90 | 11 | Bishnauth Tea Co., Ltd.      | 6th " "        | 11,00,000 | 8,25,000  | 31st " "       |  |





## TEA, COFFEE, CINCHONA OR OTHER PLANTING COMPANIES—concluded.

| Serial number. | Number. | NAMES OF COMPANIES.                       | When registered. | Nominal capital. | Paid up capital. | Date of last balance sheet filed. | REMARK. |
|----------------|---------|---|------------------|------------------|------------------|-----------------------------------|---------|
|                |         |   |                  | Rs.              | Rs.              |                                   |         |
| 107            | 118     | Killeck Tea Co., Ltd. ...                 | 20th Dec. 1885   | 2,00,000         | 1,75,000         | 31st Dec. 1886                    |         |
| 108            | 119     | Chitisa Tea Co., (Dooars) Ltd. ...        | 6th Jan. 1886    | 3,50,000         | 2,91,875         | 31st "                            |         |
| 109            | 120     | Zuranteo Tea Co., (Dooars) Ltd. ...       | 5th "            | 1,00,000         | 1,51,000         | 31st "                            |         |
| 200            | 121     | Kallinugger and Khoreel Tea Co., Ltd. ... | 10th "           | 3,00,000         | 3,00,000         | 31st "                            |         |
| 201            | 122     | Bannoekburn Tea Co., Ltd. ...             | 20th Feb. "      | 2,00,000         | .....            | .....                             |         |
| 202            | 123     | Jaipur Tea Estates, Ltd. ...              | 18th March "     | 2,00,000         | .....            | .....                             |         |
| 203            | 124     | Shakomato Tea Co., Ltd. ...               | 20th June "      | 2,50,000         | .....            | .....                             |         |
| 204            | 125     | Single Tea Co., Ltd. ...                  | 8th July "       | 12,00,000        | 12,00,000        | 31st Dec. 1886                    |         |
| 205            | 126     | Chapaguri Tea Co., Ltd. ...               | 12th "           | 1,50,000         | .....            | .....                             |         |
| 206            | 127     | Chalouni Tea Co., Ltd. ...                | 20th "           | 1,20,000         | 37,500           | 31st Dec. 1886                    |         |
| 207            | 128     | Sylhet Cultivating Co., Ltd. ...          | 29th June 1876   | 20,000           | 17,375           | 12th April "                      |         |
| 208            | 129     | Kheri Indigo Association, Ltd. ...        | 18th March 1886  | 60,000           | .....            | .....                             |         |
|                |         | GRAND TOTAL ...                           | .....            | 4,02,89,575      | 3,43,78,621      |                                   |         |

## MINING AND QUARRYING COMPANIES.

|  |    |  |           |      | Rs.       | Rs.       |            |      |
|--|----|--|-----------|------|-----------|-----------|------------|------|
| 200  | 1  | Bengal Coal Co., Ltd. ....             | 24th July | 1858 | 24,00,000 | 24,00,000 | 31st Oct.  | 1886 |
| 210  | 2  | Equitable Coal Co., Ltd. ....          | 1st Aug.  | 1863 | 8,00,000  | 8,00,000  | 31st Dec.  | "    |
| 211  | 3  | Rancegunge Coal Association, Ltd. .... | 8th April | 1873 | 9,00,000  | 8,25,000  | 31st March | "    |
| 212  | 4  | New Beerboom Coal Co., Ltd.....        | 10th May  | "    | 7,20,000  | 7,20,000  | 31st Oct.  | "    |
| 213  | 5  | Burrakur Coal Co., Ltd. ....           | 19th June | 1875 | 1,50,000  | 1,50,000  | 31st May   | "    |
| 214  | 6  | Alipore Coal Co., Ltd. ....            | 3rd March | 1882 | 3,00,000  | 3,00,000  | 30th Nov.  | "    |
| 215  | 7  | Sherghur Co., Ltd. ....                | 14th Dec. | 1886 | 10,000    | .....     | .....      | "    |
| 216  | 8  | Rajmahal Stone Co., Ltd. ....          | 30th June | 1876 | 2,50,000  | 2,50,000  | 31st Dec.  | "    |
| 217  | 9  | Bengal Stone Co., Ltd. ....            | 15th Feb. | 1879 | 80,000    | 80,000    | 31st       | "    |
| 218  | 10 | Deoghur Mining Co., Ltd. ....          | 18th Jan. | 1884 | 24,00,000 | 21,09,156 | 30th April | "    |
| 219  | 11 | Arrakan Petroleum Oil Co., Ltd.        | 14th July | 1883 | 4,00,000  | 1,64,630  | 31st Dec.  | "    |
| 220  | 12 | Bauree Oil Prospecting Co., Ltd.       | 6th Feb.  | 1894 | 32,000    | .....     | .....      | "    |
| Total Mining and Quarrying Companies ..... |    |  |           |      | 84,42,000 | 77,07,780 |            |      |

## ICE MANUFACTURING COMPANIES.

|     |   |  |            |      | Rs.       | Rs.      |           |      |
|-----|---|--|------------|------|-----------|----------|-----------|------|
| 221 | 1 | Bengal Ice Manufacturing Co., Ltd. ....    | 9th July   | 1878 | 5,00,000  | 4,95,000 | 31st Dec. | 1885 |
| 222 | 2 | Jamulpore Ice Manufacturing Co., Ltd. .... | 28th May   | 1879 | 10,000    | 7,120    | 31st      | 1886 |
| 223 | 3 | Imperial Ice Co., Ltd. ....                | 18th Aug.  | 1882 | 3,00,000  | 2,49,500 | 31st July | 1885 |
| 224 | 4 | Crystal Ice Supply Co., Ltd. ....          | 14th       | 1883 | 2,00,000  | 2,00,000 | 31st Dec. | 1886 |
| 225 | 5 | Outback Ice Co., Ltd. ....                 | 21st April | 1884 | 10,000    | .....    | .....     |      |
|     |   | Total Ice Manufacturing Companies .....    |            |      | 10,20,000 | 9,51,620 |           |      |

## SUGAR MANUFACTURING COMPANY.

|     |   |                                   |                |                  |                  |                |
|-----|---|-----------------------------------|----------------|------------------|------------------|----------------|
| 226 | 1 | Carew & Co., Ltd.                 | 11th June 1875 | Rs.<br>16,00,000 | Rs.<br>16,00,000 | 31st Dec. 1886 |
|     |   | Total Sugar Manufacturing Company |                | 16,00,000        | 16,00,000        |                |

## BREWERY.

|     |   |   |                |          |       |  |  |  |
|-----|---|---|----------------|----------|-------|--|--|--|
|     |   |   |                |          | Rs.   |  |  |  |
| 227 | 1 | Castle Distillery and Brewery Co., Ltd. ... | 6th March 1884 | 2,00,000 | ..... |  |  |  |
|     |   | Total Brewery Company ...                   | .....          | 2,00,000 | ..... |  |  |  |

## OTHERS.

|     |   |                                       |            |      | Rs.       | Its.     |           |      |
|-----|---|---------------------------------------|------------|------|-----------|----------|-----------|------|
| 228 | 1 | Kanknarrah Lime Factory Co., Ltd. ... | 6th June   | 1879 | 10,000    | 9,130    | 30th June | 1886 |
| 229 | 2 | Bengal Telephone Co., Ltd. ...        | 14th March | 1883 | 10,00,000 | 8,79,500 | 31st Dec. | 1886 |
| 230 | 3 | Goyana Boat Co., Ltd. ...             | 1st July   | 1885 | 20,000    | .....    | .....     |      |
|     |   | Total Other Companies ...             |            |      | 10,30,000 | 8,98,630 |           |      |

| NATURE OF COMPANIES.               |     |     |     |     | Number. | Nominal capital. | Paid up capital. |
|------------------------------------|-----|-----|-----|-----|---------|------------------|------------------|
|                                    |     |     |     |     |         | Rs.              | Rs.              |
| I.—Banking and Insurance Companies | ... | ... | ... | ... | 19      | 1,87,45,000      | 1,74,33,305      |
| II.—Trading Companies              | ... | ... | ... | ... | 31      | 1,89,55,000      | 1,41,51,328      |
| III.—Mills and Presses             | ... | ... | ... | ... | 29      | 2,25,95,000      | 1,96,23,551      |
| IV.—Planting Companies             | ... | ... | ... | ... | 129     | 4,02,88,575      | 3,43,78,621      |
| V.—Mining Companies                | ... | ... | ... | ... | 12      | 84,42,000        | 77,97,780        |
| VI.—Ice Manufacturing Companies    | ... | ... | ... | ... | 5       | 10,20,000        | 9,51,620         |
| VII.—Sugar Manufacturing Company   | ... | ... | ... | ... | 1       | 16,00,000        | 16,00,000        |
| VIII.—Brewery                      | ... | ... | ... | ... | 1       | 2,00,000         | .....            |
| IX.—Others                         | ... | ... | ... | ... | 3       | 10,30,000        | 8,88,620         |
| GRAND TOTAL                        |     |     |     |     | 230     | 11,28,75,575     | 9,68,24,825      |

CALCUTTA, The 12th May 1887.

P. GHOSHIA,  
Registrar of Joint-Stock Companies.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 20th August 1887.

| No.                                       | District and date of return.                      | Rainfall at Sudder station in inches.  | Character of the weather, state and prospects of the crops, and state of health at date.   |  |
|---|---|--|--|--|
| BENGAL.                                   |   |  |  |  |
| Western Districts                         |   |  |  |  |
| BURDWAN DIV.                              | 1 Burdwan, Aug. 20, '87                           | 0.05   | Weather—very hot and sultry; break in rains continues. Crop prospects so far fair, but rain will now be much required. Prices stationary. Cholera continues in the Sudder. Public health in sub-divisions good.  |  |
|   | Culna                     "                     " | 0.27   |  |  |
|   | Cutwa                   "                   "     | 0.14   |  |  |
|   | Raneegunge           "                   "        | 0.08   | Weather—seasonable. Transplantation of <i>aman</i> rice nearly finished. <i>Bhadoi</i> and <i>ketas</i> rice doing well and promise to yield an average crop. Prospects of sugarcane and pulses good. Common rice 25 seers per rupee at Bankoora market. Public health good.   |  |
|   | 2 Bankoora               " 20, '87                | 0.30   |  |  |
|   | Bishenpore           "                   "        | 0.50   |  |  |
|   | 3 Beerbhoom           " 20, "                     | 1.01   | A break in the rains. Weather extremely sultry with gathering clouds. Sugarcane unusually promising this year. More rain urgently needed for young <i>aman</i> paddy. Public health good. Prices stationary.   |  |
|   | Rampore Haut       "                   "          | 0.34   |  |  |
|   | 4 Midnapore           " 20 '87                    | 0.17   | Weather—sultry. State and prospects of crops good. A little cholera has broken out in the north of the district.   |  |
|   | 5 Hooghly              " 20, "                    | Nil  | Weather—unusually hot and dry. Want of rain caused considerable anxiety during the week. Rain falling at the time of report, and it is hoped that it is general. Public health good for the season of the year.  |  |
| Jehanabad           "                   " | 0.15  |  |  |  |
| Howrah              " 20, "               | 1.05  | A slight break in rains with increase in temperature. Rains now recommenced. State and prospects of crops good. Harvesting of jute and <i>aus</i> rice commenced. Usual complaints of crops submerged by overflow of rivers. |  |  |
| Ootloobernah       "                   "  | 0.57  |  |  |  |
| Central Districts                         |   |  |  |  |
| PRESIDENCY DIV.                           | 6 24-Pergha., Aug. 20, '87                        | 1.01   | Weather—seasonable with occasional showers of rain. Prospects of <i>aus</i> , jute and sugarcane continue satisfactory, but more rain wanted for <i>aman</i> crop. A few cases of cholera and fever reported; public health otherwise good.  |  |
|   | 7 Nuddes               " 20, "                    | Nil  | Weather—hot and dry. Rain wanted for <i>aman</i> rice. Harvesting of <i>aus</i> has begun. Indigo manufacture almost finished. Sugarcane and jute doing well. Public health fair. Flood level a little lower.  |  |
|   | Meherpur           "                   "          | 2.73   |  |  |
|   | Chandanga          "                   "          | 0.18   |  |  |
|   | Ranaghat           "                   "          | 1.27   | Weather—very hot, without rain. <i>Aus</i> paddy ripening; crop reported good. Ploughing for, and transplanting of, <i>aman</i> paddy retarded by dry weather. Public health good.   |  |
|   | 8 Khoolna              " 20 '87                   | 0.93   |  |  |
|   | 9 Jessore              " 20, "                    | 0.87   |  |  |
|   | Jhenidah           "                   "          | 1.02   | Weather—very hot. Rain at intervals. <i>Aman</i> growing well. Reaping of <i>bhadoi</i> paddy commenced. <i>Til</i> , sugarcane and jute progressing. Public health good.  |  |
|   | Magurah           "                   "           | 1.13   |  |  |
|   | Narail              "                   "         | 0.05   |  |  |
|   | 10 Moorshehabad       " 20 '87                    | 0.60   | Weather—hot and close. A ten-anna outturn of <i>bhadoi</i> expected. Prospects of <i>khaimanti</i> favourable and transplanting continues.   |  |
|   | Lalbagh           "                   "           | 0.78   |  |  |
|   | Kanchi             "                   "          | 0.75   |  |  |
|   | 11 Dinagepore         " 20, '87                   | 2.75   | Weather—very hot; cloudy. Cutting of <i>aus</i> paddy continues. Prospects of crops generally good. Public health fair.  |  |
|   | Thakurgaon       "                   "            | 2.99   |  |  |
|   | 12 Rajshahye          " 20, '87                   | 1.35   |  |  |
|   | Natore             "                   "          | 2.50   | Weather—hot and still. Jute is being cut; outturn fairly good. More rain wanted for transplantation of <i>aman</i> to be completed. Public health fair.  |  |
| Nowgong           "                   "   | 0.14  |  |  |  |
| 13 Rangpore           " 20, "             | 1.80  |  |  |  |
| RAJSHAHY DIV.                             | Gaibanda           "                   "          | 0.50   | Weather—dry and close. State and prospects of standing crops satisfactory, but more rain wanted. Public health fair.   |  |
|   | Kurigram           "                   "          | 3.13   |  |  |
|   | Nilphamari       "                   "            | 1.55   |  |  |
|   | 14 Bogra              " 20, '87                   | 0.35   | Weather—hot. Rivers continue rising and crops are in good condition. Public health good.   |  |
|   | Nowkhilla         "                   "           | 0.21   |  |  |
|   | 15 Pubna              " 20, '87                   | Nil  |  |  |
|   | 16 Darjeeling         " 20, '87                   | 2.13   | Weather—rainy. State and prospects of crops good. Harvesting of <i>bhadoi</i> rice going on. Rain still wanted, particularly in the Alipore sub-division. Prospects of winter rice will not improve unless copious rain falls soon. Jute doing well. Cattle-disease prevalent in places. Public health generally good. |  |
|   | 17 Jalpiganee         " 20, "                     | 3.31   |  |  |
|   | Eastern Districts.                                |  |  |  |
|   | DAKSHIN DIV.                                      | 18 Dacca, Aug. 20, '87   | 2.60   | Weather—very hot. Jute and <i>aus</i> paddy being harvested. Transplantation of winter paddy going on. More rain wanted in parts of the district. Rivers rising again. Public health good. |
| Manickgunge       "                   "   |   | 0.31   | Weather—seasonable. <i>Aus</i> nearly gathered with a fair outturn. <i>Aman</i> doing well. Rain wanted in Madaripore. Public health good.   |  |
| Manickgunge       "                   "   |   | 0.20   |  |  |
| Narsinggunge       "                   "  |   | 0.04   |  |  |
| 19 Furreedpore       " 20, '87            |   | 1.64   | Weather—very hot. Cultivation of <i>aman</i> crop still going on. Prospects of crops good. Rain wanted. General health good.   |  |
| Gohardo           "                   "   |   | 0.86   |  |  |
| 20 Backergunge       " 18, '87            |   | 0.28   |  |  |
| 21 Mymensingh       " 19, '87             |   | Nil  | Weather—hot. Rain wanted. River rising. Prospect of crops good.  |  |
| Jamalpur           "                   "  |   | 0.17   |  |  |
| Kishoregunge       "                   "  |   | 0.10   |  |  |
| Atta               "                   "  | 0.95  |  |  |  |

| No.                                | District and date of return.        | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|------------------------------------|-------------------------------------|---------------------------------------|--|
| <b>BENGAL—contd.</b>               |                                     |                                       |  |
| <i>Eastern Districts—contd.</i>    |                                     |                                       |  |
| CHITTAGONG DIV.                    | 22 Chittagong, Aug. 23, '87         | 0.48                                  | Weather—unseasonable. <i>Aus</i> being harvested. <i>Amun</i> being transplanted. Rain much wanted. Prices stationary. Public health fair. Cholera still reported.   |
|                                    | 23 Noakhali " 19, "                 | 0.17                                  | Weather—hot and sultry. Reaping of <i>aus</i> continues. Transplantation of <i>amun</i> progressing. More rain wanted.   |
|                                    | 24 Feni " 18, '87                   | 0.98                                  | Weather—much too dry; very heavy and continuous rain wanted. Prospects of crops very good up to date; and jute nearly reaped, but <i>amun</i> will suffer much unless very heavy rain falls soon.  |
|                                    | 25 Brahmanbaria " "                 | 0.05                                  | Weather—cloudy and sunny throughout the week. A heavy shower of rain on the 15th. <i>Jum</i> paddy generally doing well. Transplanting in low lands continues. Rain still wanted.  |
|                                    | 26 Chittagong Hill Tracts " 16, '87 | 3.71                                  | Weather—hot. Rain very much wanted. Transplantation of <i>amun</i> paddy still continues. Reaping of <i>aus</i> paddy over. Cases of fever here and there; public health otherwise good.   |
| <b>BEHAR.</b>                      |                                     |                                       |  |
| PATNA DIV.                         | 26 Patna, Aug. 20, '87              | 0.68                                  | Weather—hot and sultry. Transplantation of paddy going on; more rain wanted. <i>Bhadai</i> crops are being reaped. Sugarcane growing well. Flax and <i>jowar</i> flourishing. Cholera of a severe type still prevalent in Behar and Dinapore Sudder station.   |
|                                    | Barh " "                            | 1.30                                  |  |
|                                    | Dinapore " "                        | 1.48                                  |  |
|                                    | Behar " "                           | 1.51                                  |  |
|                                    | Hilsa " "                           | 0.43                                  |  |
|                                    | 27 Gya " 20 "                       | 1.97                                  | Weather—cloudy. Prospects of <i>bhadai</i> as well as <i>kharif</i> excellent. Cholera still reported from several places. Fever and small-pox also reported from some places.   |
|                                    | 28 Shahabad " 20 "                  | 0.71                                  | Weather—clear and bright. Transplanting of paddy in progress. Prospects of <i>bhadai</i> and sugarcane satisfactory. Cholera much abated, but not completely disappeared; otherwise public health good. Prices stationary.   |
|                                    | Sasaram " "                         | 1.01                                  |  |
|                                    | Roza " "                            | 1.10                                  |  |
|                                    | 29 Munger " 20 "                    | 2.70                                  | Weather—occasionally cloudy. Prospects of <i>bhadai</i> continue very favourable. <i>Makai</i> and <i>marua</i> begun to be harvested in places. Transplantation of paddy still going on. Indigo manufacture in progress. Price of rice averages about 19 seers per rupee. Public health generally good. |
|                                    | 30 Muzaffarpore " 20, '87           | 3.63                                  | Weather—mostly close and cloudy, with heavy showers. <i>Bhadai</i> crops in ear. All crops in good condition. Cholera still reported from the interior.  |
|                                    | Hajipur " "                         | 2.13                                  |  |
| BHAULPORE DIV.                     | 31 Sitamarhi " 20 "                 | 0.75                                  | Weather—hot with occasional clouds. Prospects of crops continue good. Cholera still reported.  |
|                                    | Saran " "                           | 7.13                                  |  |
|                                    | 32 Sonwan " 20 "                    | 1.23                                  | Weather—hot and cloudy. Prospects of <i>bhadai</i> crops good. <i>Makai</i> , <i>marua</i> , &c., producing ear. Transplantation of paddy being pushed on. Prices fluctuating. Public health not very good.  |
|                                    | Gopalgunge " "                      | 3.91                                  | Weather—first part of the week cloudy, latter part bright. More rain wanted to complete transplantation of winter rice. Reaping of <i>makai</i> has commenced in places. Cholera decreasing.   |
|                                    | 33 Monghyr, Aug. 20, '87            | 1.00                                  | Weather—sultry. <i>Marua</i> harvest commenced in north. Early rice doing well. About three-fourths of late rice transplanted. Floods from the Kusi have caused some loss in low lands in the two northern sub-divisions. Cholera still hangs about.   |
|                                    | Bogusrai " "                        | 2.01                                  | Light showers; weather cloudy. Crops promising. Transplantation progressing.   |
|                                    | Jamui " "                           | 1.97                                  | Weather—dry, hot and breezy. <i>Bhadai</i> crops are being harvested, generally with good outturn. Winter paddy is still being transplanted and is doing well. Common rice 20 seers per rupee. Public health good.   |
|                                    | 34 Rongahore " 20 "                 | 0.70                                  | Weather—cloudy, hot and dry. More rain wanted for transplanting paddy seedlings on high lands. General health good.  |
|                                    | Mudelpura " "                       | 2.77                                  |  |
|                                    | Sopool " "                          | 5.45                                  |  |
|                                    | Banka " "                           | 0.32                                  |  |
|                                    | 35 Purneah " 20 "                   | 1.88                                  |  |
| ORISSA DIV.                        | Kishengunge " "                     | 0.25                                  |  |
|                                    | Arracah " "                         | 7.32                                  |  |
|                                    | 36 Malani " 20 "                    | N                                     |  |
|                                    | Chanchal " "                        | 2.08                                  |  |
|                                    | 37 Southal Pergana " 22 "           | 0.06                                  |  |
|                                    | Deoghur " "                         | 0.27                                  |  |
| <b>ORISSA.</b>                     |                                     |                                       |  |
| ORISSA DIV.                        | 38 Cuttack " 19, '87                | 0.78                                  | Weather—fair; slight rain at times. <i>Beali</i> rice ripening. <i>Sarad</i> doing well, but requires more rain. Common rice sells at 17½ seers per rupee in town and 22 to 25 seers in the interior. Public health generally good. Cholera is subsiding.  |
|                                    | 39 Pooner " Aug. 18, "              | 1.29                                  | Weather—cloudy with occasional showers. State and prospect of <i>sarad</i> crop backward. <i>Beali</i> ripening. Common rice 24 seers 13 chittacks per rupee in the Sudder sub-division and 20 seers 1 chittack in the Khoorda sub-division. Cholera still prevalent all over the district.              |
|                                    | 40 Balasore " 19, "                 | 0.70                                  | Weather—cloudy and seasonable. <i>Beali</i> paddy in ear. Weeding of <i>sarad</i> paddy going on. Rain wanted in parts of Balaipal and Chandbally thannas. Public health generally good; only a few cases of cholera reported.   |
| <b>CHOTA NAGPORE.</b>              |                                     |                                       |  |
| <i>South-West Frontier Agency.</i> |                                     |                                       |  |
| CHOTA NAGPORE DIV.                 | 41 Hazaribagh, Aug. 19, '87         | 0.09                                  | Weather—bright and clear throughout the week. Transplanting of paddy still continues. All crops doing well. General health fair.   |
|                                    | 42 Lohardugga " 20 "                | 0.12                                  | Weather—hot. Slight rain during the week; more wanted. Prospects of <i>bhadai</i> bad at Palamow; outturn estimated at 4 m. as. Paddy prospects good. No change in prices. Cholera still reported; otherwise public health good.   |
|                                    | 43 Singhbhum " 19 "                 | 0.13                                  | Weather—slight rain throughout district; weather warm. Prospects of crops continue good. General health good.  |
|                                    | 44 Santhallah " 20 "                | N                                     | Weather—seasonable. More rain generally wanted. Prospects of crops good. Public health good.   |

*PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the*

| Number.            | DISTRICTS.        | QUANTITIES PER RUPEE IN |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
|--------------------|-------------------|-------------------------|------------------------|------------------------------------|--------------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|---------------------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|                    |                   | WHEAT.                  |                        |                                    | BARLEY.            |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLUK<br>(Sorghum Vulgare). |                        |                                    |                 |                        |                                    |
|                    |                   | Present return.         | Next preceding return. | Corresponding return of last year. | Present return.    | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                       | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|                    |                   |                         |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
| BENGAL.            |                   |                         |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
| Western Districts. |                   |                         |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
| 1                  | Burdwan ...       | 15 0                    | 13 8                   | 14 8                               | Not in the market. |                        |                                    | 31 0             | 15 0                   | 15 6                               | 13 12           | 22 8                   | 20 10                              | 18 0                                  | ...                    | ...                                | ...             |                        |                                    |
| 2                  | Bankoora ...      | 13 8                    | 15 8                   | 17 4                               | 20 0               | 20 0                   | 23 0                               | 17 0             | 16 8                   | 19 0                               | 22 6½           | 21 14                  | 22 8                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 3                  | Beerbhoom ...     | 16 8                    | 18 0                   | 19 8                               | ...                | ...                    | ...                                | 17 4             | 18 0                   | 16 0                               | 22 8            | 22 8                   | 19 8                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 4                  | Midnapore ...     | 13 0                    | 13 0                   | 18 0                               | ...                | ...                    | ...                                | 18 0             | 18 0                   | 16 0                               | 23 0            | 23 0                   | 21 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 5                  | Hooghly ...       | 14 0                    | 14 0                   | 16 0                               | ...                | ...                    | ...                                | 10 0             | 10 0                   | 10 0                               | 17 0            | 17 0                   | 15 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
|                    | Howrah ...        | 14 8                    | ...                    | 15 8                               | ...                | ...                    | ...                                | 13 4             | 12 8                   | 11 8                               | 18 8            | 17 12                  | 15 8                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| Central Districts. |                   |                         |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
|                    | Calcutta ...      | 14 4                    | 13 4                   | 14 8                               | 20 0               | 20 14                  | 21 8                               | 8 12             | 8 12                   | 8 12                               | 16 4            | 16 8                   | 15 8                               | 19 12                                 | 20 0                   | 19 12                              | ...             |                        |                                    |
| 6                  | 24-Pergunnahs ... | 14 0                    | 14 0                   | 14 0                               | 26 8               | 25 0                   | 20 0                               | 8 0              | 8 0                    | 8 0                                | 16 13           | 16 13                  | 13 5                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 7                  | Nuddes ...        | 16 0                    | 16 0                   | 17 0                               | 32 0               | 32 0                   | 23 0                               | 15 4             | 15 4                   | 13 5½                              | 20 4            | 19 2                   | 15                                 | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 8                  | Khoolna ...       | ...                     | ...                    | ...                                | ...                | ...                    | ...                                | 17 0             | 18 0                   | 14 0                               | 20 0            | 21 0                   | 17 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 9                  | Jessore ...       | 16 0                    | 16 0                   | 16 0                               | ...                | ...                    | ...                                | 16 0             | 16 0                   | 13 0                               | 21 4            | 21 4                   | 19 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 10                 | Moorshedabad ...  | 15 0                    | 15 0                   | 16 0                               | ...                | ...                    | ...                                | 15 0             | 15 0                   | 13 4                               | 20 0            | 22 0                   | 17 8                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 11                 | Dinapore ...      | 12 8                    | 12 0                   | 16 0                               | 22 8               | 23 0                   | 20 0                               | 15 8             | 16 3                   | 16 9                               | 19 8            | 20 13                  | 19 3                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 12                 | Rajahmhye ...     | 16 8                    | 17 4                   | 20 0                               | 45 0               | 45 0                   | 32 0                               | 15 12            | 15 12                  | 15 12                              | 18 12           | 18 12                  | 18 12                              | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 13                 | Rungpore ...      | 18 12                   | 18 12                  | 18 0                               | ...                | ...                    | ...                                | 14 8             | 15 3                   | 15 12                              | 17 12           | 17 12                  | 20 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 14                 | Bogra ...         | 17 4                    | 17 4                   | 11 4                               | ...                | ...                    | ...                                | 15 0             | 13 8                   | 13 8                               | 22 8            | 21 0                   | 21 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 15                 | Pubna ...         | 18 0                    | 19 0                   | 21 4                               | ...                | ...                    | ...                                | 8 0              | 8 0                    | 8 0                                | 21 0            | 24 0                   | 18 12                              | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 16                 | Darjeeling ...    | 9 0                     | 9 0                    | 10 0                               | 13 0               | 13 0                   | 10 0                               | 5 0              | 5 0                    | 5 0                                | 13 0            | 13 0                   | 11 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 17                 | Julpigoree ...    | 12 0                    | 12 0                   | 13 4                               | 20 0               | 20 0                   | 20 0                               | 13 0             | 13 0                   | 13 0                               | 20 0            | 20 0                   | 22 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| Eastern Districts. |                   |                         |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
| 18                 | Dacca ...         | 14 8                    | 14 8                   | 14 8                               | 36 0               | 28 0                   | 26 0                               | 17 0             | 17 0                   | 16 0                               | 20 0            | 20 0                   | 18 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 19                 | Furzedpore ...    | 20 0                    | 20 0                   | 16 0                               | 36 0               | 26 0                   | 25 0                               | 18 0             | 17 0                   | 16 0                               | 22 0            | 21 0                   | 20 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 20                 | Backergunge ...   | ...                     | ...                    | ...                                | ...                | ...                    | ...                                | 16 0             | 16 0                   | 14 8                               | 18 0            | 18 0                   | 16 8                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |
| 21                 | Mymensingh ...    | 12 8                    | 12 4                   | 13 0                               | ...                | ...                    | ...                                | 13 5             | 14 0                   | 14 8                               | 17 0            | 18 8                   | 20 0                               | ...                                   | ...                    | ...                                | ...             |                        |                                    |

A In sub-divisions retail prices of salt per rupee were :—Culna 12 seers, Cutwa 13 seers, and Maneegunge 12½ seers.  
B In Bishenpore retail price of salt 12 seers per rupee.  
C In Rampore Haut retail price of salt 13 seers 3 chittacks per rupee.  
D In sub-divisions retail prices of salt per rupee were :—Ghatal 14½ seers, Tumlook 11 seers.  
E In sub-divisions retail prices of salt per rupee were :—Salem 19 seers and Jehanabad 13½ seers.  
F In sub-divisions retail prices of salt per rupee were :—Baraset 12 seers, Basirhat 13 seers, Diamond Harbour (at Kulpihat) 10½ seers, Barrackpore 12½ seers and Dum-Dum 11 seers.  
G In sub-divisions retail prices of salt per rupee were :—Koochta 18 seers, Maherpore and Ohooadanga 19 seers, and Ranaghat 10½ seers.  
H In Satkhira and Bagirhat sub-divisions retail price of salt 11 seers per rupee.  
I In sub-divisions retail prices of salt per rupee were :—Jhenida and Narail 19 seers, Marichganj 20 seers, and ...

**YES OF SO TOLAND.**

| Next preceding return. | Corresponding return of last year | Present return. | Next preceding return. | Corresponding return of last year. |
|------------------------|-----------------------------------|-----------------|------------------------|------------------------------------|
|                        |                                   |                 |                        |                                    |

*Fortnight ending the 15th August 1887.*

|                 |                        |                                       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |                        |                                       | DISTRICT |
|-----------------|------------------------|---------------------------------------|---|------------------------|---------------------------------------|----------|
| FIREWOOD.       |                        |                                       | SALT.   |                        |                                       |          |
| Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return.                               | Next preceding return. | Corresponding return<br>of last year. |          |
|                 |                        |                                       |   |                        |                                       |          |

| Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. |
|-----|--------|--------|--------|--------|--------|
| 1   | 100    | 100    | 100    | 100    | 100    |
| 2   | 100    | 100    | 100    | 100    | 100    |
| 3   | 100    | 100    | 100    | 100    | 100    |
| 4   | 100    | 100    | 100    | 100    | 100    |
| 5   | 100    | 100    | 100    | 100    | 100    |
| 6   | 100    | 100    | 100    | 100    | 100    |
| 7   | 100    | 100    | 100    | 100    | 100    |
| 8   | 100    | 100    | 100    | 100    | 100    |
| 9   | 100    | 100    | 100    | 100    | 100    |
| 10  | 100    | 100    | 100    | 100    | 100    |
| 11  | 100    | 100    | 100    | 100    | 100    |
| 12  | 100    | 100    | 100    | 100    | 100    |
| 13  | 100    | 100    | 100    | 100    | 100    |
| 14  | 100    | 100    | 100    | 100    | 100    |
| 15  | 100    | 100    | 100    | 100    | 100    |
| 16  | 100    | 100    | 100    | 100    | 100    |
| 17  | 100    | 100    | 100    | 100    | 100    |
| 18  | 100    | 100    | 100    | 100    | 100    |
| 19  | 100    | 100    | 100    | 100    | 100    |
| 20  | 100    | 100    | 100    | 100    | 100    |
| 21  | 100    | 100    | 100    | 100    | 100    |
| 22  | 100    | 100    | 100    | 100    | 100    |
| 23  | 100    | 100    | 100    | 100    | 100    |
| 24  | 100    | 100    | 100    | 100    | 100    |
| 25  | 100    | 100    | 100    | 100    | 100    |
| 26  | 100    | 100    | 100    | 100    | 100    |
| 27  | 100    | 100    | 100    | 100    | 100    |
| 28  | 100    | 100    | 100    | 100    | 100    |
| 29  | 100    | 100    | 100    | 100    | 100    |
| 30  | 100    | 100    | 100    | 100    | 100    |
| 31  | 100    | 100    | 100    | 100    | 100    |
| 32  | 100    | 100    | 100    | 100    | 100    |
| 33  | 100    | 100    | 100    | 100    | 100    |
| 34  | 100    | 100    | 100    | 100    | 100    |
| 35  | 100    | 100    | 100    | 100    | 100    |
| 36  | 100    | 100    | 100    | 100    | 100    |
| 37  | 100    | 100    | 100    | 100    | 100    |
| 38  | 100    | 100    | 100    | 100    | 100    |
| 39  | 100    | 100    | 100    | 100    | 100    |
| 40  | 100    | 100    | 100    | 100    | 100    |
| 41  | 100    | 100    | 100    | 100    | 100    |
| 42  | 100    | 100    | 100    | 100    | 100    |
| 43  | 100    | 100    | 100    | 100    | 100    |
| 44  | 100    | 100    | 100    | 100    | 100    |
| 45  | 100    | 100    | 100    | 100    | 100    |
| 46  | 100    | 100    | 100    | 100    | 100    |
| 47  | 100    | 100    | 100    | 100    | 100    |
| 48  | 100    | 100    | 100    | 100    | 100    |
| 49  | 100    | 100    | 100    | 100    | 100    |
| 50  | 100    | 100    | 100    | 100    | 100    |
| 51  | 100    | 100    | 100    | 100    | 100    |
| 52  | 100    | 100    | 100    | 100    | 100    |
| 53  | 100    | 100    | 100    | 100    | 100    |
| 54  | 100    | 100    | 100    | 100    | 100    |
| 55  | 100    | 100    | 100    | 100    | 100    |
| 56  | 100    | 100    | 100    | 100    | 100    |
| 57  | 100    | 100    | 100    | 100    | 100    |
| 58  | 100    | 100    | 100    | 100    | 100    |
| 59  | 100    | 100    | 100    | 100    | 100    |
| 60  | 100    | 100    | 100    | 100    | 100    |
| 61  | 100    | 100    | 100    | 100    | 100    |
| 62  | 100    | 100    | 100    | 100    | 100    |
| 63  | 100    | 100    | 100    | 100    | 100    |
| 64  | 100    | 100    | 100    | 100    | 100    |
| 65  | 100    | 100    | 100    | 100    | 100    |
| 66  | 100    | 100    | 100    | 100    | 100    |
| 67  | 100    | 100    | 100    | 100    | 100    |
| 68  | 100    | 100    | 100    | 100    | 100    |
| 69  | 100    | 100    | 100    | 100    | 100    |
| 70  | 100    | 100    | 100    | 100    | 100    |
| 71  | 100    | 100    | 100    | 100    | 100    |
| 72  | 100    | 100    | 100    | 100    | 100    |
| 73  | 100    | 100    | 100    | 100    | 100    |
| 74  | 100    | 100    | 100    | 100    | 100    |
| 75  | 100    | 100    | 100    | 100    | 100    |
| 76  | 100    | 100    | 100    | 100    | 100    |
| 77  | 100    | 100    | 100    | 100    | 100    |
| 78  | 100    | 100    | 100    | 100    | 100    |
| 79  | 100    | 100    | 100    | 100    | 100    |
| 80  | 100    | 100    | 100    | 100    | 100    |
| 81  | 100    | 100    | 100    | 100    | 100    |
| 82  | 100    | 100    | 100    | 100    | 100    |
| 83  | 100    | 100    | 100    | 100    | 100    |
| 84  | 100    | 100    | 100    | 100    | 100    |
| 85  | 100    | 100    | 100    | 100    | 100    |
| 86  | 100    | 100    | 100    | 100    | 100    |
| 87  | 100    | 100    | 100    | 100    | 100    |
| 88  | 100    | 100    | 100    | 100    | 100    |
| 89  | 100    | 100    | 100    | 100    | 100    |
| 90  | 100    | 100    | 100    | 100    | 100    |
| 91  | 100    | 100    | 100    | 100    | 100    |
| 92  | 100    | 100    | 100    | 100    | 100    |
| 93  | 100    | 100    | 100    | 100    | 100    |
| 94  | 100    | 100    | 100    | 100    | 100    |
| 95  | 100    | 100    | 100    | 100    | 100    |
| 96  | 100    | 100    | 100    | 100    | 100    |
| 97  | 100    | 100    | 100    | 100    | 100    |
| 98  | 100    | 100    | 100    | 100    | 100    |
| 99  | 100    | 100    | 100    | 100    | 100    |
| 100 | 100    | 100    | 100    | 100    | 100    |

[illegible]

**BENGAL.**  
*Western Districts.*

[illegible]

**Central District.**

|     |     |     |     |     |     |    |     |    |     |    |     |   |    |   |   |    |   |       |       |       |                |
|-----|-----|-----|-----|-----|-----|----|-----|----|-----|----|-----|---|----|---|---|----|---|-------|-------|-------|----------------|
| 1   | 0   | 80  | 0   | 80  | 0   | 13 | 0   | 13 | 0   | 13 | 4   | 3 | 0  | 0 | 3 | 0  | 0 | 2     | 12    | 0     | Calcutta.      |
| 1   | 0   | 90  | 0   | 90  | 0   | 12 | 8   | 12 | 8   | 9  | 24  | 2 | 15 | 6 | 2 | 15 | 6 | 3     | 5     | 0     | 24-Pergunnahs. |
| ... | ... | ... | ... | ... | ... | 11 | 104 | 11 | 104 | 11 | 104 | 3 | 0  | 0 | 3 | 0  | 0 | 3     | 4     | 0     | Nudda.         |
| 10  | 0   | 160 | 0   | 120 | 0   | 10 | 8   | 10 | 8   | 10 | 0   | 3 | 12 | 0 | 3 | 12 | 0 | ....  | ....  | ....  | Khoolna.       |
| 10  | 0   | 100 | 0   | 120 | 0   | 10 | 12  | 10 | 12  | 10 | 12  | 3 | 2  | 0 | 3 | 2  | 0 | 3     | 4     | 0     | Jessore.       |
| 10  | 0   | 130 | 0   | 120 | 0   | 13 | 0   | 13 | 0   | 11 | 0   | 3 | 5  | 0 | 3 | 5  | 0 | 3     | 4     | 0     | Moorshedabad.  |
| 10  | 0   | 160 | 0   | 140 | 0   | 12 | 8   | 12 | 8   | 13 | 0   | 3 | 2  | 0 | 3 | 2  | 0 | ..... | ..... | ..... | Dinagapore.    |
| 10  | 0   | 240 | 0   | 240 | 0   | 12 | 0   | 12 | 0   | 12 | 0   | 3 | 1  | 3 | 3 | 1  | 3 | 2     | 0     | 0     | Rajahmhye.     |
| 10  | 0   | 120 | 0   | 120 | 0   | 10 | 5   | 10 | 5   | 12 | 12  | 3 | 8  | 0 | 3 | 8  | 0 | 3     | 1     | 6     | Bungpore.      |
| 10  | 0   | 90  | 0   | 90  | 0   | 12 | 0   | 10 | 8   | 11 | 4   | 3 | 2  | 8 | 3 | 5  | 4 | 3     | 8     | 0     | Bogra.         |
| 10  | 0   | 200 | 0   | 200 | 0   | 12 | 0   | 12 | 0   | 11 | 4   | 3 | 5  | 0 | 3 | 5  | 0 | 3     | 6     | 0     | Pabna.         |
| 10  | 0   | 120 | 0   | 140 | 0   | 9  | 0   | 9  | 0   | 9  | 0   | 4 | 6  | 0 | 4 | 4  | 0 | ..... | ..... | ..... | Darjeeling.    |
| 18  | 0   | 128 | 0   | 128 | 0   | 11 | 0   | 11 | 0   | 11 | 8   | 3 | 6  | 0 | 3 | 6  | 0 | 3     | 8     | 0     | Julpigoree.    |

**Eastern District.**

| P   |     |     |     |     |     |    |   |    |    |    |   |                    |              |
|-----|-----|-----|-----|-----|-----|----|---|----|----|----|---|--------------------|--------------|
| 10  | 0   | 120 | 0   | 120 | 0   | 12 | 8 | 12 | 0  | 10 | 8 | 3 3 0 3 3 0 3 3 0  | Dacca.       |
| Q   |     |     |     |     |     |    |   |    |    |    |   |                    |              |
| 10  | 0   | 160 | 0   | 140 | 0   | 12 | 0 | 12 | 12 | 3  | 1 | 0 3 1 0 3 2 0      | Furzed       |
| R   |     |     |     |     |     |    |   |    |    |    |   |                    |              |
| 10  | 0   | 120 | 0   | 120 | 0   | 12 | 0 | 12 | 0  | 11 | 8 | 3 4 0 3 4 0 3 6 0  | Backergunge. |
| S   |     |     |     |     |     |    |   |    |    |    |   |                    |              |
| ... | ... | ... | ... | ... | ... | 12 | 0 | 12 | 0  | 10 | 8 | 3 4 0 3 4 0 3 10 0 | Mymensingh.  |

**The increase in price is less due to importation.**

seers per rupee.

**L** In sub-divisions retail prices of salt per rupee were:—Kurigram 12 seers 9 chittacks, Gaibanda 9½ seers, and Nilphamari 13 seers.  
**M** In Sorajunge retail price of salt 12 seers per rupee.  
**N** Retail price of salt at Kursong 8 seers and Siguri 10 seers.  
**O** In Alipore sub-division (at Fallacotta) retail price of salt 10 seers per rupee.  
**P** In sub-divisions retail prices of salt per rupee were:—Manickgunge 11 seers, Munshigunge 10½ seers.  
**Q** In sub-divisions retail prices of salt per rupee were:—Chittagong 11 seers, Comilla 11 seers, and Feni 11 seers.

**PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the**

| Number.                        | DISTRICTS.              | QUANTITIES PER RUPEE IN |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
|--------------------------------|-------------------------|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--|------------------------|------------------------------------|--|--|--|
|                                |                         | WHEAT.                  |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLUK.<br>(Sorghum Vulgare.) |                        |                                    |  |  |  |
|                                |                         | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                        | Next preceding return. | Corresponding return of last year. |  |  |  |
| Eastern Districts.—Concluded.  |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
| 22                             | Chittagong ...          | 10 0                    | 16 0                   | 16 0                               | ...             | ...                    | ...                                | 12 0             | 12 0                   | 9 0                                | 16 13           | 16 13                  | 13 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 23                             | Noakholly ...           | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 19 0             | 20 0                   | 13 0                               | 21 0            | 22 0                   | 16 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 24                             | Tipperah ...            | 12 0                    | 11 14                  | 14 13                              | ...             | ...                    | ...                                | 18 7             | 15 12                  | 15 2                               | 18 13           | 19 9                   | 18 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 25                             | Chittagong Hill Tracts. | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 13 5             | 11 7                   | 10 0                               | 14 11           | 12 5                   | 18 5                               | ...                                    | ...                    | ...                                |  |  |  |
|                                | Hill Tipperah ...       | 12 0                    | 12 0                   | 12 0                               | ...             | ...                    | ...                                | 10 0             | 10 0                   | 11 0                               | 16 0            | 17 0                   | 16 0                               | ...                                    | ...                    | ...                                |  |  |  |
| BEHAR.                         |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
|                                | Patna ...               | 19 0                    | 18 0                   | 21 0                               | 28 0            | 28 0                   | 30 0                               | 11 8             | 11 8                   | 11 8                               | 21 8            | 20 0                   | 18 0                               | 28 0                                   | 26 0                   | 28 0                               |  |  |  |
| 26                             | Gya ...                 | 16 0                    | 16 0                   | 17 8                               | 29 0            | 33 0                   | 30 0                               | 9 8              | 9 8                    | 9 0                                | 18 8            | 18 8                   | 16 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 28                             | Shahabad ..             | 16 0                    | 16 0                   | 17 0                               | 26 0            | 29 0                   | 26 0                               | 9 0              | 10 0                   | 8 0                                | 16 0            | 16 0                   | 17 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 29                             | Durbhanga ...           | 19 12                   | 18 8                   | 18 0                               | 30 12           | 33 0                   | 24 0                               | 12 0             | 12 0                   | 10 0                               | 17 3            | 18 0                   | 15 8                               | ...                                    | ...                    | ...                                |  |  |  |
| 30                             | Monmroperore ...        | 20 0                    | 20 0                   | 20 0                               | 30 0            | 30 0                   | 27 8                               | 12 0             | 12 0                   | 13 0                               | 19 0            | 20 0                   | 16 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 31                             | Baran ...               | 15 0                    | 14 8                   | 18 0                               | 27 0            | 27 0                   | 27 0                               | 8 4              | 8 0                    | 8 0                                | 20 8            | 20 0                   | 18 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 32                             | Chumparan ...           | 20 0                    | 20 0                   | 20 0                               | 36 0            | 36 0                   | 29 0                               | 7 8              | 8 0                    | 10 8                               | 16 0            | 16 0                   | 15 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 33                             | Monknyr ...             | 18 15                   | 18 9                   | 20 0                               | 33 8            | 33 8                   | 23 0                               | 13 10            | 13 14                  | 11 9                               | 17 5            | 16 12                  | 14 12                              | ...                                    | ...                    | ...                                |  |  |  |
| 34                             | Bhagulpore ...          | 19 4                    | 17 10                  | 18 15                              | 32 12           | 35 5                   | 31 9                               | 16 6             | 16 6                   | 13 14                              | 18 15           | 18 15                  | 16 6                               | ...                                    | ...                    | ...                                |  |  |  |
| 35                             | Purneah ...             | 18 0                    | 18 0                   | 20 0                               | ...             | ...                    | ...                                | 16 0             | 16 0                   | 17 0                               | 17 0            | 17 0                   | 20 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 36                             | Maldah ...              | 17 0                    | 16 0                   | 18 0                               | ...             | ...                    | ...                                | 13 0             | 13 0                   | 12 0                               | 22 0            | 23 0                   | 23 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 37                             | Southal Perghe.         | 13 4                    | 13 0                   | 14 8                               | ...             | ...                    | ...                                | 16 0             | 17 0                   | 16 0                               | 25 0            | 25 0                   | 23 0                               | ...                                    | ...                    | ...                                |  |  |  |
| ORISSA.                        |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
| 38                             | Cuttack ...             | 15 12                   | 17 1                   | 17 1                               | ...             | ...                    | ...                                | 11 13            | 11 13                  | 10 8                               | 18 6            | 19 11                  | 15 12                              | ...                                    | ...                    | ...                                |  |  |  |
| 39                             | Pooree ...              | 10 8                    | 11 13                  | 14 7                               | ...             | ...                    | ...                                | 13 2             | 13 2                   | 14 7                               | 22 5            | 21 0                   | 18 6                               | ...                                    | ...                    | ...                                |  |  |  |
| 40                             | Balasore ...            | 13 0                    | 15 0                   | 16 0                               | 13 0            | 13 0                   | 13 0                               | 15 0             | 15 0                   | 13 0                               | 25 0            | 25 0                   | 24 0                               | ...                                    | ...                    | ...                                |  |  |  |
| CHOTA NAGPORE.                 |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
| South-Western Frontier Agency. |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
| 41                             | Hazare bagh ...         | 17 0                    | 17 0                   | 16 0                               | 17 0            | 17 0                   | 20 0                               | 9 0              | 9 0                    | 10 0                               | 16 0            | 17 0                   | 17 0                               | Not procurable.                        |                        |                                    |  |  |  |
| 42                             | Lohardugga ...          | 20 0                    | 21 0                   | 20 0                               | 24 0            | 24 0                   | 20 0                               | 16 0             | 17 0                   | 16 0                               | 20 0            | 22 0                   | 21 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 43                             | Singbhoom ...           | 20 0                    | 20 0                   | 24 0                               | 32 0            | 32 0                   | 32 0                               | 20 0             | 20 0                   | 28 0                               | 24 0            | 24 0                   | 32 0                               | ...                                    | ...                    | ...                                |  |  |  |
| 44                             | Manbhoom ...            | 17 0                    | 17 0                   | 18 0                               | ...             | 36 0                   | ...                                | 18 0             | 17 0                   | 15 0                               | 26 0            | 25 0                   | 26 0                               | ...                                    | ...                    | ...                                |  |  |  |

T In Cox's Bazar sub-division retail price of salt 8 seers per rupee.

T1 In Feeny sub-division (at Anchagachia hat) retail price of salt 9 seers per rupee.

U In sub-divisions retail prices of salt per rupee were:—Brahmunberiah 13 seers and Chandpore 11½ seers.

V In sub-divisions retail prices of salt per rupee were:—Sasseram 12 seers, Bhatooch 10½ seers, and Duxar 12½ seers.

W In sub-divisions retail prices of salt per rupee were:—Tajpore 12 seers and Madhubani 11 seers.

X In sub-divisions retail prices of salt per rupee were:—Sotamarhee 11 seers and Hajepore 12½ seers.

Y In Sewan and Gopalgunge sub-divisions retail price of salt 12 seers per rupee.

Z In Bettiah sub-division retail price of salt 11½ seers per rupee.



## Fortnight ending 15th August 1887—(Concluded.)

## SEERS OF 80 TOLAHS.

| BAJRA OR CUMBU.<br>( <i>Pennisetum typho-</i><br><i>ideum</i> .) |                        |                                    | MARUA OR RASI.<br>( <i>Eleusine Corocana</i> .) |                        |                                    |
|--|------------------------|------------------------------------|---|------------------------|------------------------------------|
| Present return.  | Next preceding return. | Corresponding return of last year. | Present return.                                 | Next preceding return. | Corresponding return of last year. |

| FIREWOOD.       |                        |                                    | SALT.           |                        |                                    | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |                        |                                    | DISTRICTS. |
|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|---|------------------------|------------------------------------|------------|
| Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                               | Next preceding return. | Corresponding return of last year. |            |

| S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. |
|--------|--------|--------|--------|--------|--------|--------|
| ...    | ...    | ...    | ...    | ...    | ...    | ...    |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    |

## Eastern Districts.—Concluded.

| S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | Rs. A. P. | Rs. A. P. | Rs. A. P. |                         |
|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|-----------|-------------------------|
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Chittagong.             |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Noakhally.              |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Tipperah.               |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Chittagong Hill Tracts. |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Hill Tipperah.          |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | ORISSA.                 |

## BEHAR.

| S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | Rs. A. P. | Rs. A. P. | Rs. A. P. |                 |
|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|-----------|-----------------|
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Patna.          |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Gya.            |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Shahabad.       |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Darbhanga.      |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Muzaffarpore.   |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Saran.          |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Chumparan.      |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Monahy.         |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Bhagalpur.      |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Purnea.         |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Malah.          |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Sonhal Pargana. |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Catmuck.        |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Poorce.         |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Blasore.        |

## CHOTA NAGPORE.

## South-Western Frontier Agency.

| S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | Rs. A. P. | Rs. A. P. | Rs. A. P. |             |
|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|-----------|-------------|
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Hazaribagh. |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Loharabagh. |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Singbhum.   |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       | ...       | ...       | Mamhoun.    |

seers were:—Begusarai 11 seers and Jamui 11½ seers.

Divisional retail price of salt 11 seers per rupee.

and retail price of salt 10 seers per rupee.

and were:—Deoghur, Pakour and Rajmahal 12 seers, and Godda 11 seers.

and salt 12 seers per rupee.

Z5 In Boudhuck sub-division retail price of salt 9½ seers per rupee.

Z6 In Giridih sub-division (at Kharagdhia) retail price of salt 11 seers per rupee.

Published for general information.

PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt in the

| Number. | MARKS.         |                 |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |
|---------|----------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|         |                | WHEAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    |
|         |                | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|         |                | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.         | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |
| 1       | Calcutta ...   | 2 10 3          | 2 13 0                 | 2 9 0                              | 1 6 6           | 1 6 6                  | 1 9 6                              | 3 12 0           | 3 12 0                 | 3 12 0                             | 2 1 6           | 2 2 3                  | 2 4 9                              |
| 2       | Serajgunge ... | 2 1 0           | 2 3 0                  | 2 1 6                              | ...             | ...                    | ...                                | 3 13 0           | 3 10 0                 | 4 0 0                              | 1 11 6          | 2 0 0                  | 1 12 0                             |
| 3       | Dacca ...      | 2 7 0           | 2 11 0                 | 2 8 0                              | 1 6 0           | 1 6 0                  | 1 8 0                              | 2 6 0            | 2 6 0                  | 2 7 0                              | 1 14 6          | 1 15 0                 | 2 2 0                              |
| 4       | Naraingunge*   | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | 2 2 0                  | 2 6 0                              | ...             | 2 1 0                  | 2 1 0                              |
| 5       | Chittagong ... | 3 7 0           | 2 6 0                  | 2 6 0                              | ...             | ...                    | ...                                | 3 0 0            | 3 0 0                  | 4 1 0                              | 2 6 0           | 2 6 0                  | 3 0 0                              |
| 6       | Patna ...      | 2 0 0           | 2 4 0                  | 1 13 9                             | 1 5 3           | 1 5 3                  | 1 4 0                              | 3 0 0            | 3 0 0                  | 3 0 0                              | 1 14 0          | 1 14 6                 | 2 1 0                              |
| 7       | Balasore ...   | 3 0 0           | 2 8 0                  | 2 6 0                              | 3 0 0           | 3 0 0                  | 3 0 0                              | 2 8 0            | 2 8 0                  | 3 0 0                              | 1 7 0           | 1 7 0                  | 1 10 0                             |
| 8       | Pooree ...     | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | 1 11 0          | 1 14 0                 | 2 0 8                              |
| 9       | Cuttack ...    | 2 5 0           | 2 2 0                  | 2 2 0                              | ...             | ...                    | ...                                | 3 4 0            | 3 4 0                  | 3 10 0                             | 2 2 0           | 2 0 0                  | 2 5 0                              |

CALCUTTA,  
The 23rd August 1887.

\* Present return

## PRICES PER MAUND

OWAR OR CHOLUM.  
(*Sorghum Vulgare*.)

BAJRA OR CUMBU  
(*Pennisetum typhoides*.)

| Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
| R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |
| 14 0 1          | 12 0 1                 | 14 0 3                             | 8 0 2           | 8 0 3                  | 2 0                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| 6 0 1           | 6 0 1                  | 5 6 1                              | 6 0 1           | 6 0 1                  | 6 0                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |
| ...             | ...                    | ...                                | ...             | ...                    | ...                                |

1490a

received.

during the fortnight ending 15th August 1887.

| ARHAR OR THUR<br>(CAJAN PEA.<br>( <i>Cajanus indicus</i> .) |                        |                                    | FIREWOOD.       |                        |                                    | SALT.           |                        |                                    | MARTS.       |
|---|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--------------|
| Present return.   | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |              |
| R. A. P.  | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |              |
| 2 0 0   | 1 15 0                 | 1 15 0                             | 0 6 9           | 0 6 9                  | 0 6 9                              | 3 0 0           | 3 0 0                  | 2 12 0                             | Calcutta.    |
| ...   | ...                    | ...                                | ...             | ...                    | ...                                | 2 12 0          | 2 12 0                 | 3 0 0                              | Sersajunge.  |
| 2 0 0   | 2 0 0                  | ...                                | 0 5 0           | 0 5 0                  | 0 5 0                              | 3 3 0           | 3 3 0                  | 3 8 0                              | Dacca.       |
| ...   | 2 3 0                  | 1 14 0                             | ...             | 0 8 0                  | 0 6 0                              | ...             | 3 2 0                  | 3 4 0                              | Narsingunge. |
| 4 8 0   | 4 8 0                  | 4 0 0                              | ...             | ...                    | ...                                | 4 4 0           | 4 6 0                  | 3 2 0                              | Chittagong.  |
| 1 7 0   | 1 8 0                  | 1 6 0                              | 0 5 0           | 0 5 0                  | 0 5 3                              | 3 1 6           | 3 1 6                  | 3 1 6                              | Patna.       |
| 3 5 0   | 3 5 0                  | 3 0 0                              | 0 4 6           | 0 4 6                  | 0 5 0                              | 3 5 0           | 3 5 0                  | 3 12 0                             | Balasore.    |
| ...   | ...                    | ...                                | ...             | ...                    | ...                                | 2 10 0          | 2 10 0                 | 2 10 0                             | Pooree.      |
| 2 5 0   | 2 0 0                  | ...                                | 0 8 0           | 0 8 0                  | 0 8 0                              | 2 12 0          | 2 12 0                 | 2 12 0                             | Cuttack.     |

Published for general information.

W. C. MACPHERSON,  
Offg. Secy. to the Govt. of Bengal.



the week ending Friday, the 19th August 1887.

| DISTRICT OBSERVATIONS.                    |  |                    |              |                     |              |            |                      |              |            |                               |                              |                 |                          | Representative station. | DISTRICT. | METEOROLOGICAL DIVISION. |
|---|--|--------------------|--------------|---------------------|--------------|------------|----------------------|--------------|------------|-------------------------------|------------------------------|-----------------|--------------------------|-------------------------|-----------|--------------------------|
| Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | RAINFALL.          |              |                     |              |            |                      |              |            |                               |                              |                 |                          |                         |           |                          |
|   |  | Of week.           |              | Since 1st of month. |              |            | Since 15th May 1887. |              |            | Average number of rainy days. | Normal number of rainy days. |                 |                          |                         |           |                          |
|   |  | Mean for district. | Normal mean. | Mean for district.  | Normal mean. | Variation. | Mean for district.   | Normal mean. | Variation. |                               |                              |                 |                          |                         |           |                          |
| 6.4                                       | 0.24                                   | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —               | Gopalpore                | ORISSA.                 |           |                          |
| 5.4                                       | 0.91                                   | —                  | 2.86         | —                   | 7.84         | —          | —                    | 30.40        | —          | 4.6                           | 4.6                          | False Point     | Poorbe                   |                         |           |                          |
| 6.7                                       | 0.71                                   | —                  | 2.82         | —                   | 7.05         | —          | —                    | 31.09        | —          | 4.6                           | 4.6                          | Cuttack         | Cuttack                  |                         |           |                          |
| 6.3                                       | 0.40                                   | —                  | 3.08         | —                   | 8.16         | —          | —                    | 31.18        | —          | 4.5                           | 4.5                          | Balasore        | Balasore                 |                         |           |                          |
| 6.6                                       | 0.54                                   | 0.08               | 3.66         | 6.09                | 9.22         | -3.13      | 34.67                | 36.66        | -1.99      | 2.3                           | 4.7                          | Saugor Island   | South-West Midnapore     | SOUTH-WEST BENGAL.      |           |                          |
| 3.1                                       | 0.23                                   | 0.68               | 2.76         | 7.34                | 8.74         | -1.40      | 37.65                | 32.00        | +5.65      | 2.0                           | 4.0                          | Midnapore       | South 24-Pergunnahs      |                         |           |                          |
| 6.9                                       | 0.64                                   | 0.74               | 3.52         | 5.76                | 8.74         | -2.98      | 28.35                | 33.83        | -5.48      | 2.2                           | 5.2                          | Calcutta        | Midnapore                |                         |           |                          |
| 7.4                                       | 0.03                                   | 0.10               | 3.13         | 5.54                | 7.98         | -2.44      | 33.35                | 39.72        | +5.63      | 0.7                           | 4.6                          | Burdwan         | 24-Pergunnahs            |                         |           |                          |
| 4.3                                       | 0.46                                   | 0.41               | 3.13         | 13.97               | 9.06         | +4.91      | 40.56                | 33.84        | +6.72      | 1.5                           | 4.9                          | Bankoora        | Howrah                   | SOUTH-WEST BENGAL.      |           |                          |
| 5.6                                       | 0.12                                   | 0.45               | 3.49         | 7.88                | 8.00         | -0.72      | 34.90                | 33.35        | +1.55      | 1.5                           | 4.8                          | Raneegunge      | Burghoom                 |                         |           |                          |
| 8.1                                       | 0.60                                   | 0.45               | 2.94         | 8.07                | 7.73         | +0.27      | 41.86                | 30.18        | +11.68     | 1.4                           | 4.7                          | Berhampore      | West Burdwan             |                         |           |                          |
| 7.1                                       | 0.04                                   | 0.90               | 3.29         | 6.00                | 7.87         | -1.78      | 27.45                | 31.40        | -4.04      | 1.4                           | 4.5                          | Krishnaghur     | Moorsheadabad            |                         |           |                          |
| 7.9                                       | 0.08                                   | 0.84               | 3.31         | 5.46                | 8.43         | -2.97      | 25.42                | 35.64        | -10.22     | 1.9                           | 4.6                          | Jessore         | Nudda                    | SOUTH-WEST BENGAL.      |           |                          |
| 6.0                                       | 0.10                                   | —                  | 6.51         | —                   | 17.04        | —          | —                    | 83.98        | —          | —                             | 5.5                          | Chittagong      | Jessore                  |                         |           |                          |
| 5.6                                       | 0.25                                   | 0.50               | 4.00         | 6.34                | 10.87        | -4.63      | 35.15                | 52.71        | -17.56     | 1.3                           | 5.8                          | Dumakiri        | Khoolna                  |                         |           |                          |
| 2.6                                       | 0.50                                   | 0.10               | —            | —                   | 17.10        | —          | —                    | 74.19        | —          | —                             | 5.7                          | Barrisal        | Chittagong Hill Tracts   |                         |           |                          |
| 2.1                                       | 1.57                                   | 0.91               | 3.95         | 3.90                | 8.03         | -4.13      | 23.05                | 36.99        | -13.94     | 1.3                           | 4.6                          | Furzedpore      | Backergunge              | EAST BENGAL.            |           |                          |
| 5.3                                       | 2.80                                   | 0.79               | 2.78         | 4.70                | 8.83         | -4.04      | 27.51                | 40.37        | -12.86     | 1.3                           | 4.9                          | Dacca           | Nonkholly                |                         |           |                          |
| 3.1                                       | 0.29                                   | —                  | 4.22         | —                   | 11.23        | —          | —                    | 47.41        | —          | —                             | 5.3                          | Commillah       | Furzedpore               |                         |           |                          |
| 5.4                                       | 0.06                                   | 0.20               | 3.25         | 6.32                | 8.71         | -2.39      | 42.92                | 42.50        | +0.33      | 0.6                           | 4.5                          | Mymensingh      | Dacca                    |                         |           |                          |
| 5.1                                       | 0.04                                   | 0.54               | 2.79         | 5.36                | 7.22         | -1.86      | 43.02                | 30.72        | +6.30      | 1.3                           | 4.4                          | Bogra           | Tipporah                 | EAST BENGAL.            |           |                          |
| 3.1                                       | Nil                                    | 2.97               | 4.59         | 7.27                | -2.68        | 28.92      | 32.95                | -4.03        | Nil        | 4.4                           | 4.4                          | Serajung        | Mymensingh               |                         |           |                          |
| 3.1                                       | Nil                                    | 1.40               | 2.86         | 7.51                | 7.40         | +0.11      | 32.37                | 32.51        | -0.14      | 1.0                           | 4.6                          | Rampore Beaulah | Bogra                    |                         |           |                          |
| 3.9                                       | Nil                                    | 0.35               | 2.67         | 4.45                | 7.22         | -2.77      | 33.38                | 33.81        | -0.43      | 2.0                           | 5.0                          | Maldah          | Pubna                    |                         |           |                          |
| 5.3                                       | 2.13                                   | 1.83               | 2.75         | 10.38               | 7.24         | +3.14      | 52.64                | 36.17        | +16.47     | 3.2                           | 4.7                          | Dinagopore      | Rajshahye                | EAST BENGAL.            |           |                          |
| 2.6                                       | 1.75                                   | 1.80               | 2.80         | 11.13               | 7.18         | +3.95      | 63.42                | 40.11        | +14.31     | 3.5                           | 4.0                          | Rungpore        | Maldah                   |                         |           |                          |
| 7.3                                       | 3.40                                   | 4.22               | 4.44         | 18.24               | 13.59        | +4.65      | 84.76                | 73.07        | +11.69     | 3.2                           | 4.7                          | Jalpigoree      | Dinagopore               |                         |           |                          |
| 8.9                                       | 2.10                                   | 2.76               | 5.13         | 20.05               | 18.57        | +1.38      | 85.98                | 82.29        | +3.69      | 5.0                           | 5.1                          | Darjeeling      | Jalpigoree               |                         |           |                          |
| 5.6                                       | 1.88                                   | 5.05               | 2.54         | 11.00               | 7.91         | +3.78      | 47.19                | 36.57        | +11.62     | 3.2                           | 4.2                          | Purneah         | Cooch Behar              | NORTH BENGAL.           |           |                          |
| 6.7                                       | 5.63                                   | 2.73               | 1.95         | 10.93               | 6.38         | +4.55      | 38.00                | 26.87        | +11.23     | 3.3                           | 3.4                          | Mozufferpore    | Darjeeling Hill District |                         |           |                          |
| 7.7                                       | 3.55                                   | 2.18               | 2.52         | 8.63                | 7.98         | +0.65      | 30.76                | 29.04        | +1.72      | 2.5                           | 3.4                          | Durbhunga       | Purneah                  |                         |           |                          |
| 6.1                                       | 1.91                                   | 2.11               | 1.91         | 8.30                | 6.37         | +1.93      | 27.00                | 26.36        | +0.64      | 2.0                           | 3.3                          | Chupra          | North Bhagulpore         |                         |           |                          |
| 2.9                                       | 1.68                                   | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | 3.4                          | Motihari        | ...                      | NORTH BENGAL.           |           |                          |
| 6.6                                       | 0.92                                   | 1.20               | 2.27         | 10.12               | 7.08         | +3.04      | 26.83                | 24.64        | +2.20      | 1.3                           | 3.1                          | Luxar           | Chumparun                |                         |           |                          |
| 6.7                                       | 0.71                                   | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | 3.3                          | Dohree          | Saran                    |                         |           |                          |
| 5.9                                       | 0.91                                   | —                  | 2.25         | —                   | 7.16         | —          | —                    | 26.10        | —          | —                             | 3.1                          | Gya             | ...                      |                         |           |                          |
| 9.4                                       | 0.63                                   | —                  | 2.0          | —                   | 6.50         | —          | —                    | 26.14        | —          | —                             | 3.1                          | Bankipore       | Gya                      | SOUTH BENGAL.           |           |                          |
| 3.9                                       | 0.70                                   | 1.15               | 2.1          | 7.56                | 7.04         | +0.52      | 32.02                | 26.96        | +5.06      | 2.4                           | 3.6                          | Bhagulpore      | Patna                    |                         |           |                          |
| 3.3                                       | Nil                                    | 0.10               | 3.00         | 7.69                | 7.63         | +0.06      | 38.52                | 31.56        | +6.96      | 0.7                           | 4.5                          | Doomka          | South Bhagulpore         |                         |           |                          |
| 8.0                                       | 0.09                                   | 0.17               | 3.22         | 0.57                | 8.50         | +1.07      | 34.83                | 31.81        | +3.02      | 0.6                           | 4.5                          | Hazaribagh      | Monghyr                  |                         |           |                          |
| 7.1                                       | 0.12                                   | 0.33               | 2.71         | 8.61                | 8.55         | +0.06      | 32.68                | 30.31        | +2.37      | 0.8                           | 4.3                          | Ranchee         | South 24-Pergunnahs      | CHOTA NAGPORE.          |           |                          |
| 5.3                                       | Nil                                    | 0.00               | 2.75         | 10.00               | 9.35         | +0.74      | 39.07                | 34.26        | +4.81      | 1.0                           | 5.6                          | Chyebassa       | Hazaribagh               |                         |           |                          |
| —   | —                                      | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —               | Lohardugga               |                         | ...       |                          |
| —   | —                                      | —                  | —            | —                   | —            | —          | —                    | —            | —          | —                             | —                            | —               | Manbhoom                 |                         | ...       |                          |





Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 19th of August 1887—con. *ld.*

| Met-oro logical<br>Division. | District.                | Station.               | RAINFALL                  |                         |                         |                          |                            |                           |                         | TOTAL                       |                          | Total rain-<br>fall since<br>1st of<br>month. | Average<br>total rain<br>fall from<br>1st of<br>month. | Total rain<br>fall since<br>18th May<br>1887. | Average<br>rainfall<br>from 18th<br>May<br>to date. |
|------------------------------|--------------------------|------------------------|---------------------------|-------------------------|-------------------------|--------------------------|----------------------------|---------------------------|-------------------------|-----------------------------|--------------------------|---|--|---|---|
|                              |                          |                        | Saturday, 13th<br>August. | Sunday, 14th<br>August. | Monday, 15th<br>August. | Tuesday, 16th<br>August. | Wednesday,<br>17th August. | Thursday, 18th<br>August. | Friday, 19th<br>August. | Number<br>of<br>rainy days. | of<br>Rainfall<br>weeks. |   |  |   |   |
| NORTH BEHAR<br>—concluded.   | Saran                    | Gopalgunge ..          | 0.18                      | ...                     | 1.54                    | ...                      | ...                        | ...                       | ...                     | 3                           | 1.20                     | 8.89  | 0.30   | 26.16   | 27.30   |
|                              |                          | Sawan ..               | 1.90                      | 0.30                    | 1.71                    | ...                      | ...                        | ...                       | ...                     | 3                           | 3.91                     | 9.91  | 0.33   | 25.96   | 26.43   |
| SOUTH BEHAR                  | Shahabad                 | Chaurah ..             | ...                       | ...                     | 1.23                    | ...                      | ...                        | ...                       | ...                     | 1                           | 1.23                     | 6.31  | 0.29   | 28.56   | 25.26   |
|                              |                          | Buxar ..               | ...                       | ...                     | 0.49                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.49                     | 0.92  | 0.01   | 22.53   | 22.75   |
|                              |                          | Dumree ..              | ...                       | ...                     | 1.50                    | ...                      | ...                        | ...                       | ...                     | 1                           | 1.50                     | 7.14  | ?  | 29.13   | ?   |
|                              |                          | Mithunah ..            | ...                       | ...                     | 2.30                    | ...                      | ...                        | ...                       | ...                     | 1                           | 2.30                     | 13.65   | 7.61   | 30.27   | 25.82   |
|                              |                          | Sasaram ..             | ...                       | ...                     | 0.87                    | 0.14                     | ...                        | ...                       | ...                     | 2                           | 1.01                     | 15.92   | 7.61   | 27.05   | 25.30   |
|                              |                          | Arran ..               | ...                       | ...                     | 0.60                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.60                     | 5.23  | 0.80   | 27.83   | 24.70   |
|                              |                          | Mohania ..             | ...                       | ...                     | 0.69                    | ...                      | ...                        | 0.30                      | ...                     | 2                           | 0.90                     | 12.50   | ?  | ?   | ?   |
|                              | Gya                      | Aurungabad ..          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | ...                         | ...                      | ...   | 7.45   | ?   | 26.04   |
|                              |                          | Sya ..                 | ...                       | 0.1                     | 0.90                    | ...                      | ...                        | ...                       | 1.04                    | 3                           | 1.97                     | 10.00   | 0.08   | 31.33   | 27.04   |
|                              |                          | Sowdah ..              | 1.07                      | ...                     | ...                     | ...                      | ...                        | ...                       | 0.13                    | 2                           | 1.20                     | 9.31  | 0.71   | 28.50   | 25.32   |
|                              |                          | Sahabad ..             | ...                       | ...                     | 0.31                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.31                     | 8.42  | 7.40   | 29.37   | 25.64   |
|                              |                          | Arwal ..               | ...                       | ...                     | 0.83                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.83                     | 8.64  | ?  | 29.98   | ?   |
|                              |                          | Daudnagar ..           | ...                       | ...                     | 0.30                    | 0.10                     | ...                        | ...                       | ...                     | 2                           | 0.40                     | 4.95  | ?  | 21.90   | ?   |
|                              |                          | Sherrghati ..          | ...                       | ...                     | 1.50                    | ...                      | ...                        | ...                       | ...                     | 1                           | 1.50                     | 9.31  | ?  | 28.63   | ?   |
|                              |                          | Kajuli ..              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 7.07  | ?  | 20.53   | ?   |
|                              |                          | Pakri Barwa ..         | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 6.04  | ?  | 14.65   | ?   |
|                              | Patna                    | Patna ..               | ...                       | ...                     | 0.68                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.68                     | 4.88  | 0.76   | 29.28   | 26.64   |
|                              |                          | Dinapore ..            | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 0.01  | 0.71   | 30.70   | 26.49   |
|                              |                          | Belhar ..              | ...                       | 0.06                    | 0.45                    | ...                      | ...                        | ...                       | ...                     | 2                           | 0.51                     | 0.88  | 0.27   | 27.92   | 25.91   |
|                              |                          | Barra ..               | ...                       | ...                     | 0.60                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.60                     | 3.95  | 0.26   | 27.01   | 21.37   |
|                              |                          | Bickram ..             | ...                       | ...                     | 0.80                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.80                     | 0.24  | ?  | 25.65   | ?   |
|                              |                          | Hilsa ..               | ...                       | ...                     | 0.43                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.43                     | 4.68  | ?  | 26.68   | ?   |
|                              | Monghyr                  | Begoonah ..            | ...                       | 0.11                    | 0.25                    | 0.68                     | ...                        | ...                       | 0.50                    | 4                           | 1.63                     | 11.71   | 0.64   | 31.44   | 24.32   |
|                              |                          | Monghyr ..             | ...                       | 0.14                    | 0.42                    | ...                      | ...                        | ...                       | ...                     | 2                           | 1.09                     | 6.95  | 0.80   | 31.01   | 24.92   |
|                              |                          | Jamun ..               | 1.39                      | 0.42                    | ...                     | ...                      | ...                        | ...                       | ...                     | 2                           | 1.81                     | 9.48  | 7.72   | 29.36   | 28.42   |
|                              |                          | Gopri ..               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | ...                         | ...                      | ...   | ?  | ?   | ?   |
|                              | South Hazaribagh         | Sheikhpura ..          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 5.30  | ?  | 19.11   | ?   |
|                              |                          | Hazirpur ..            | ...                       | 0.65                    | 0.05                    | ...                      | ...                        | ...                       | ...                     | 2                           | 0.70                     | 5.25  | 7.14   | 32.71   | 27.24   |
|                              |                          | Baika ..               | 0.32                      | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | 2                           | 0.50                     | 4.90  | 7.46   | 26.55   | 27.06   |
|                              |                          | Kolung ..              | ...                       | 1.47                    | 0.36                    | ...                      | ...                        | ...                       | ...                     | 2                           | 1.83                     | 5.14  | ?  | 34.73   | ?   |
|                              | Sonthal Per-<br>gunnahs. | Kaimonah ..            | ...                       | 0.24                    | ...                     | 0.7                      | ...                        | ...                       | ...                     | 2                           | 0.30                     | 5.71  | 0.44   | 43.32   | 13.15   |
|                              |                          | Godda ..               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | 1                           | 0.19                     | 5.31  | 8.32   | 30.17   | 27.16   |
|                              |                          | Pakour ..              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | 0.19                    | Nil                         | Nil                      | 12.21   | 5.60   | 48.41   | 31.11   |
|                              |                          | Ays Dookma ..          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 5.35  | 9.30   | 31.67   | 33.84   |
|                              |                          | Dookur ..              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | 0.12                    | 1                           | 0.12                     | 8.90  | 8.11   | 37.53   | 31.81   |
|                              |                          | Jumara ..              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 8.42  | 8.32   | 20.12   | 33.66   |
|                              |                          | Sutra ..               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | 1                           | 0.10                     | 5.08  | ?  | 19.35   | ?   |
|                              |                          | Nasihat ..             | 0.10                      | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | ...                         | ...                      | ...   | ?  | ?   | ?   |
| MUTIA NAG-<br>PUR.           | Hazaribagh               | Pachautia ..           | ...                       | ...                     | 0.5                     | 0.22                     | ...                        | ...                       | ...                     | 2                           | 0.77                     | 10.11   | 8.28   | 31.50   | 30.65   |
|                              |                          | (Girdi) ..             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | ...                         | ...                      | ...   | ?  | ?   | ?   |
|                              |                          | Hazratnagar ..         | ...                       | ...                     | ...                     | 0.08                     | ...                        | ...                       | ...                     | 1                           | 0.08                     | 9.70  | 8.95   | 34.12   | 30.44   |
|                              |                          | Somungur ..            | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 5.35  | 7.65   | 29.50   | ?   |
|                              |                          | Sumud Hills ..         | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 10.05   | 8.15   | 34.87   | 29.15   |
|                              |                          | Jhoomrah Hills ..      | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 12.60   | 9.45   | 45.99   | 39.21   |
|                              |                          | Bara ..                | 0.35                      | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | 1                           | 0.35                     | 10.18   | ?  | 29.48   | ?   |
|                              |                          | Chitra ..              | ...                       | ...                     | 0.13                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.13                     | 9.95  | ?  | 35.32   | ?   |
|                              |                          | Karagdeha ..           | ...                       | ...                     | 0.80                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.80                     | 14.52   | ?  | 65.50   | ?   |
|                              |                          | Lumbar ..              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 10.10   | ?  | 1.24  | ?   |
|                              | Lohardugga               | Lohardugga ..          | 0.05                      | ...                     | 0.02                    | 0.50                     | ...                        | ...                       | ...                     | 3                           | 1.47                     | 15.67   | ?  | 12.04   | ?   |
|                              |                          | Kanchi ..              | 0.17                      | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | 1                           | 0.17                     | 8.28  | 9.52   | 44.00   | 33.30   |
|                              |                          | Paimow ..              | ...                       | 1.10                    | ...                     | ...                      | ...                        | ...                       | ...                     | 1                           | 1.10                     | 9.80  | 7.08   | 36.68   | 26.26   |
|                              |                          | Silla ..               | ...                       | ...                     | 0.80                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.80                     | 1.75  | ?  | 33.74   | ?   |
|                              |                          | Batumat ..             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 7.20  | ?  | 27.19   | ?   |
|                              |                          | Hoseenabad ..          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 11.93   | ?  | 42.80   | ?   |
|                              | Mugubhoon                | Chyowana ..            | ...                       | ...                     | ...                     | ...                      | 0.08                       | ...                       | ...                     | 1                           | 0.06                     | 10.00   | 9.35   | 39.07   | 34.26   |
|                              |                          | Chakradhar-<br>pore .. | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 6.56  | ?  | 30.06   | ?   |
|                              |                          | Chaitilla ..           | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | 0.65                    | 1                           | 0.65                     | 12.06   | ?  | 37.04   | ?   |
|                              | Manbhoom                 | Baharagura ..          | ...                       | ...                     | ...                     | ...                      | ...                        | 0.57                      | 0.15                    | 2                           | 0.72                     | 5.34  | ?  | 25.98   | ?   |
|                              |                          | Purulia ..             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 9.70  | 9.08   | 29.98   | 32.15   |
|                              |                          | Gobindpore ..          | 0.05                      | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | 1                           | 0.05                     | 6.64  | 8.53   | 21.86   | 29.49   |
|                              |                          | Kaghanath-<br>pore ..  | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | 7.74  | ?  | 20.82   | ?   |
|                              |                          | Barrabhoon ..          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | ?   | ?  | ?   | ?   |
|                              |                          | Jhalda ..              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                         | Nil                      | ?   | ?  | ?   | ?   |
|                              |                          | Ches ..                | ...                       | ...                     | 0.20                    | ...                      | ...                        | ...                       | ...                     | 1                           | 0.20                     | ?   | ?  | ?   | ?   |

Explanation. — Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 23rd August 1887.



**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVA-  
TIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
19TH OF AUGUST 1887.**

It was mentioned in the report for the previous week, that at its close both branches of the monsoon blowing over Bengal had become most decidedly weaker, and at the commencement of the present week, and throughout the greater part of it, similar conditions have obtained. During this period, however, a feeble cyclonic storm has formed in the Bay, which only crossed the west coast south of Gopalpore on the 19th. This storm has naturally formed the most prominent feature in the meteorology of the week, and during its formation and advance towards the west coast, the monsoon winds have been mainly deflected towards it, and thus for the greater part of the week the rain falling in Bengal has been both local and scanty, and a distinct break in the rain has been established for the whole of the week.

On Saturday, the 13th, the conditions over Bengal and the sea area to the south of it were those of an ordinary very light monsoon, except that pressure was decidedly low along the coast of Madras from Gopalpore to Masulipatam. Winds also were rather more strongly easterly along the west coast than is usual. Conditions remained almost unchanged for the following two days at the stations in the northern half of the Bay and in Bengal, but the strength of the monsoon blowing in the south of the Bay began to increase very considerably. On Tuesday, the 16th, winds became north-easterly at many stations in Bengal, and also along the Orissa coast and at Akyab, while to the south winds were westerly. It was therefore clearly evident on this day that a distinct depression had formed in the centre of the Bay. On the 17th the centre of the feeble storm was off the South Orissa coast, but it had not strengthened to any material extent, though there was a distinct cyclonic circulation of winds accompanying it. On the 18th it had approached rather nearer the land, but it still remained a feeble storm, and on the morning of the 19th it was crossing the South Orissa coast, and the centre of the storm on this day was a little distance inland. The storm afterwards drifted into the Central Provinces, where, after a day or two, it filled up. It was a remarkably persistent storm, though the barometric depression at its centre was feeble, and though the winds in connection with it were comparatively light; but at sea it gave rise to somewhat squally weather and rough sea. In the rear of the storm also a strong monsoon was blowing, and it was only after the feeble storm had advanced inland, that it became possible for the monsoon winds to again flow over Bengal. It will thus be seen that the conditions during the present week have been decidedly unfavourable for rainfall. It is in fact only along the line of the hills at the stations in North Behar and North Bengal that anything like general rain has occurred during the week, but in these districts, for the first two or three days, general and rather heavy rain was received, particularly in North Behar.

*Pressure.*—The changes of pressure during the week have not been very important. On the 13th pressure fell generally. This fall continued on the 14th, but on the 15th it was confined to the southern and western districts only. This local fall continued on the 16th and 17th, but on the 18th the fall again became general, and on the 19th again the fall was confined to the south-western stations, while over the remainder of the province pressure was rising. These changes were of course clearly connected with the development of the depression above described. Pressure at the close of the previous week was rather largely above the normal, and the effect of these changes has been to somewhat reduce this excess, particularly in the districts most affected by the formation of the depression. Thus the mean pressure for the whole week has been only 0.019" in excess of the normal at Copalpur and 0.025" in excess at False Point, while at Purneah the excess has been 0.114" and at Dacca 0.072". The mean pressure for the week in Assam has also been above the normal, the excess averaging 0.043".

*Temperature.*—Owing to the comparative absence of rainfall, the temperature of the province has risen considerably, and the general average temperature has been decidedly above the normal. The only districts in which the mean temperatures for the week have been below the normal are North and South Behar, but in neither case does the defect equal one degree. In North Bengal the excess above the normal temperature has been small and is only 0.8°, but in Orissa, South-West Bengal and Chutia Nagpur, the excess has varied from 1° to 2°, and in East Bengal the excess has equalled no less than 2.6°. For the whole province the mean temperature for the week has been 0.9° in excess of the normal. In Assam, also, temperature has been almost steadily above the normal, and the excess has averaged 0.8°.

*Rainfall.*—Has been light and local in all districts except North Behar and North Bengal, but the only district in which the fall has been at all heavy is North Behar. In this district an average fall of 3.50 inches has been received, which is no less than 1.32 inches in excess of the normal fall for the period. North Bengal has received the next largest fall, but in this district the average fall has only been 1.80 inches, which is 1.33 inches in defect of the normal. In Orissa the fall has averaged 1.30 inches, or 1.63 inches less than the normal. In all other districts the average amounts received have been less than one inch, and in most cases the defects vary between two and three inches. The smallest average fall in any district is 0.22 inch in Chutia Nagpur, and this is only about one-fifteenth of the usual fall for the week. Compared with the normal fall, and expressed as a percentage of that amount, the actual average falls in the seven

meteorological districts during the past week are.—Orissa 44 per cent., South West Bengal 19 per cent., East Bengal 17 per cent., North Bengal 57 per cent., North Behar 160 per cent., South Behar 30 per cent., and Chutia Nagpur 7 per cent. If each of these districts be considered to have an equal value in the calculation, the general average rainfall of the province for the week has only equalled 48 per cent. of the normal. Some districts in fact have scarcely received any rain at all during the week, and thus the following districts have received average falls of less than a fifth of an inch :—Burdwan, Pubna, Mymensingh, Sonthal Pergunnah, Hazaribagh Chyebassa.

In Assam the following amounts of rain have been received during the week :—Dhubri 1·18 inches, Sibsagar 0·81 inch and Silchar 0·78 inch.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 19th of August 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          | RAINFALL.       |            |                         |                                |            |                     |                 |                      |                 |  |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|--|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 15th May 1887. |                 |  |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. | Average.             | Normal average. |  |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |                 |  |
| Orissa, .. .. .              | 82·4                          | 77·6                         | 88·8                    | 78·7                   | 83·8                  | +1·1   | 1·30     | 2·98            | -1·68      | 3·6                     | 4·6                            | -1·0       | 5·00                | 7·70            | 27·00                | 31·32           |  |
| South-West Bengal ...        | 85·1                          | 77·3                         | 90·8                    | 78·8                   | 84·8                  | +1·5   | 0·63     | 3·30            | -2·67      | 1·7                     | 4·7                            | -3·0       | 7·04                | 8·48            | 32·48                | 33·01           |  |
| East Bengal: ... ..          | 94·3                          | 74·1                         | 90·3                    | 78·2                   | 84·3                  | +2·6   | 0·70     | 3·07            | -3·27      | 1·5                     | 5·1                            | -3·6       | 7·65                | 10·85           | 37·10                | 50·50           |  |
| North Bengal ... ..          | 91·3                          | 73·3                         | 89·8                    | 77·8                   | 83·8                  | +0·8   | 1·80     | 3·13            | -1·33      | 2·4                     | 4·5                            | -2·1       | 10·08               | 8·57            | 34·25                | 45·32           |  |
| North Behar ... ..           | 94·7                          | 73·6                         | 88·1                    | 77·6                   | 82·0                  | -0·9   | 3·50     | 2·18            | +1·32      | 2·8                     | 3·7                            | -0·9       | 10·10               | 7·04            | 37·43                | 29·06           |  |
| South Behar ... ..           | 94·4                          | 73·0                         | 89·0                    | 78·5                   | 83·8                  | -0·4   | 0·73     | 2·42            | -1·69      | 1·4                     | 3·6                            | -2·2       | 7·00                | 7·13            | 31·48                | 27·80           |  |
| Chutia Nagpur ... ..         | 87·6*                         | 70·4*                        | 85·3*                   | 72·5*                  | 79·2*                 | +1·2*  | 0·22     | 2·97            | -2·75      | 0·7                     | 4·6                            | -3·8       | 9·28                | 8·61            | 34·45                | 31·45           |  |
| Assam: ... .. .              | 90·1                          | 75·3                         | 90·1                    | 77·2                   | 83·7                  | +0·8   |          |                 |            |                         |                                |            |                     |                 |                      |                 |  |

\* Chyebassa not included.

METEOROLOGICAL OFFICE, BENGAL ;

A. PEDLER,

The 23rd August 1887.

Offg. Meteorological Reporter to the Govt. of Bengal.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 14th to 20th August 1887.

| MONTH. | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|--------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|        |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.  |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| August | 14th  | 85·0         | 92·2     | 13·9   | 78·3     | 79·8           | ·948            | 77·6       | 79        | 0·00    |
| "      | 15th  | 84·6         | 92·0     | 13·2   | 78·8     | 79·9           | ·959            | 78·0       | 80        | 0·02    |
| "      | 16th  | 84·9         | 92·0     | 12·2   | 79·8     | 79·8           | ·950            | 77·7       | 79        | 0·02    |
| "      | 17th  | 81·6         | 93·2     | 14·4   | 78·8     | 78·6           | ·939            | 77·3       | 87        | 0·19    |
| "      | 18th  | 82·2         | 91·2     | 12·9   | 78·3     | 79·3           | ·963            | 78·1       | 87        | 0·39    |
| "      | 19th  | 83·3         | 91·0     | 12·2   | 78·8     | 80·2           | ·991            | 79·0       | 87        | 0·27    |
| "      | 20th  | 80·8         | 87·0     | 7·7    | 79·3     | 79·7           | 1·001           | 79·3       | 96        | 0·29    |

The mean temperature of the seven days

The extreme variation of temperature

The maximum temperature

The mean relative humidity

The total fall of rain from 14th to 20th August 1887

The mean temperature and humidity are obtained by applying to the mean of the 10th, 16th, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ;

A. PEDLER,

The 22nd August 1887.

for Offg. Meteorological Reporter to the Govt. of India.

## Results of the Meteorological Observations taken at the Alipore Observatory from 14th to 20th August 1887.

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 55° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain. | WEATHER.                       |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|-------|--------------------------------|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |       |                                |
| Aug.   | 14th  | 152.2           | 11.9                                | 29.663                               | 84.4         | 89.1     | 10.8   | 78.3     | 79.9           | 0.961           | 78.0       | 82        | SW by S and SSW       | 76              | 0.02  | Partially cloudy, t, d, p.     |
| "      | 15th  | 146.5           | 7.1                                 | .656                                 | 84.0         | 88.9     | 10.7   | 78.2     | 79.6           | .964            | 77.8       | 82        | SSW and SW by S...    | 62              | Nil   | Chiefly cloudy, p.             |
| "      | 16th  | 155.4           | 7.8                                 | .657                                 | 84.3         | 90.2     | 10.7   | 79.5     | 79.7           | .954            | 77.8       | 81        | SW by S, ENE and ESE. | 93              | "     | Chiefly cloudy.                |
| "      | 17th  | 155.3           | 8.5                                 | .665                                 | 83.6         | 90.9     | 12.5   | 78.4     | 79.6           | .956            | 77.9       | 84        | ESE and E by S ...    | 83              | 0.30  | Chiefly cloudy, o, g, t, p.    |
| "      | 18th  | 155.7           | 6.9                                 | .602                                 | 82.9         | 89.3     | 11.3   | 78.0     | 79.8           | .980            | 78.6       | 87        | E by S and SE ...     | 75              | 0.30  | Chiefly cloudy, o, g, t, p.    |
| "      | 19th  | 156.7           | 1.7                                 | .383                                 | 83.2         | 88.5     | 9.8    | 78.7     | 79.7           | .970            | 78.3       | 86        | ESE and SE by S ...   | 93              | 0.14  | Chiefly cloudy, o, g, t, d, p. |
| "      | 20th  | 134.3           | Nil                                 | .571                                 | 82.0         | 84.9     | 6.1    | 78.8     | 79.7           | .983            | 78.7       | 90        | SE by S and variable  | 78              | 0.19  | Chiefly cloudy o, g, t, d, p.  |

|  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |         |        |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|--------|
| The mean pressure of the seven days  | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | Inches. | 29.628 |
| The average pressure of the corresponding period for 24 years, S. G.'s Office          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...     | 29.589 |
| The total number of hours of bright sunshine   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | Hours.  | 43.9   |
| The maximum possible number of hours of sunshine                                       | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...     | 89.9   |
| The mean temperature of the seven days   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | °       | 83.5   |
| The average temperature of the corresponding period for 24 years, S. G.'s Office       | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...     | 83.1   |
| The extreme variation of temperature   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...     | 12.9   |
| The maximum temperature  | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...     | 90.9   |
| The highest velocity of the wind in one hour   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | Miles.  | 14     |
| The highest pressure of wind on one square foot  | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | lbs.    | ...    |
| The mean relative humidity   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | %       | 85     |
| The average relative humidity of the corresponding period for 24 years, S. G.'s Office | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...     | 87     |
| The total fall of rain from 14th to 20th August 1887                                   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | Inches. | 0.95   |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...     | 3.75   |
| The total fall from 1st January to 20th August 1887                                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...     | 42.11  |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...     | 44.02  |

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph. The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Alipore Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, t thunder, Δ dew, < lighting.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

## MEMORANDUM.

THE mortuary statistics of the districts of Bengal for the month of May 1887 present the following results:—

1. That the deaths of 140,829 persons were registered among a population of 66,163,884, representing an annual casualty-rate of 25·44 per 1,000 against 22·80 per 1,000 in the preceding month, and 18·24 per 1,000 in the corresponding month of 1886, indicating, as compared with both the periods (especially with the latter), a considerable increase in the registration of deaths.

2. That the following districts returned the highest proportions of deaths:—

| Districts. |     |                  | Districts.  |     |                  |
|------------|-----|------------------|-------------|-----|------------------|
|            |     | Ratio per mille. |             |     | Ratio per mille. |
| Chumparun  | ... | 63·12            | Nuddea      | ... | 29·64            |
| Gya        | ... | 55·92            | Dinajpur    | ... | 29·28            |
| Monghyr    | ... | 49·92            | Bogra       | ... | 28·56            |
| Jalpaiguri | ... | 43·56            | Puri        | ... | 28·56            |
| Bhagulpur  | ... | 34·80            | Backergunge | ... | 28·41            |
| Rajshahye  | ... | 34·32            | Hazaribagh  | ... | 28·32            |
| Darjiling  | ... | 32·88            | Shahabad    | ... | 27·72            |
| Pubna      | ... | 32·64            | Patna       | ... | 27·60            |
| Rungpur    | ... | 30·24            | Balasore    | ... | 25·68            |

3. That the total mortality of the month, distributed under the following specific heads of disease, stood as follows:—

|                  |     |     |     | Ratio per mille during— |           |
|------------------|-----|-----|-----|-------------------------|-----------|
|                  |     |     |     | May 1887.               | May 1886. |
| Cholera          | ... | ... | ... | 5·88                    | 1·68      |
| Small-pox        | ... | ... | ... | ·12                     | ·12       |
| Fever            | ... | ... | ... | 15·36                   | 12·96     |
| Bowel-complaints | ... | ... | ... | ·84                     | ·72       |
| Injury           | ... | ... | ... | ·36                     | ·36       |
| Other causes     | ... | ... | ... | 2·64                    | 2·16      |

indicating chiefly, in comparison with the mortality of the corresponding month of the preceding year, a considerable increase in the death-rates from cholera and fever, particularly from the former.

4. That while the following districts exhibited exceptional high mortality from cholera and fever, the rest did not display any noticeable severity from the other diseases mentioned in the foregoing table, excepting Puri, where 12·96 per 1,000 of the population died from the maladies coming under the head of "Other causes":—

| Cholera.      |     |                  | Fever.     |     |                  |
|---------------|-----|------------------|------------|-----|------------------|
|               |     | Ratio per mille. |            |     | Ratio per mille. |
| Chumparun     | ... | 42·72            | Rajshahye  | ... | 31·68            |
| Gya           | ... | 26·28            | Jalpaiguri | ... | 31·68            |
| Monghyr       | ... | 13·80            | Monghyr    | ... | 30·60            |
| Mozufferpur   | ... | 12·36            | Pubna      | ... | 28·92            |
| Balasore      | ... | 9·72             | Dinajpur   | ... | 26·04            |
| Bhagulpur     | ... | 9·24             | Bogra      | ... | 25·20            |
| Jalpaiguri    | ... | 9·12             | Gya        | ... | 23·88            |
| Shahabad      | ... | 8·16             | Nuddea     | ... | 21·36            |
| Puri          | ... | 7·80             | Bhagulpur  | ... | 21·00            |
| Rungpur       | ... | 7·44             | Rungpur    | ... | 20·88            |
| Faridpur      | ... | 7·44             | Darjiling  | ... | 20·88            |
| Backergunge   | ... | 7·08             | Hazaribagh | ... | 20·88            |
| Durbhanga     | ... | 6·64             | Maldah     | ... | 20·52            |
| Patna         | ... | 4·80             |            |     |                  |
| Nuddea        | ... | 4·20             |            |     |                  |
| Saran         | ... | 3·24             |            |     |                  |
| Purneah       | ... | 3·24             |            |     |                  |
| Hazaribagh    | ... | 3·12             |            |     |                  |
| 24-Pergunnahs | ... | 2·76             |            |     |                  |
| Chittagong    | ... | 2·76             |            |     |                  |
| Jessore       | ... | 2·64             |            |     |                  |
| Lohardugga    | ... | 2·64             |            |     |                  |
| Dacca         | ... | 2·52             |            |     |                  |

5. That in relation to *Sex*, *Class* and *Age*, the mortality of the month stood as follows:—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |        |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|--------|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |        | Ratio per mille. |
| Males   | ... | 27·96            | Christians          | ... | 12·00            | Under 1 year         | ...    | 146·16           |
| Females   | ... | 23·04            | Hindus              | ... | 26·28            | 1 and under          | ...    | 95·88            |
| Ratio of male deaths to every 100 female deaths | ... | 119              | Mahomedans          | ... | 24·36            | 5 " "                | 10 " " | 15·72            |
|   |     |                  | Budhists            | ... | 16·32            | 10 " "               | 15 " " | 13·08            |
|   |     |                  | Other classes       | ... | 20·64            | 15 " "               | 20 " " | 17·64            |
|   |     |                  |                     |     |                  | 20 " "               | 30 " " | 18·24            |
|   |     |                  |                     |     |                  | 30 " "               | 40 " " | 19·20            |
|   |     |                  |                     |     |                  | 40 " "               | 50 " " | 23·52            |
|   |     |                  |                     |     |                  | 50 " "               | 60 " " | 32·16            |
|   |     |                  |                     |     |                  | 60 years and upwards | ...    | 45·36            |

The 22nd August 1887.

R. LUDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.





MEMORANDUM.

THE birth and death returns from the principal Municipalities in Bengal afford the following results for the week ending 6th August 1887 :—

1. That births were registered at the rate of 16·7 per 1,000 of population, and deaths at 28·4 per 1,000 as opposed to 21·9 and 39·1 per 1,000, respectively, during the preceding week ending 30th July, indicating a considerable falling off in the registration of both the events.

2. That the highest proportions of births and deaths were returned from the following Municipalities :—

| <i>Births.</i> |     |     |                  | <i>Deaths.</i>      |     |     |                  |
|----------------|-----|-----|------------------|---------------------|-----|-----|------------------|
|                |     |     | Ratio per mille. |                     |     |     | Ratio per mille. |
| Comillah       | ... | ... | 38·5             | Arrah               | ... | ... | 81·4             |
| Arrah          | ... | ... | 33·5             | Gya                 | ... | ... | 69·0             |
|                |     |     |                  | Puri                | ... | ... | 62·9             |
|                |     |     |                  | Beaulah             | ... | ... | 39·4             |
|                |     |     |                  | Scrapore            | ... | ... | 39·3             |
|                |     |     |                  | Suburbs of Calcutta | ... | ... | 35·4             |
|                |     |     |                  | Patna               | ... | ... | 34·4             |
|                |     |     |                  | Ranaghat            | ... | ... | 29·9             |

3. That, in comparison with the results of the preceding week, there was a considerable reduction in the death-rates from cholera, fever, bowel-complaints, and the unspecified diseases coming under the head of "Other causes," and only fractional diminution of mortality from injury, small-pox presenting no variation :—

|                  |     |     |     | Ratio per mille during the weeks ending— |                 |
|------------------|-----|-----|-----|--|-----------------|
|                  |     |     |     | 6th August 1887.                         | 30th July 1887. |
| Cholera          | ... | ... | ... | 6·0                                      | 8·0             |
| Small-pox        | ..  | ... | ... | ·1                                       | ·1              |
| Fever            | ... | ... | ... | 10·2                                     | 14·2            |
| Bowel-complaints | ... | ... | ... | 3·6                                      | 5·1             |
| Injury           | ..  | ... | ... | ·6                                       | ·7              |
| Other causes     | ... | ... | ... | 7·9                                      | 11·0            |

4. That the following Municipalities suffered pre-eminently from cholera, fever and the maladies grouped under the head of "Other causes," the rest of the diseases above named manifesting no noticeable severity :—

| <i>Cholera.</i>     |                  | <i>Fever.</i> |                  | <i>Other Causes.</i> |                  |
|---------------------|------------------|---------------|------------------|----------------------|------------------|
|                     | Ratio per mille. |               | Ratio per mille. |                      | Ratio per mille. |
| Arrah               | 41·9             | Beaulah       | 31·5             | Scrapore             | 19·6             |
| Puri                | 33·5             | Ranaghat      | 29·9             | Gya                  | 19·0             |
| Gya                 | 25·3             |               |                  | Arrah                | 16·8             |
| Patna               | 8·4              |               |                  | Puri                 | 12·6             |
| Chupra              | 3·9              |               |                  | Suburbs of Calcutta  | 11·6             |
| Suburbs of Calcutta | 2·7              |               |                  |                      |                  |

5. That the death rates in relation to *Sex*, *Class* and *Age*, stood as follows :—

| <i>According to Sex.</i>                        |                  | <i>According to Class.</i> |                  | <i>According to Age.</i> |                  |
|---|------------------|----------------------------|------------------|--------------------------|------------------|
|   | Ratio per mille. |                            | Ratio per mille. |                          | Ratio per mille. |
| Males   | 29·7             | Christians                 | 13·0             | Under 1 year             | 224·7            |
| Females   | 26·9             | Hindus                     | 30·5             | 1 and under 5 years      | 62·6             |
| Ratio of male deaths to every 100 female deaths | 725              | Mahomedans                 | 24·3             | 5 " " 10 "               | 16·3             |
|   |                  |                            |                  | 10 " " 15 "              | 14·5             |
|   |                  |                            |                  | 15 " " 20 "              | 24·0             |
|   |                  |                            |                  | 20 " " 30 "              | 19·8             |
|   |                  |                            |                  | 30 " " 40 "              | 12·1             |
|   |                  |                            |                  | 40 " " 50 "              | 21·7             |
|   |                  |                            |                  | 50 " " 60 "              | 26·2             |
|   |                  |                            |                  | 60 years and upwards     | 55·1             |

R. LIDDERDALE, M.D., *Deputy Surgeon-General,*

The 22nd August 1887

*Sanitary Commissioner for Bengal.*





| DISTRICTS.   |     | NAMES OF MUNICIPALITIES. |     | DEATHS AMONG— |          | RATIO PER 1,000 OF POPULATION PER ANNUM. |                |             |         | DEATHS.     |            | RATIO PER 1,000 OF POPULATION PER ANNUM. |               |                      |                       |                        |                        |                        |                        |                        |                        |                        |  | Age. |  |
|--------------|-----|--------------------------|-----|---------------|----------|--|----------------|-------------|---------|-------------|------------|--|---------------|----------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--|------|--|
|              |     |                          |     | Christians.   | Muslims. | Buddhists.                               | Other classes. | Christians. | Hindus. | Mohomedans. | Buddhists. | Other classes.                           | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and up-wards. |  |      |  |
| Burhan       | ... | ...                      | ... | 9             | 2        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | ...                    |  |      |  |
| Midnapore    | ... | ...                      | ... | 6             | 4        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 3             | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Hugli        | ... | ...                      | ... | 8             | 1        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 4             | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Serampore    | ... | ...                      | ... | 10            | 1        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 5             | 4                    | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
|              | ... | ...                      | ... | 3             | ...      | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Howrah       | ... | ...                      | ... | 12            | 4        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | 3                    | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
|              | ... | ...                      | ... | 2             | ...      | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| 24-Pargunnah | ... | ...                      | ... | 3             | 111      | 57                                       | ...            | ...         | ...     | ...         | ...        | ...                                      | 37            | 15                   | 8                     | 3                      | 12                     | 51                     | 16                     | 17                     | 10                     | ...                    |  |      |  |
| Kishoreganj  | ... | ...                      | ... | 5             | ...      | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
|              | ... | ...                      | ... | 6             | ...      | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 2             | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Santipur     | ... | ...                      | ... | 5             | ...      | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 1             | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
|              | ... | ...                      | ... | 2             | 1        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Jessore      | ... | ...                      | ... | 7             | 8        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 8             | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
|              | ... | ...                      | ... | 4             | ...      | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Dacca        | ... | ...                      | ... | 9             | 10       | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 1             | 2                    | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
|              | ... | ...                      | ... | 1             | 1        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Chittagong   | ... | ...                      | ... | 2             | 2        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
|              | ... | ...                      | ... | 2             | 4        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Tiberah      | ... | ...                      | ... | 84            | 22       | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 15            | 15                   | 5                     | 7                      | 5                      | 17                     | 6                      | 6                      | 6                      | ...                    |  |      |  |
|              | ... | ...                      | ... | 77            | 4        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 18            | 10                   | 9                     | 5                      | 2                      | 8                      | 8                      | 11                     | 12                     | ...                    |  |      |  |
| Shalal ad    | ... | ...                      | ... | 57            | 11       | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 5             | 25                   | 9                     | 2                      | 5                      | 8                      | 5                      | 3                      | 3                      | ...                    |  |      |  |
|              | ... | ...                      | ... | 4             | 2        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Durrban      | ... | ...                      | ... | 16            | 10       | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
|              | ... | ...                      | ... | 10            | 2        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 3             | 4                    | 2                     | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Bhagulpore   | ... | ...                      | ... | 23            | 5        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 6             | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
|              | ... | ...                      | ... | 22            | 5        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 6             | 4                    | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Purneah      | ... | ...                      | ... | 1             | 4        | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
|              | ... | ...                      | ... | 20            | ...      | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |
| Total        | ... | ...                      | ... | 3             | 506      | 183                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | 131           | 111                  | 41                    | 32                     | 46                     | 105                    | 53                     | 67                     | 48                     | 80                     |  |      |  |
|              | ... | ...                      | ... | ...           | ...      | ...                                      | ...            | ...         | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |  |      |  |

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,  
The 22nd August 1887.

R. LUDDERDALE, M.D., *Deputy Surgeon-General,  
Sanitary Commissioner for Bengal*

# PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statements showing quantities of Goods carried during the month of June 1887.

## ORISSA CIRCLE.

### TALDUNDAH CANAL SYSTEM.

LENGTH OF CANAL OPEN { TALDUNDAH CANAL 27 MILES.  
MACHGONG „ 4 „

| Number of boats or rafts.                     | DESCRIPTION.                        | TOTAL GOVERNMENT AND PRIVATE. |                   |                   |   | PRIVATE.          |         | REMARKS.  |
|---|-------------------------------------|-------------------------------|-------------------|-------------------|---|-------------------|---------|-----------|
|   |                                     | Quantity—Tons.                |                   |                   | Value.  | Quantity.         | Value.  |           |
|   |                                     | Up.                           | Down.             | Total.            | Rupces.   | Tons.             | Rupces. |           |
| 6   | 1. Grain ...                        | .....                         | 92                | 92                | 2,000   | 92                | 2,000   |           |
| .....   | 2. Cotton ...                       | .....                         | .....             | .....             | .....   | .....             | .....   |           |
| .....   | 3. Oilseeds ...                     | .....                         | .....             | .....             | .....   | .....             | .....   |           |
| .....   | 4. Salt ...                         | .....                         | .....             | .....             | .....   | .....             | .....   |           |
| .....   | 5. Piece-goods ...                  | .....                         | .....             | .....             | .....   | .....             | .....   |           |
| 40  | 6. Metal ...                        | .....                         | 506               | 506               | 730   | 506               | 730     |           |
| 6   | 7. Building materials ...           | .....                         | 81                | 81                | 150   | 5½                | 45      |           |
| 6   | 8. Miscellaneous ...                | .....                         | 7                 | 7                 | 150   | 7                 | 150     |           |
| .....   | 9. Fuel ...                         | .....                         | .....             | .....             | .....   | .....             | .....   |           |
| .....   | 10. Timber ...                      | .....                         | .....             | .....             | .....   | .....             | .....   |           |
| raft  | 11. Bamboos ...                     | .....                         | 1,000 No.         | 1,000 No.         | 15  | 1,000 No.         | 15      |           |
| 3 & 1 raft                                    | 12. Total ...                       | .....                         | 686 & 1,000 No.   | 686 & 1,000 No.   | 3,045   | 610 & 1,000 No.   | 2,940   |           |
| 28  | 13. Total of same month last year } | .....                         | { 379 & 4,000 No. | { 379 & 4,000 No. | 3,235   | { 253 & 4,000 No. | 2,842   |           |
|   |                                     | Up.                           | Down.             | Total.            |   |                   |         | Rs. A. P. |
| Total number of boats plying cargo No.        |                                     | .....                         | 58                | 58                | Total tollage of month—<br>24 + 25 + 26 ...         |                   |         | 265 3 9   |
| Total number of boats plying passenger No.    |                                     | 9                             | .....             | 9                 | Total tollage of same month last year ...           |                   |         | 168 0 0   |
| Total number of empty boats ... No.           |                                     | 23                            | 13                | 36                | Memorandum of Tollage.                              |                   |         |           |
| Total registered tonnage, cargo ...           |                                     | 190                           | 1,294             | 1,484             |   |                   |         |           |
| Total registered tonnage, passenger ...       |                                     | 416                           | 261               | 677               |   |                   |         |           |
| Ton-mileage ...                               |                                     | 3,908                         | 20,193            | 24,101            |   |                   |         |           |
| Estimated value of cargo. Rs.                 |                                     | .....                         | 3,030             | 3,030             | 1. Balance not recovered on the 1st of the month .. |                   |         | .....     |
| Number of passengers. No.                     |                                     | 2,924                         | .....             | 2,924             | 2. Tollage per month ...                            |                   |         | 265 3 9   |
| Rafts, bamboos ..                             |                                     | .....                         | 1,000             | 1,000             |   |                   |         |           |
| Do., bullahs ..                               |                                     | .....                         | .....             | .....             |   |                   |         |           |
| Estimated value of rafts. Rs.                 |                                     | .....                         | 15                | 15                | 3. Total ...  |                   |         | 265 3 9   |
| Tollage on boats ..                           |                                     | 65-10-9                       | 198-15-0          | 264-9-9           | 4. Amount credited in the accounts of the month ... |                   |         | 44 9 0    |
| Compounded tollage on boats ... Rs.           |                                     | .....                         | .....             | .....             |   |                   |         |           |
| Tollage on rafts ..                           |                                     | .....                         | 0-10-0            | 0-10-0            | 5. Balance due at the end of the month ...          |                   |         | 220 10 9  |
| Total tollage on boats per ton-mile ...       |                                     | .....                         | .....             | 2-10 pie          |   |                   |         |           |
| Total tollage on rafts per 100 cubic feet ... |                                     | .....                         | .....             | .....             |   |                   |         |           |

## KENDRAPARA CANAL SYSTEM.

LENGTH OF CANAL OPEN, 75 MILES.

| No. of<br>Rafts. | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |                        |                        |            | PRIVATE.               |            | REMARKS. |
|------------------|--------------------------------------|-------------------------------|------------------------|------------------------|------------|------------------------|------------|----------|
|                  |                                      | Quantity—Tons.                |                        |                        | Value.     | Quantity.              | Value.     |          |
|                  |                                      | Up.                           | Down.                  | Total.                 | Rupees.    | Tons.                  | Rupees.    |          |
| 12               | 1. Grain ...                         | 383                           | 33                     | 416                    | 13,250     | 416                    | 13,250     |          |
| ..               | 2. Cotton ...                        | .....                         | .....                  | .....                  | .....      | .....                  | .....      |          |
| 5                | 3. Oilseeds ...                      | .....                         | 23                     | 23                     | 1,950      | 23                     | 1,950      |          |
| 6                | 4. Salt ...                          | 60                            | 2                      | 62                     | 6,850      | 62                     | 6,850      |          |
| ..               | 5. Piece-goods ...                   | .....                         | .....                  | .....                  | .....      | .....                  | .....      |          |
| ..               | 6. Metal ...                         | .....                         | .....                  | .....                  | .....      | .....                  | .....      |          |
| ..               | 7. Building materials ...            | .....                         | .....                  | .....                  | .....      | .....                  | .....      |          |
| 8                | 8. Miscellaneous ...                 | 116                           | 56                     | 172                    | 12,620     | 147                    | 12,270     |          |
| ..               | 9. Fuel ...                          | .....                         | .....                  | .....                  | .....      | .....                  | .....      |          |
| rafts            | 10. Timber ...                       | 94 No.                        | 16 No.                 | 110 No.                | 125        | 110 No.                | 125        |          |
| raft             | 11. Bamboos ...                      | ...                           | 260 „                  | 200 „                  | 5          | 200 „                  | 5          |          |
| 91 &<br>5 rafts  | 12. Total ...                        | { 559 &<br>94 No.             | { 114 &<br>216 No.     | { 673 &<br>310 No.     | { 34,800   | { 648 &<br>310 No.     | { 34,450   |          |
| 445 &<br>1 rafts | 13. Total of same<br>month last year | { 1,917 &<br>62 No.           | { 1,648 &<br>5,070 No. | { 3,565 &<br>5,132 No. | { 1,82,805 | { 2,995 &<br>5,132 No. | { 1,81,335 |          |

|  | Up.     | Down.   | Total.   |  | Rs. A. P.               |
|--|---------|---------|----------|--|-------------------------|
| Total number of boats plying cargo No.           | 77      | 14      | 91       | Total tollage of month—<br>24 + 25 + 26 ...                | 941 6 0                 |
| Total number of boats plying passenger No.       | 4       | 16      | 20       | Total tollage of same month<br>last year ...               | 2,895 12 6              |
| Total number of empty boats No.                  | 48      | 45      | 93       | <i>Memorandum of Tollage.</i>                              |                         |
| Total registered tonnage, cargo                  | 874     | 208     | 1,082    | 1. Balance not recovered<br>on the 1st of the<br>month ... | Rs. A. P.<br>5,112 15 0 |
| Total registered tonnage, passenger              | 64      | 485     | 549      |  |                         |
| Ton-mileage                                      | 24,506  | 27,994  | 52,500   |  |                         |
| Estimated value of cargo Rs.                     | 21,230  | 13,440  | 34,670   |  |                         |
| Number of passengers No.                         | 68      | 2,701   | 2,769    |  |                         |
| Rafts, bamboos                                   | ...     | 200     | 200      | 2. Tollage per month ...                                   | 941 6 0                 |
| Do., timbers                                     | 94      | 16      | 110      | 3. Total ...   | 6,054 5 0               |
| Estimated value of rafts. Rs.                    | 100     | 30      | 130      |  |                         |
| Tollage on boats                                 | 503-3-0 | 434-8-6 | 937-11-6 | 4. Amount credited in the<br>accounts of the month ...     | 2,060 9 9               |
| Compounded tollage on<br>boats ...               | .....   | .....   | .....    |  |                         |
| Tollage on rafts                                 | 3-4-0   | 0-6-6   | 3-10-6   |  |                         |
| Total tollage on boats per<br>ton-mile ...       | .....   | .....   | 34 pie   | 5. Balance due at the end<br>of the month ...              | 3,993 11 3              |
| Total tollage on rafts per<br>100 cubic feet ... | .....   | .....   | 1-28     |  |                         |

## HIGH LEVEL CANAL, RANGE I.

LENGTH OF CANAL OPEN, 34 MILES.

| Number of boats or rafts. | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |       |                     |         | PRIVATE.            |         | REMARKS. |
|---------------------------|---------------------------------------|-------------------------------|-------|---------------------|---------|---------------------|---------|----------|
|                           |                                       | Quantity—Tons.                |       |                     | Value.  | Quantity.           | Value.  |          |
|                           |                                       | Up.                           | Down. | Total.              | Rupees. | Tons.               | Rupees. |          |
| 32                        | 1. Grain ...                          | 168                           | ..... | 168                 | 11,970  | 168                 | 11,970  |          |
| .....                     | 2. Cotton ...                         | .....                         | ..... | .....               | .....   | .....               | .....   |          |
| .....                     | 3. Oilseeds ...                       | .....                         | ..... | .....               | .....   | .....               | .....   |          |
| 7                         | 4. Salt ...                           | .....                         | 38    | 38                  | 3,150   | 38                  | 3,150   |          |
| .....                     | 5. Piece-goods ...                    | .....                         | ..... | .....               | .....   | .....               | .....   |          |
| .....                     | 6. Metal ...                          | .....                         | ..... | .....               | .....   | .....               | .....   |          |
| .....                     | 7. Building materials ...             | .....                         | ..... | .....               | .....   | .....               | .....   |          |
| 15                        | 8. Miscellaneous ...                  | 45                            | 16    | 61                  | 6,860   | 61                  | 6,860   |          |
| .....                     | 9. Fuel ...                           | .....                         | ..... | .....               | .....   | .....               | .....   |          |
| 14 rafts                  | 10. Timber ...                        | 210 No.                       | ..... | 210 No.             | 500     | 210 No.             | 500     |          |
| .....                     | 11. Bamboos ...                       | .....                         | ..... | .....               | .....   | .....               | .....   |          |
| 54 & 14 rafts             | 12. Total ...                         | { 213 & 210 No. }             | 54    | { 267 & 210 No. }   | 22,480  | { 267 & 210 No. }   | 22,480  |          |
| 265                       | 13. Total of same month last year ... | { 402 & 121 No. }             | 631   | { 1,033 & 121 No. } | 23,480  | { 1,033 & 121 No. } | 23,480  |          |

|   | Up.     | Down.  | Total.  |  | Rs. A. P. |
|---|---------|--------|---------|--|-----------|
| 14. Total number of boats plying cargo No.        | 44      | 10     | 54      | Total tollage of month—<br>24 + 25 + 26 ...          | 235 6 0   |
| 15. Total number of boats plying passenger No.    | 1       | 7      | 8       |  |           |
| 15½. Total number of empty boats No.              | 5       | 28     | 33      | Total tollage of same month last year ...            | 361 9 6   |
| 16. Total registered tonnage, cargo ...           | 414     | 82     | 496     | <i>Memorandum of Tollage.</i>                        |           |
| 17. Total registered tonnage, passenger ...       | 5       | 41     | 46      |  |           |
| 18. Ton-mileage ...                               | 6,810   | 2,612  | 9,422   |  | Rs. A. P. |
| 19. Estimated value of cargo Rs.                  | 17,320  | 4,660  | 21,980  | 1. Balance not recovered on the 1st of the month ... | 5 12 0    |
| 20. Number of passengers No.                      | 28      | 293    | 321     | 2. Tollage per month ...                             | 235 6 0   |
| 21. Rafts, bamboos C. ft.                         | .....   | .....  | .....   | 3. Total ...   | 241 2 0   |
| 22. Do., timbers „                                | 210     | .....  | 210     | 4. Amount credited in the accounts of the month ...  | .....     |
| 23. Estimated value of rafts Rs.                  | 560     | .....  | 500     |  |           |
| 24. Tollage on boats „                            | 137-9-6 | 67-7-0 | 205-0-6 | 5. Balance due at the end of the month ...           | 241 2 0   |
| 25. Compounded tollage on boats Rs.               | .....   | .....  | .....   |  |           |
| 26. Tollage on rafts „                            | 30-5-6  | .....  | 30-5-6  |  |           |
| 27. Total tollage on boats per ton-mile ...       | ...     | .....  | 4-2 pie |  |           |
| 28. Total tollage on rafts per 100 cubic feet ... | .....   | .....  | 14-4-7  |  |           |

## HIGH LEVEL CANAL, RANGE II.

LENGTH OF CANAL OPEN, 12½ MILES.

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |                   |                 |          | PRIVATE.         |          | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|-------------------|-----------------|----------|------------------|----------|----------|
|                           |                                   | Quantity—Tons.                |                   |                 | Value.   | Quantity.        | Value.   |          |
|                           |                                   | Up.                           | Down.             | Total.          | Rupees.  | Tons.            | Rupees.  |          |
| 15                        | 1. Grain ...                      | 49                            | 6                 | 55              | 2,572    | 55               | 2,572    |          |
| 6                         | 2. Cotton ...                     | .....                         | 6                 | 6               | 1,800    | 6                | 1,800    |          |
| 2                         | 3. Oilseeds ...                   | .....                         | 2                 | 2               | 240      | 2                | 240      |          |
| .....                     | 4. Salt ...                       | .....                         | .....             | .....           | .....    | .....            | .....    |          |
| 5                         | 5. Piece-goods ...                | .....                         | 11                | 11              | 3,110    | 11               | 3,110    |          |
| .....                     | 6. Metal ...                      | .....                         | .....             | .....           | .....    | .....            | .....    |          |
| 29                        | 7. Building materials ...         | .....                         | 216               | 216             | 189      | .....            | .....    |          |
| 5                         | 8. Miscellaneous ...              | .....                         | 8                 | 8               | 1,229    | 8                | 1,229    |          |
| 4                         | 9. Fuel ...                       | .....                         | 13                | 13              | 39       | 4                | 13       |          |
| 14 rafts                  | 10. Timber ...                    | .....                         | 673 No.           | 673 No.         | 2,019    | 673 No.          | 2,019    |          |
| 15 „                      | 11. Bamboos ...                   | .....                         | 3,500 „           | 3,500 „         | 140      | 3,500 „          | 140      |          |
| 66 & 29 rafts             | 12. Total ...                     | 49                            | { 262 & 4,173 No. | 311 & 4,173 No. | { 11,338 | { 86 & 4,173 No. | { 11,123 |          |
| 178                       | 13. Total of same month last year | 846                           | 454               | 1,300           | 22,119   | 764              | 21,906   |          |

|   | Up.    | Down.   | Total.  |  | Rs. A. P. |
|---|--------|---------|---------|--|-----------|
| 14. Total number of boats plying cargo No.        | 11     | 55      | 66      |  |           |
| 15. Total number of boats plying passenger No.    | .....  | 5       | 5       | Total tollage of month—<br>24 + 25 + 26 ...          | 183 2 9   |
| 15½. Total number of empty boats No.              | 66     | 9       | 75      | Total tollage of same month last year ...            | 201 10 6  |
| 16. Total registered tonnage of cargo-boats ...   | 99     | 523     | 622     |  |           |
| 16½. Total registered tonnage of empty boats ...  | 291    | 52      | 343     |  |           |
| 17. Total registered tonnage, passenger ...       | .....  | 27      | 27      | <i>Memorandum of Tollage.</i>                        |           |
| 18. Ton-milage ...                                | 5,517  | 5,470   | 8,987   |  |           |
| 19. Estimated value of cargo Rs                   | 1,848  | 7,331   | 9,179   |  |           |
| 20. Number of passengers No.                      | .....  | 120     | 120     | 1. Balance not recovered on the 1st of the month ... | .....     |
| 21. Rafts, bamboos „                              | .....  | 3,500   | 3,500   | 2. Tollage per month ...                             | 183 2 9   |
| 22. Do., bullahs „                                | .....  | 673     | 673     |  |           |
| 23. Estimated value of rafts Rs.                  | .....  | 2,159   | 2,159   | 3. Total ...   | 183 2 9   |
| 24. Tollage on boats „                            | 44-5-6 | 102-0-0 | 146-5-6 |  |           |
| 25. Compounded tollage on boats ... Rs.           | .....  | .....   | .....   | 4. Amount credited in the accounts of the month ...  | 146 4 3   |
| 26. Tollage on rafts „                            | .....  | 36-13-3 | 36-13-3 |  |           |
| 27. Total tollage on boats per ton-mile ...       | .....  | .....   | 3 1 pie |  |           |
| 28. Total tollage on rafts per 100 cubic feet ... | .....  | .....   | 0-14-2  | 5. Balance due at the end of the month ...           | 36 14 6   |

HIGH LEVEL CANAL, RANGE III.

LENGTH OF CANAL OPEN, 19 MILES.

| Number of boats or rafts. | DESCRIPTION.                               | TOTAL GOVERNMENT AND PRIVATE. |         |         | PRIVATE.   |        | REMARKS.  |
|---------------------------|--|-------------------------------|---------|---------|--|--------|-----------|
|                           |  | Quantity—Tons.                |         | Value.  | Quantity.  | Value. |           |
|                           |  | Up.                           | Down.   | Total.  | Rupees.  | Tons.  |           |
| .....                     | 1. Grain                                   | .....                         | .....   | .....   | .....  | .....  |           |
| .....                     | 2. Cotton                                  | .....                         | .....   | .....   | .....  | .....  |           |
| .....                     | 3. Oilseeds                                | .....                         | .....   | .....   | .....  | .....  |           |
| 1                         | 4. Salt                                    | 4                             | .....   | 4       | 348  | 4      |           |
| .....                     | 5. Piece-goods                             | .....                         | .....   | .....   | .....  | .....  |           |
| .....                     | 6. Metal                                   | .....                         | .....   | .....   | .....  | .....  |           |
| 3                         | 7. Building materials                      | .....                         | 19      | 19      | 68   | .....  |           |
| 3                         | 8. Miscellaneous                           | 2                             | 8       | 10      | 2,295  | 10     |           |
| .....                     | 9. Fuel                                    | .....                         | .....   | .....   | .....  | .....  |           |
| .....                     | 10. Timber                                 | .....                         | .....   | .....   | .....  | .....  |           |
| .....                     | 11. Bamboos                                | .....                         | .....   | .....   | .....  | .....  |           |
| 7                         | 12. Total                                  | 6                             | 27      | 33      | 2,711  | 14     | 2,643     |
| 93                        | 13. Total of same month last year          | 797                           | 349     | 1,146   | 10,210   | 243    | 6,210     |
|                           |  | Up.                           | Down.   | Total.  |  |        | Rs. A. P. |
| 14.                       | Total number of boats plying cargo No.     | 2                             | 5       | 7       | Total tollage of month—24 + 25 + 26              |        | 14 12 0   |
| 15.                       | Total number of boats plying passenger No. | .....                         | .....   | .....   | Total tollage of same month last year            |        | 183 8 0   |
| 15½.                      | Total number of empty boats No.            | 3                             | 3       | 6       |  |        |           |
| 16.                       | Total registered tonnage of cargo boats    | 13                            | 56      | 69      |  |        |           |
| 16½.                      | Total registered tonnage of empty boats    | 18                            | 13      | 31      | Memorandum of Tollage.                           |        |           |
| 17.                       | Total registered tonnage, passenger        | .....                         | .....   | .....   |  |        | Rs. A. P. |
| 18.                       | Ton-mileage                                | 260                           | 789     | 1,149   | 1. Balance not recovered on the 1st of the month |        | .....     |
| 19.                       | Estimated value of cargo Rs.               | 1,078                         | 1,633   | 2,711   | 2. Tollage per month                             |        | 14 12 0   |
| 20.                       | Number of passengers No.                   | .....                         | 120     | 120     | 3. Total   |        | 14 12 0   |
| 21.                       | Rafts, bamboos                             | .....                         | .....   | .....   | 4. Amount credited in the accounts of the month  |        | 14 12 0   |
| 22.                       | Do., bullahs                               | .....                         | .....   | .....   | 5. Balance due at the end of the month           |        | .....     |
| 23.                       | Estimated value of rafts Rs.               | .....                         | .....   | .....   |  |        |           |
| 24.                       | Tollage on boats                           | 3-15-0                        | 10-13-0 | 14-12-0 |  |        |           |
| 25.                       | Compounded tollage on boats Rs.            | .....                         | .....   | .....   |  |        |           |
| 26.                       | Tollage on rafts                           | .....                         | .....   | .....   |  |        |           |
| 27.                       | Total tollage on boats per ton-mile        | .....                         | .....   | 2½ pie  |  |        |           |
| 28.                       | Total tollage on rafts per 100 cubic feet  | .....                         | .....   | .....   |  |        |           |

## SOUTH-WESTERN CIRCLE.

## MIDNAPORE CANAL.

LENGTH OF CANAL OPEN, 53 MILES.

| Number of<br>boats<br>or rafts. | DESCRIPTION.                                       | TOTAL GOVERNMENT AND PRIVATE. |                          |                             |  | PRIVATE.                    |           | REMARKS.   |
|---------------------------------|--|-------------------------------|--------------------------|-----------------------------|--|-----------------------------|-----------|------------|
|                                 |  | Quantity—Tons.                |                          |                             | Value.   | Quantity.                   | Value.    |            |
|                                 |  | Up.                           | Down.                    | Total.                      | Rupces.  | Tons.                       | Rupces.   |            |
| 951                             | 1. Grain ...                                       | 6,068                         | 1,108                    | 7,176                       | 3,09,517   | 7,176                       | 3,09,517  |            |
| 1                               | 2. Cotton ...                                      | 1                             | .....                    | 1                           | 1,280  | 1                           | 1,280     |            |
| 70                              | 3. Oilseeds ...                                    | 375                           | 237                      | 612                         | 58,833   | 612                         | 58,833    |            |
| 207                             | 4. Salt ...  | .....                         | 2,773                    | 2,773                       | 2,06,577   | 2,773                       | 2,06,577  |            |
| 9                               | 5. Piece-goods ...                                 | 6                             | 12                       | 18                          | 57,210   | 18                          | 57,210    |            |
| 36                              | 6. Metal ...                                       | 129                           | 169                      | 298                         | 2,37,180   | 298                         | 2,37,180  |            |
| 55                              | 7. Building materials ...                          | 411                           | 33                       | 444                         | 1,237  | 444                         | 1,237     |            |
| 530                             | 8. Miscellaneous ...                               | 1,045                         | 1,284                    | 2,329                       | 5,76,654   | 2,329                       | 5,76,654  |            |
| 52                              | 9. Fuel ...  | 417                           | 237                      | 654                         | 10,917   | 654                         | 10,917    |            |
| 24 rafts                        | 10. Timber ...                                     | 1,302 c. ft.                  | 155 c. ft.               | 1,457 c. ft.                | 1,425  | 1,457 c. ft.                | 1,425     |            |
| 2 "                             | 11. Bamboos ...                                    | 150 "                         | .....                    | 150 "                       | 10   | 150 "                       | 10        |            |
| 1,911<br>&<br>26 rafts          | 12. Total ...                                      | 8,452<br>&<br>1,452 c. ft.    | 5,853<br>&<br>155 c. ft. | 14,305<br>&<br>1,607 c. ft. | 14,60,840  | 14,305<br>&<br>1,607 c. ft. | 14,60,840 |            |
| 1,694<br>&<br>17 rafts          | 13. Total of same<br>month last year.              | 7,207<br>&<br>4,175 c. ft.    | 3,906<br>&<br>12 c. ft.  | 11,113<br>&<br>4,187 c. ft. | 10,06,593  | 11,113<br>&<br>4,187 c. ft. | 10,06,593 |            |
|                                 |  | Up.                           | Down.                    | Total.                      |  |                             |           | Rs. A. P.  |
| 14.                             | Total number of boats ply-<br>ing cargo No.        | 1,249                         | 662                      | 1,911                       | Total tollage of month—<br>24 + 25 + 26 ...                |                             |           | 12,639 8 6 |
| 15.                             | Total number of boats ply-<br>ing passenger No.    | 501                           | 597                      | 1,098                       | Total tollage of same<br>month last year ...               |                             |           | 10,396 5 0 |
| 15½.                            | Total number of empty boats<br>No.                 | 552                           | 818                      | 1,370                       |  |                             |           |            |
| 16.                             | Total registered tonnage,<br>cargo ...             | 18,902                        | 12,916                   | 31,818                      | Memorandum of Tollage.                                     |                             |           |            |
| 17.                             | Total registered tonnage,<br>passenger ...         | 2,495                         | 2,339                    | 4,834                       |  |                             |           |            |
| 17½.                            | Total registered tonnage,<br>empty ...             | 2,078                         | 3,529                    | 5,607                       |  |                             |           | Rs. A. P.  |
| 18.                             | Ton-mileage ...                                    | 4,82,944                      | 3,45,080                 | 8,28,024                    | 1. Balance not recovered<br>on the 1st of the<br>month ... |                             |           | 3,247 14 8 |
| 19.                             | Estimated value of cargo Rs.                       | 6,99,150                      | 7,60,255                 | 14,59,405                   |  |                             |           |            |
| 20.                             | Number of passengers No.                           | 6,992                         | 11,385                   | 18,377                      |  |                             |           |            |
| 21.                             | Rafts, bamboos c. ft.                              | 150                           | .....                    | 150                         | 2. Tollage per month ...                                   |                             |           | 12,639 8 6 |
| 22.                             | Do., bullahs "                                     | 1,302                         | 155                      | 1,457                       |  |                             |           |            |
| 23.                             | Estimated value of rafts. Rs.                      | 1,125                         | 310                      | 1,435                       | 3. Total ...   |                             |           | 15,887 7 2 |
| 24.                             | Tollage on boats "                                 | 7,264-5-3                     | 5,344-9-0                | 12,608-14-3                 |  |                             |           |            |
| 25.                             | Compounded tollage on<br>boats ... Rs.             | .....                         | .....                    | .....                       |  |                             |           |            |
| 26.                             | Tollage on rafts "                                 | 29-8-9                        | 1-1-6                    | 30-10-3                     | 4. Amount paid into<br>treasury during the<br>month ...    |                             |           | 13,255 1 9 |
| 27.                             | Total tollage on boats per<br>ton-mile ...         | .....                         | .....                    | 2-9 pie                     |  |                             |           |            |
| 28.                             | Total tollage on rafts per<br>100 cubic feet . Rs. | .....                         | .....                    | 1-15-0                      | 5. Balance due at the end<br>of the month ...              |                             |           | 2,632 5 5  |

## HIDGELLER TIBAL CANAL.

LENGTH OF CANAL OPEN, 29 MILES.

| Number of<br>boats<br>or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |                       |                       |  | PRIVATE.                |            | REMARKS.  |
|---------------------------------|---|-------------------------------|-----------------------|-----------------------|--|-------------------------|------------|-----------|
|                                 |   | Quantity—Tons.                |                       |                       | Value.   | Quantity.               | Value.     |           |
|                                 |   | Up.                           | Down.                 | Total.                | Rupees.  | Tons.                   | Rupees.    |           |
| 412                             | 1. Grain ...                                  | 3,207                         | .....                 | 3,207                 | 1,04,150   | 3,207                   | 1,04,150   |           |
| .....                           | 2. Cotton ...                                 | .....                         | .....                 | .....                 | .....  | .....                   | .....      |           |
| .....                           | 3. Oilseeds ...                               | .....                         | .....                 | .....                 | .....  | .....                   | .....      |           |
| 61                              | 4. Salt ...                                   | .....                         | 602                   | 602                   | 42,125   | 602                     | 42,125     |           |
| 14                              | 5. Piece-goods ...                            | .....                         | 41                    | 41                    | 29,000   | 41                      | 29,000     |           |
| 3                               | 6. Metal ...                                  | .....                         | 12                    | 12                    | 2,000  | 4                       | 1,000      |           |
| 9                               | 7. Building materials ...                     | 9                             | 14                    | 23                    | 248  | 23                      | 248        |           |
| 876                             | 8. Miscellaneous ...                          | 795                           | 774                   | 1,569                 | 1,37,422   | 1,569                   | 1,37,422   |           |
| 26                              | 9. Fuel ...                                   | 29                            | 145                   | 174                   | 1,237  | 174                     | 1,237      |           |
| 1 raft                          | 10. Timber ...                                | .....                         | 7 c. ft.              | 7 c. ft.              | 30   | 7 c. ft.                | 30         |           |
| 1 „                             | 11. Bamboos ...                               | .....                         | 625 „                 | 625 „                 | 100  | 625 „                   | 100        |           |
| 1,401 &<br>2 rafts              | 12. Total ...                                 | { 4,040<br>.....              | 1,588 &<br>632 c. ft. | 5,628 &<br>632 c. ft. | { 3,16,312   | 5,620 &<br>632 c. ft.   | { 3,15,312 |           |
| 1,527 &<br>2 rafts              | 13. Total of same<br>month last year.         | 4,490 &<br>36 c. ft.          | 1,346 &<br>175 c. ft. | 5,836 &<br>211 c. ft. | { 3,33,446   | { 5,833 &<br>211 c. ft. | { 3,32,941 |           |
|                                 |   | Up.                           | Down.                 | Total.                |  |                         |            | Rs. A. P. |
| 14.                             | Total number of boats plying cargo No.        | 623                           | 778                   | 1,401                 | Total tollage of month—<br>24 + 25 + 26 ...          |                         |            | 5,418 12  |
| 15.                             | Total number of boats plying passenger No.    | 68                            | 60                    | 128                   | Total tollage of same<br>month last year             |                         |            | 6,075 5   |
| 16.                             | Total registered tonnage, cargo ...           | 8,895                         | 6,523                 | 15,424                | Memorandum of Tollage.                               |                         |            |           |
| 17.                             | Total registered tonnage, passenger ...       | 308                           | 300                   | 608                   |  |                         |            |           |
| 18.                             | Ton-mileage ...                               | 174,450                       | 134,808               | 309,238               |  |                         |            |           |
| 19.                             | Estimated value of cargo Rs.                  | 1,19,930                      | 1,96,252              | 3,16,182              | 1. Balance not recovered on the 1st of the month ... |                         |            | 853 11    |
| 20.                             | Number of passengers No.                      | 355                           | 506                   | 861                   | 2. Tollage per month ...                             |                         |            | 5,418 12  |
| 21.                             | Rafts, bamboos c. ft.                         | .....                         | 625                   | 625                   | 3. Total ...   |                         |            | 6,272 8   |
| 22.                             | Do., bullahs „                                | .....                         | 7                     | 7                     | 4. Amount paid into treasury during the month ...    |                         |            | 5,173 7 9 |
| 23.                             | Estimated value of rafts Rs.                  | .....                         | 130                   | 130                   | 5. Balance due at the end of the month ...           |                         |            | 1,099 0 6 |
| 24.                             | Tollage on boats „                            | 1,083-15-9                    | 4,175-14-3            | 5,259-14-0            |  |                         |            |           |
| 25.                             | Compounded tollage on boats ... Rs.           | 80-10-6                       | 76-9-3                | 157-3-9               |  |                         |            |           |
| 26.                             | Tollage on rafts „                            | .....                         | 1-11-0                | 1-11-0                |  |                         |            |           |
| 27.                             | Total tollage on boats per ton-mile ...       | .....                         | .....                 | 0-0-3                 |  |                         |            |           |
| 28.                             | Total tollage on rafts per 100 cubic feet ... | .....                         | .....                 | 0-4-8                 |  |                         |            |           |



**SONE CIRCLE.**  
**PATNA CANAL SYSTEM.**  
**LENGTH OF CANAL OPEN, 86½ MILES.**

| Number of<br>boats<br>or rafts. | DESCRIPTION.                                     | TOTAL GOVERNMENT AND PRIVATE. |           |           |  | PRIVATE.  |            | REMARKS.  |
|---------------------------------|--|-------------------------------|-----------|-----------|--|-----------|------------|-----------|
|                                 |  | Quantity—Tons.                |           |           | Value.   | Quantity. | Value.     |           |
|                                 |  | Up.                           | Down.     | Total.    | Rupces.  | Tons.     | Rupces.    |           |
| 28                              | 1. Grain ...                                     | 1                             | 314       | 315       | 17,949   | 315       | 17,919     |           |
| .....                           | 2. Cotton ...                                    | .....                         | .....     | .....     | .....  | .....     | .....      |           |
| 25                              | 3. Oilseeds ...                                  | .....                         | 240       | 240       | 20,905   | 240       | 20,905     |           |
| 10                              | 4. Salt ...                                      | 124                           | .....     | 124       | 6,785  | 124       | 6,785      |           |
| 56                              | 5. Piece-goods ...                               | 308                           | 98        | 406       | 45,966   | 400       | 44,526     |           |
| .....                           | 6. Metal ...                                     | 4                             | .....     | 4         | 3,040  | 4         | 3,040      |           |
| 6                               | 7. Building materials                            | 5                             | 18        | 23        | 384  | 2         | 79         |           |
| 112                             | 8. Miscellaneous ...                             | 372                           | 1,092     | 1,464     | 1,35,429   | 1,456     | 1,35,414   |           |
| 9                               | 9. Fuel { boats                                  | 58                            | .....     | 58        | 903  | 27        | 476        |           |
|                                 | { rafts  | .....                         | 4         | 4         | 9  | 4         | 9          |           |
| 16                              | 10. Timber { boats                               | 269                           | .....     | 269       | 7,210  | .....     | .....      |           |
|                                 | { rafts  | .....                         | 70        | 70        | 270  | 70        | 270        |           |
| 6                               | 11. Bamboos { boats                              | 50                            | 12        | 62        | 958  | 62        | 958        |           |
|                                 | { rafts  | 16                            | 229       | 245       | 3,397  | 245       | 3,397      |           |
| 268                             | 12. Total ...                                    | 1,207                         | 2,077     | 3,284     | 2,43,205   | 2,949     | 2,33,808   |           |
| 80 &<br>32 rafts                | 13. Total of same<br>month last year.            | 90½                           | 639½      | 730       | 38,026   | 709       | 36,636     |           |
|                                 |  | Up.                           | Down.     | Total.    |  |           |            | Rs. A. P. |
| 14.                             | Total number of boats ply-<br>ing cargo No.      | 117                           | 151       | 268       | Total tollage of month—<br>24 + 25 + 26 ...                | ...       | 3,685 11 2 |           |
| 15.                             | Total number of boats ply-<br>ing passenger No.  | 10                            | 13        | 23        |  |           |            |           |
| 15½.                            | Total number of empty<br>boats No.               | 167                           | 18        | 185       | Total tollage of same<br>month last year ...               | ...       | 586 11 9   |           |
| 16.                             | Total registered tonnage,<br>cargo ...           | 1,689                         | 2,957     | 4,646     |  |           |            |           |
| 17.                             | Total registered tonnage,<br>passenger ...       | 163                           | 175       | 338       |  |           |            |           |
| 17½.                            | Total registered tonnage,<br>empty ...           | 894                           | 64        | 958       | <i>Memorandum of Tollage.</i>                              |           |            |           |
| 18.                             | Ton-mileage ...                                  | 1,85,212                      | 2,39,443  | 4,24,655  |  |           |            | Rs. A. P. |
| 19.                             | Estimated value of cargo Rs.                     | 84,223                        | 1,55,306  | 2,39,529  | 1. Balance not recovered<br>on the 1st of the<br>month ... | ...       | 533 13 6   |           |
| 20.                             | Number of passengers No.                         | 505                           | 567       | 1,072     | 2. Tollage per month ...                                   | ...       | 3,685 11 2 |           |
| 21.                             | Rafts, bamboos c. ft.                            | 2,300                         | 34,395    | 36,695    |  |           |            |           |
| 22.                             | Do., bullahs "                                   | .....                         | 5,606     | 5,606     |  |           |            |           |
| 23.                             | Estimated value of rafts Rs.                     | 437                           | 3,239     | 3,676     |  |           |            |           |
| 24.                             | Tollage on boats "                               | 1,232-15-9                    | 2,172-5-3 | 3,405-5-0 | 3. Total ...   | ...       | 4,219 8 3  |           |
| 25.                             | Compounded tollage on<br>boats Rs.               | 74-7-10                       | 74-7-10   | 148-15-8  |  |           |            |           |
| 26.                             | Tollage on rafts "                               | 0-11-6                        | 130-11-0  | 131-6-6   | 4. Amount credited in<br>the accounts of the<br>month ...  | ...       | 3,348 0 11 |           |
| 27.                             | Total tollage on boats per<br>ton-mile ...       | .....                         | .....     | 1-6 pies. |  |           |            |           |
| 28.                             | Total tollage on rafts per<br>100 cubic feet ... | .....                         | .....     | 0-4-11    | 5. Balance due at the end<br>of the month ...              | ...       | 871 7 9    |           |

ABRAH CANAL SYSTEM.

LENGTH OF CANAL OPEN, 65 MILES.

| Number of boats or rafts.                         | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |          |           |  | PRIVATE.  |            | REMARKS. |
|---|---------------------------------------|-------------------------------|----------|-----------|--|-----------|------------|----------|
|   |                                       | Quantity—Tons.                |          |           | Value.   | Quantity. | Value.     |          |
|   |                                       | Up.                           | Down.    | Total.    | Rupces.  | Tons.     | Rupces.    |          |
| 33  | 1. Grain ...                          | 121                           | 419      | 540       | 36,118   | 540       | 36,118     |          |
| .....   | 2. Cotton ...                         | 6                             | .....    | 6         | 11,600   | 6         | 11,600     |          |
| 5   | 3. Oilseeds ...                       | .....                         | 38       | 38        | 3,498  | 38        | 3,498      |          |
| 28  | 4. Salt ...                           | 343                           | .....    | 343       | 30,489   | 343       | 30,489     |          |
| .....   | 5. Piece-goods ...                    | 18                            | .....    | 18        | 47,480   | 18        | 47,480     |          |
| .....   | 6. Metal ...                          | .....                         | .....    | .....     | .....  | .....     | .....      |          |
| .....   | 7. Building materials ...             | .....                         | .....    | .....     | .....  | .....     | .....      |          |
| 33  | 8. Miscellaneous ...                  | 79                            | 149      | 228       | 36,476   | 187       | 36,301     |          |
| 2   | 9. Fuel ...                           | .....                         | 22       | 22        | 325  | 22        | 325        |          |
| Rafts {   | 10. Timber ...                        | .....                         | 23       | 23        | 905  | 23        | 985        |          |
|   | 11. Bamboos ...                       | .....                         | 105      | 105       | 1,854  | 105       | 1,854      |          |
| 101   | 12. Total ...                         | 567                           | 756      | 1,323     | 1,68,825   | 1,282     | 1,68,650   |          |
| 230   | 13. Total of same month last year ... | 791½                          | 2,877½   | 3,669     | 1,80,895   | 3,633     | 1,74,803   |          |
|   |                                       | Up.                           | Down.    | Total.    |  |           | Rs. A. P.  |          |
| 14. Total number of boats plying cargo No.        |                                       | 51                            | 50       | 101       | Total tollage of month—<br>24 + 25 + 26 ...          |           | 2,144 0 5  |          |
| 15. Total number of boats plying passenger No.    |                                       | 8                             | 9        | 17        |  |           |            |          |
| 15½. Total number of empty boats No.              |                                       | 113                           | 17       | 130       | Total tollage of same month last year ...            |           | 1,719 8 4  |          |
| 6. Total registered tonnage, cargo ...            |                                       | 943                           | 923      | 1,866     | Memorandum of Tollage.                               |           |            |          |
| 7. Total registered tonnage, passenger ...        |                                       | 407                           | 332      | 739       |  |           |            |          |
| 7½. Total registered tonnage, empty ...           |                                       | 315                           | 69       | 384       |  |           |            |          |
| 8. Ton-mileage ...                                |                                       | 63,645                        | 51,531   | 1,15,176  | 1. Balance not recovered on the 1st of the month ... |           | 100 8 6    |          |
| 9. Estimated value of cargo Rs.                   |                                       | 1,3,204                       | 52,782   | 1,65,986  |  |           |            |          |
| 10. Number of passengers No.                      |                                       | 1,218                         | 1,172    | 2,390     | 2. Tollage per month ...                             |           | 2,144 0 5  |          |
| 11. Rafts, bamboos c. ft.                         |                                       | .....                         | 15,735   | 15,735    |  |           |            |          |
| 12. Do., bullahs "                                |                                       | .....                         | 1,761    | 1,761     |  |           |            |          |
| 13. Estimated value of rafts Rs.                  |                                       | .....                         | 2,839    | 2,839     | 3. Total ...   |           | 2,244 8 11 |          |
| 14. Tollage on boats "                            |                                       | 665-3-3                       | 797-0-6  | 1,462-3-9 |  |           |            |          |
| 15. Compounded tollage on boats Rs.               |                                       | 290-0-0                       | 282-1-8  | 572-1-8   | 4. Amount credited in the accounts of the month ...  |           | 2,115 6 2  |          |
| 16. Tollage on rafts "                            |                                       | .....                         | 109-11-0 | 109-11-0  |  |           |            |          |
| 17. Total tollage on boats per ton-mile ...       |                                       | .....                         | .....    | 3-3 pie   |  |           |            |          |
| 18. Total tollage on rafts per 100 cubic feet ... |                                       | .....                         | .....    | 0-10-0    | 5. Balance due at the end of the month ...           |           | 129 2 9    |          |

## BUXAR CANAL SYSTEM.

LENGTH OF CANAL OPEN, 67 MILES.

| Number of boats or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |          |          |  | PRIVATE.  |           | REMARKS. |
|---------------------------|---|-------------------------------|----------|----------|--|-----------|-----------|----------|
|                           |   | Quantity—Tons.                |          |          | Value.   | Quantity. | Value.    |          |
|                           |   | Up.                           | Down.    | Total.   | Rupees.  | Tons.     | Rupees.   |          |
| 105                       | 1. Grain ...                                  | 150                           | 1,383    | 1,533    | 1,41,333   | 1,533     | 1,41,333  |          |
| .....                     | 2. Cotton ...                                 | .....                         | .....    | .....    | .....  | .....     | .....     |          |
| 7                         | 3. Oilseeds ...                               | .....                         | 111      | 111      | 14,231   | 111       | 14,231    |          |
| .....                     | 4. Salt ...                                   | 11                            | .....    | 11       | 1,610  | 11        | 1,610     |          |
| .....                     | 5. Piece-goods ...                            | 4                             | .....    | 4        | 5,320  | 4         | 5,320     |          |
| .....                     | 6. Metal ...                                  | .....                         | .....    | .....    | .....  | .....     | .....     |          |
| 1                         | 7. Building materials ...                     | .....                         | 5        | 5        | 200  | .....     | .....     |          |
| 6                         | 8. Miscellaneous ...                          | 47                            | 38       | 85       | 18,756   | 85        | 18,756    |          |
| .....                     | 9. Fuel ...                                   | .....                         | .....    | .....    | .....  | .....     | .....     |          |
| Rafts {                   | 10. Timber ...                                | .....                         | 212      | 212      | 3,060  | 212       | 3,060     |          |
|                           | 11. Bamboos ...                               | .....                         | 83       | 83       | 1,498  | 83        | 1,498     |          |
| 119                       | 12. Total ...                                 | 212                           | 1,832    | 2,044    | 1,86,008   | 2,039     | 1,85,808  |          |
| 167                       | 13. Total of same month last year ...         | 394½                          | 1,725½   | 2,120    | 1,75,583   | 2,066     | 1,74,571  |          |
|                           |   | Up.                           | Down.    | Total.   |  |           |           |          |
| 14.                       | Total number of boats plying cargo No.        | 15                            | 104      | 119      |  |           | Rs. A. P. |          |
| 15.                       | Total number of boats plying passenger No.    | 8                             | 8        | 16       | Total tollage of month—24 + 25 + 26 ...              |           | 906 13 0  |          |
| 15½.                      | Total number of empty boats No.               | 65                            | 10       | 75       |  |           |           |          |
| 16.                       | Total registered tonnage, cargo ...           | 265                           | 2,333    | 2,598    | Total tollage of same month last year ...            |           | 816 3 4   |          |
| 17.                       | Total registered tonnage, passenger ...       | 216                           | 216      | 432      |  |           |           |          |
| 17½.                      | Total registered tonnage, empty ...           | 236                           | 32       | 268      |  |           |           |          |
| 18.                       | Ton-mileage ...                               | 14,026                        | 57,124   | 71,150   | Memorandum of Tollage.                               |           |           |          |
| 19.                       | Estimated value of cargo Rs.                  | 29,383                        | 1,52,067 | 1,81,450 |  |           | Rs. A. P. |          |
| 20.                       | Number of passengers No.                      | 607½                          | 487½     | 1,095    | 1. Balance not recovered on the 1st of the month ... |           | 72 9 3    |          |
| 21.                       | Rafts, bamboos c. ft.                         | .....                         | 12,490   | 12,490   |  |           |           |          |
| 22.                       | Do., bullahs ..                               | .....                         | 15,882   | 15,882   | 2. Tollage per month ...                             |           | 906 13 0  |          |
| 23.                       | Estimated value of rafts Rs.                  | .....                         | 4,558    | 4,558    |  |           |           |          |
| 24.                       | Tollage on boats ..                           | 141-4-0                       | 509-8-9  | 650-12-9 | 3. Total ...   |           | 979 6 3   |          |
| 25.                       | Compounded tollage on boats Rs.               | 68-0-7                        | 116-0-8  | 184-1-3  |  |           |           |          |
| 26.                       | Tollage on rafts ..                           | .....                         | 71-15-0  | 71-15-0  | 4. Amount credited in the accounts of the month ...  |           | 843 12 6  |          |
| 27.                       | Total tollage on boats per ton-mile ...       | .....                         | .....    | 2-25 pie |  |           |           |          |
| 28.                       | Total tollage on rafts per 100 cubic feet ... | .....                         | .....    | 0-4-0    | 5. Balance due at the end of the month ...           |           | 135 9 9   |          |

**ABSTRACT FOR THE MONTH OF JUNE 1887, AS COMPARED WITH THE CORRESPONDING  
MONTH OF THE PREVIOUS YEAR.**

| CANAL.                       | TRAFFIC, 1887-88. |    |    |                      | TRAFFIC, 1886-87. |             |           |                      | REMARKS. |
|------------------------------|-------------------|----|----|----------------------|-------------------|-------------|-----------|----------------------|----------|
|                              | During the month. |    |    | To end of the month. | During the month. |             |           | To end of the month. |          |
| <i>Orissa Circle.</i>        | Rs.               | A. | P. | Rs. A. P.            | Rs. A. P.         | Rs. A. P.   | Rs. A. P. |                      |          |
| Taldunda Canal System ...    | 265               | 3  | 9  | 820 15 0             | 168 0 0           | 1,049 7 7   |           |                      |          |
| Kendrapara Canal System      | 941               | 6  | 0  | 7,063 7 9            | 2,895 12 6        | 9,223 10 0  |           |                      |          |
| High Level, Range I ...      | 235               | 6  | 0  | 1,128 2 0            | 361 9 6           | 1,341 11 3  |           |                      |          |
| Ditto, " II ...              | 183               | 2  | 9  | 645 8 9              | 201 10 6          | 859 7 6     |           |                      |          |
| Ditto, " III ...             | 14                | 12 | 0  | 143 2 3              | 183 8 0           | 525 3 9     |           |                      |          |
| Total Orissa Circle ...      | 1,639             | 14 | 6  | 9,801 3 9            | 3,810 8 6         | 12,999 8 1  |           |                      |          |
| <i>South-Western Circle.</i> |                   |    |    |                      |                   |             |           |                      |          |
| Midnapore Canal ...          | 12,639            | 8  | 6  | 28,022 12 9          | 10,396 5 0        | 30,139 14 9 |           |                      |          |
| Hidgellée Tidal Canal ...    | 5,418             | 12 | 9  | 16,368 2 0           | 6,075 5 9         | 20,551 14 9 |           |                      |          |
| Total South-Western Circle   | 18,058            | 5  | 3  | 44,390 14 9          | 16,471 10 9       | 50,691 13 6 |           |                      |          |
| <i>Sone Circle.</i>          |                   |    |    |                      |                   |             |           |                      |          |
| Patna Canal System ...       | 3,685             | 11 | 2  | 8,006 15 6           | 586 11 9          | 4,130 9 6   |           |                      |          |
| Arrah ditto ...              | 2,144             | 0  | 5  | 4,367 14 10          | 1,719 8 4         | 4,712 14 7  |           |                      |          |
| Buxar ditto ...              | 906               | 13 | 0  | 2,372 10 3           | 816 3 4           | 2,292 4 1   |           |                      |          |
| Total Sone Circle ...        | 6,736             | 8  | 7  | 14,747 8 7           | 3,122 7 5         | 11,135 12 2 |           |                      |          |
| GRAND TOTAL ...              | 26,434            | 12 | 4  | 68,939 11 1          | 23,404 10 8       | 74,827 1 9  |           |                      |          |

**GOVERNMENT TRANSPORT SERVICE.**

| CANAL.                  | TRAFFIC, 1887-88. |        |                 |                      |        |                 | TRAFFIC, 1886-87. |        |                 |                      |        |                 |
|-------------------------|-------------------|--------|-----------------|----------------------|--------|-----------------|-------------------|--------|-----------------|----------------------|--------|-----------------|
|                         | During the month. |        |                 | To end of the month. |        |                 | During the month. |        |                 | To end of the month. |        |                 |
|                         | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. |
| <i>Orissa Circle.</i>   | No.               | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A. P.       | No.               | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A. P.       |
| High Level ...          | 1                 | 11     | 1 13 0          | 666                  | 1,585  | 1,055 11 8      | 952               | 1,506  | 988 5 5         | 2,599                | 8,056  | 3,260 5 6       |
| Total Orissa Circle ... | 1                 | 11     | 1 13 0          | 666                  | 1,585  | 1,055 11 8      | 952               | 1,506  | 988 5 5         | 2,599                | 8,056  | 3,260 5 6       |

**TOTAL NAVIGATION RECEIPTS.**

| CANAL.                    | EARNINGS, 1887-88. |    |    |                      | EARNINGS, 1886-87. |             |           |                      | REMARKS. |
|---------------------------|--------------------|----|----|----------------------|--------------------|-------------|-----------|----------------------|----------|
|                           | During the month.  |    |    | To end of the month. | During the month.  |             |           | To end of the month. |          |
|                           | Rs.                | A. | P. | Rs. A. P.            | Rs. A. P.          | Rs. A. P.   | Rs. A. P. |                      |          |
| Orissa Canals ...         | 1,641              | 11 | 6  | 10,856 15 5          | 4,798 13 11        | 16,259 13 7 |           |                      |          |
| Midnapore Canal ...       | 12,639             | 8  | 6  | 28,022 12 9          | 10,396 5 0         | 30,139 14 9 |           |                      |          |
| Hidgellée Tidal Canal ... | 5,418              | 12 | 9  | 16,368 2 0           | 6,075 5 9          | 20,551 14 9 |           |                      |          |
| Sone Canals ...           | 6,736              | 8  | 7  | 14,747 8 7           | 3,122 7 5          | 11,135 12 2 |           |                      |          |
| Total ...                 | 26,436             | 9  | 4  | 69,995 6 9           | 24,393 0 1         | 78,087 7 3  |           |                      |          |

A. D. McARTHUR, Major, R.E.,  
Under-Secy. to the Govt. of Bengal.

CALCUTTA,  
The 23rd August 1887.

CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 20th August 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>20TH AUGUST 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>21ST AUGUST 1886. |                     |          |
|--------------------|--|---------------------|----------|--|---------------------|----------|
|                    | Number of<br>boats.                            | Weight of<br>cargo. | Tollage. | Number of<br>boats.                            | Weight of<br>cargo. | Tollage. |
|                    | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... | 636  | 1,16,850            | 2,011    | 354  | 72,596              | 1,272    |
| Jute ...           | 53   | 26,350              | 475      | 22   | 11,224              | 195      |
| Firewood ...       | 144  | 59,190              | 904      | 160  | 1,47,125            | 1,416    |
| Other articles ... | 824  | 1,78,555            | 2,907    | 809  | 1,92,467            | 2,969    |
| Total ...          | 1,657  | 3,80,945            | 6,297    | 1,345  | 4,23,412            | 5,852    |

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 13th August 1887, on 1,519 miles open.

|   | COACHING TRAFFIC.     |                        | MERCHANDISE AND MINERAL TRAFFIC. |                        | Other earnings (estimated). | Total earnings.        | TRAFFIC TRAIN-MILES RUN. |              |          |
|---|-----------------------|------------------------|----------------------------------|------------------------|-----------------------------|------------------------|--------------------------|--------------|----------|
|   | Number of passengers. | Receipts.              | Weight carried.                  | Receipts.              |                             |                        | Coaching.                | Merchandise. | Total.   |
| Total traffic for the week ...                              | 218,651               | Rs. A. P. 2,10,061 1 0 | MDS. S. 18,44,385 0              | Rs. A. P. 5,80,973 4 0 | Rs. A. P. 10,847 0 0        | Rs. A. P. 6,08,481 5 0 | 61,452                   | 73,807½      | 138,119½ |
| Or per mile of railway ...                                  | .....                 | 138 10 11              | .....                            | 250 12 11              | 11 1 5                      | 400 9 3                | .....                    | .....        | .....    |
| For previous 5 weeks of half-year ...                       | 1,286,259             | 12,89,081 11 0         | 1,14,37,168 16                   | 24,56,086 1 0          | 1,00,054 2 9                | 38,55,021 15 3         | 545,814½                 | 455,590½     | 801,403½ |
| Total for 6 weeks ...                                       | 1,500,110             | 15,00,562 12 0         | 1,32,81,543 16                   | 28,37,000 5 6          | 1,25,901 2 0                | 44,63,503 4 3          | 410,268½                 | 529,257      | 930,523½ |
| COMPARISON.   |                       |                        |                                  |                        |                             |                        |                          |              |          |
| Total for corresponding week of previous year ...           | 220,563½              | 2,27,398 5 11          | 22,23,635 0                      | 5,39,050 2 6           | 17,570 1 3                  | 7,84,618 9 8           | 60,736                   | 89,146       | 155,882  |
| Per mile of railway corresponding week of previous year ... | .....                 | 150 1 7                | .....                            | 356 3 3                | 11 9 7                      | 517 1½ 5               | .....                    | .....        | .....    |
| Total to corresponding date of previous year ...            | 1,477,870             | 14,44,073 3 1          | 1,41,21,181 10                   | 32,65,251 11 0         | 1,14,119 15 4               | 48,23,447 13 5         | 427,431                  | 600,700      | 1,028 31 |

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |              |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |              |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 13TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|--------------|------------------|--|--------------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts.    | Per mile worked. | Mean mileage worked.                       | Receipts.    | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 1,515                                      | Rs. 7,84,019 | Rs. 518          | 1,519                                      | Rs. 6,08,481 | 401              | 1,515   | Rs. 1,76,07,031 | 11,622           | 1,519   | Rs. 1,69,38,234 | 11,151           | .....                   | 6,08,507                |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 13th August 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |                     | MERCHANDISE AND MINERAL TRAFFIC. |                     | Other earnings (estimated). | Total earnings.      | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|---------------------|----------------------------------|---------------------|-----------------------------|----------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.           | Weight carried.                  | Receipts.           |                             |                      | Coaching.                | Merchandise. | Total. |
| Total traffic for the week ...                              | 8,846                 | Rs. A. P. 4,507 8 0 | MDS. S. 31,049 10                | Rs. A. P. 2,074 6 0 | Rs. A. P. 39 13 0           | Rs. A. P. 6,592 11 0 | 1,615                    | 770          | 2,384  |
| Or per mile of railway ...                                  | 155                   | 76 14 1             | 543 0                            | 36 4 3              | 0 8 7                       | 115 10 11            | .....                    | .....        | .....  |
| For previous 5 weeks of half-year ...                       | 58,082                | 28,238 12 0         | 2,15,295 10                      | 13,590 7 0          | 147 3 0                     | 41,946 6 0           | 8,589½                   | 4,449½       | 12,999 |
| Total for 6 weeks ...                                       | 67,528                | 32,636 4 0          | 2,46,344 20                      | 15,664 13 0         | 178 0 0                     | 48,419 1 0           | 10,164½                  | 5,228½       | 15,393 |
| COMPARISON.   |                       |                     |                                  |                     |                             |                      |                          |              |        |
| Total for corresponding week of previous year ...           | 10,968½               | 5,449 12 7          | 31,912 0                         | 2,236 11 0          | 23 0 6                      | 7,709 8 1            | 1,777                    | 617          | 2,394  |
| Per mile of railway corresponding week of previous year ... | 192                   | 95 4 5              | 558 0                            | 39 1 8              | 0 6 5                       | 131 12 6             | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 69,005                | 35,308 4 7          | 2,54,372 10                      | 17,352 14 0         | 218 13 0                    | 52,790 15 7          | 10,421                   | 5,721        | 16,145 |

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 13TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 57½  | Rs. 7,710 | Rs. 135          | 57½  | Rs. 6,503 | 114              | 57½   | Rs. 1,70,488    | 3,158            | 57½   | Rs. 1,67,103    | 2,923            | .....                   | 12,396                  |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

*Approximate Return of Traffic for week ended 13th August 1887, on 12 miles open.*

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,562                 | 433 3 0    | 9,055 30                         | 206 15 0  | 9 8 0                       | 649 10 0        | 372½                     | 121          | 493½   |
| Or per mile of railway ...                                  | .....                 | 86 1 7     | .....                            | 17 3 11   | 0 12 8                      | 54 3 3          | .....                    | .....        | .....  |
| For previous 5 weeks of half-year                           | 16,992                | 2,798      | 47,770 0                         | 1,200 4 0 | 46 5 0                      | 4,104 1 0       | 1,904½                   | 704          | 2,608½ |
| Total for 6 weeks ...                                       | 10,554                | 3,231 11 0 | 56,825 30                        | 1,407 3 0 | 54 13 0                     | 4,753 11 0      | 2,277                    | 825          | 3,102  |
| COMPARISON.   |                       |            |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,524                 | 425 1 5    | 8,128 20                         | 79 13 0   | 9 13 6                      | 514 11 11       | 415                      | 78           | 493    |
| Per mile of railway corresponding week of previous year ... | .....                 | 35 6 0     | .....                            | 6 10 5    | 0 13 2                      | 42 14 4         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 17,211                | 2,806 7 11 | 77,790 20                        | 1,525 5 0 | 60 14 0                     | 4,461 10 11     | 2,398                    | 1,042        | 3,440  |

*Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 14TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 12   | 515       | 43               | 12   | 650       | 54               | 12  | 21,734          | 1,811            | 12  | 19,354          | 1,613            | .....                   | 2,380                   |

## SINDIA STATE RAILWAY.

*Approximate Return of Traffic for week ended 13th August 1887, on 74½ miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 4,520                 | 2,024 10 0  | 86,545 0                         | 2,088 12 0  | 50 0 0                      | 5,041 0 0       | 673                      | 932½         | 1,605½  |
| Or per mile of railway ...                                  | .....                 | 39 1 7      | .....                            | 27 14 5     | 0 10 8                      | 67 10 8         | .....                    | .....        | .....   |
| For previous 5 weeks of half-year                           | 27,129                | 21,119 4 0  | 4,51,926 0                       | 12,652 4 0  | 319 14 0                    | 34,091 0 0      | 3,640½                   | 6,208½       | 9,849½  |
| Total for 6 weeks ...                                       | 31,649                | 24,043 14 0 | 5,34,491 0                       | 14,739 0 0  | 369 14 0                    | 39,162 12 0     | 4,310½                   | 7,141        | 11,451½ |
| COMPARISON.   |                       |             |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 5,109½                | 4,392 8 0   | 63,143 30                        | 2,662 6 0   | 185 3 3                     | 7,230 1 3       | 886                      | 996          | 1,882   |
| Per mile of railway corresponding week of previous year ... | .....                 | 58 9 5      | .....                            | 35 9 6      | 2 7 7                       | 96 10 6         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 32,212                | 23,052 8 7  | 3,64,107 0                       | 16,641 15 0 | 665 4 9                     | 41,359 12 4     | 4,690                    | 5,637        | 10,327  |

*Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 14TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 74½  | 7,330     | 97               | 74½  | 5,061     | 68               | 74½   | 1,37,035        | 1,840            | 74½   | 1,33,343        | 2,050            | 15,713                  | .....                   |

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 13th August 1887, on 22½ miles open.

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 13,704                | 3,602 1 0  | 2,728 10                         | 18 4 0    | 5 4 0                       | 3,705 0 0       | 923                      | 45           | 968    |
| Or per mile of railway ...                                  | .....                 | 161 14 3   | .....                            | 4 6 8     | 0 3 0                       | 166 8 8         | .....                    | .....        | .....  |
| For previous 5 weeks of half-year ...                       | 84,103                | 23,164 3 0 | 19,245 30                        | 664 3 0   | 33 5 0                      | 23,861 11 0     | 4,869½                   | 388½         | 5,258  |
| Total for 6 weeks ...                                       | 96,807                | 26,766 4 0 | 21,974 0                         | 762 7 0   | 38 9 0                      | 27,567 4 0      | 6,792½                   | 433½         | 6,226  |
| COMPARISON.   |                       |            |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 15,688½               | 4,005 9 3  | 2,189 30                         | 81 6 0    | 8 0 3                       | 4,094 15 6      | 1450                     | 18           | 968    |
| Per mile of railway corresponding week of previous year ... | .....                 | 180 0 5    | .....                            | 3 10 6    | 0 5 9                       | 184 0 8         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 109,582               | 26,722 9 5 | 18,660 0                         | 606 5 0   | 42 10 0                     | 27,461 8 5      | 6,101                    | 123          | 6,226  |

Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 14TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½  | 4,095     | 184              | 22½  | 3,706     | 167              | 22½   | 1,00 194        | 4,503            | 22½   | 1,04,624        | 4,702            | 4,430                   | .....                   |

INDIAN MIDLAND RAILWAY.

Approximate Return of Traffic for week ended 13th August 1887, on 42 miles open.

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 1,602                 | 724 10 0   | 9,197 30                         | 533 4 0    | 28 13 0                     | 1,289 11 0      | 302                      | 286          | 588    |
| Or per mile of railway ...                                  | .....                 | 17 4 1     | .....                            | 12 12 3    | 0 11 0                      | 30 11 1         | .....                    | .....        | .....  |
| For previous 5 weeks of half-year ...                       | 11,225                | 5,027 11 6 | 41,336 10                        | 4,266 9 0  | 132 14 0                    | 9,427 2 6       | 1,343                    | 1,765        | 3,108  |
| Total for 6 weeks ...                                       | 12,827                | 5,752 5 6  | 50,533 0                         | 4,800 13 0 | 161 11 0                    | 10,716 13 6     | 1,645                    | 2,051        | 3,696  |
| COMPARISON.   |                       |            |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,446½                | 1,044 8 6  | 9,727 30                         | 601 5 0    | 8 5 0                       | 1,744 3 3       | 1,353                    | 235          | 588    |
| Per mile of railway corresponding week of previous year ... | .....                 | 24 13 11   | .....                            | 16 7 5     | 0 3 2                       | 41 8 6          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 16,397                | 6,898 10 9 | 31,001 0                         | 2,336 4 0  | 113 4 9                     | 9,388 2 6       | 2,592                    | 1,188        | 3,780  |

Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 14TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 42   | 1,744     | 42               | 42   | 1,290     | 31               | 42  | 35,501          | 845              | 42  | 60,431          | 1,439            | 24,930                  | .....                   |



## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 6th August 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |          |
|---|-----------------------|--------------------|----------------------------------|--------------|---|-----------------|--------------------------|--------------|----------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |   |                 | Coaching.                | Merchandise. | Total.   |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.    | Rs. A. P.   | Rs. A. P.       |                          |              |          |
| Total traffic for the week ...                                | 116,600               | 46,530 0 0         | 5,71,500 0                       | 94,050 0 0   | 11,970 0 0  | 1,52,550 0 0    | 19,432                   | 19,294       | 38,716   |
| Or per mile of railway ...                                    | 179                   | 72 0 0             | 886 0                            | 146 0 0      | 1 0 0†  | 219 0 0         | .....                    | .....        | .....    |
| For previous 4 weeks of half-year ...                         | 524,730               | 2,27,050 0 0       | 22,56,530 0                      | 3,38,000 0 0 | 70,910 0 0  | 6,36,960 0 0*   | 81,300                   | 81,696       | 165,276  |
| Total for 5 weeks ...   | 640,330               | 2,73,580 0 0       | 28,28,060 0                      | 4,32,050 0 0 | 82,880 0 0  | 7,88,510 0 0    | 102,822                  | 101,170      | 2,03,992 |
| COMPARISON.   |                       |                    |                                  |              |   |                 |                          |              |          |
| Total for corresponding week of previous year ...             | 95,443                | 41,269 0 0         | 3,57,397 0                       | 67,945 0 0   | 8,534 0 0   | 1,17,688 0 0    | 17,446                   | 16,534       | 33,960   |
| Per mile of railway corresponding period of previous year ... | 137                   | 68 0 0             | 591 0                            | 112 0 0      | .....   | 189 0 0         | .....                    | .....        | .....    |
| Total to corresponding date of previous year ...              | 614,252               | 2,59,764 0 0       | 20,51,575 0                      | 3,21,641 0 0 | 50,680 0 0  | 6,31,487 0 0    | 92,666                   | 88,667       | 181,333  |

NOTE.—Dacca and Assam-Bihar sections are also published separately.

\* Audited up to week ending 1887.

† Steam-boat earnings, Rs. 11,800, have been excluded from the calculation.

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 7TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 6TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 606                                       | 1,17,688  | 194              | 645                                       | 1,52,550  | 237              | 606  | 24,71,928       | 227              | 645  | 25,61,548       | 221              | 89,620                  | .....                   |

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 13th August 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 21,851                | 8,937 0 0          | 39,360 0                         | 2,250 0 0  | 30 0 0                      | 10,500 0 0      | 3,501                    | 1,709        | 5,210  |
| Or per mile of railway ...                                    | 174                   | 66 0 0             | 315 0                            | 18 0 0     | .....                       | 84 0 0          | .....                    | .....        | .....  |
| For previous 5 weeks of half-year ...                         | 127,095               | 40,840 0 0         | 1,96,764 0                       | 13,700 0 0 | 330 0 0                     | 54,930 0 0      | 18,543                   | 9,047        | 27,590 |
| Total for 6 weeks ...   | 148,946               | 49,660 0 0         | 2,36,114 0                       | 15,950 0 0 | 420 0 0                     | 65,430 0 0      | 22,044                   | 10,756       | 32,800 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 23,236                | 7,544 0 0          | 16,891 0                         | 1,350 0 0  | 34 0 0                      | 8,937 0 0       | 4,014                    | 1,736        | 5,750  |
| Per mile of railway corresponding period of previous year ... | 186                   | 60 0 0             | 135 0                            | 11 0 0     | .....                       | 71 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 149,995               | 50,005 0 0         | 98,057 0                         | 6,820 0 0  | 178 0 0                     | 57,003 0 0      | 25,111                   | 9,623        | 34,734 |

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 14TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 186  | 8,937     | 71               | 125  | 10,500    | 84               | 125   | 2,32,661        | 98               | 125   | 2,34,610*       | 99               | 2,049                   | .....                   |

\* Audited up to week ending 11th June 1887.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 6th August 1887, on 86 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 10,000                | 3,130 0 0          | 5,800 0                          | 750 0 0   | 340 0 0                     | 4,220 0 0       | 2,101                    | 803          | 2,904  |
| Or per mile of railway ...                                    | 116                   | 36 0 0             | 67 0                             | 9 0 0     | 4 0 0                       | 49 0 0          | .....                    | .....        | .....  |
| For previous 4 weeks of half-year ...                         | 45,500                | 15,100 0 0         | 44,730 0                         | 3,700 0 0 | 450 0 0                     | *19,250 0 0     | 9,271                    | 4,709        | 13,980 |
| Total for 5 weeks ...   | 55,500                | 18,230 0 0         | 50,530 0                         | 4,450 0 0 | 790 0 0                     | 23,470 0 0      | 11,432                   | 5,513        | 16,944 |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 8,470                 | 2,538 0 0          | 3,006 0                          | 403 0 0   | 342 0 0                     | 3,283 0 0       | 1,201                    | 349          | 1,610  |
| Per mile of railway corresponding period of previous year ... | 98                    | 29 0 0             | 35 0                             | 5 0 0     | .....                       | 34 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 50,033                | 15,556 0 0         | 44,304 0                         | 1,979 0 0 | 1,059 0 0                   | 18,584 0 0      | 6,286                    | 5,067        | 11,343 |

\* Audited up to week ending 18s .

FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Dacca State Railway.

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 7TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 6TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         | Rs.                     |
| 86  | 3,283     | 38               | 86  | 4,220     | 49               | 86   | 84,904          | 55               | 86   | 85,555          | 55               | 561                     | .....                   |

ASSAM-BEHAR STATE RAILWAY.

PURNIAH SECTION.

Approximate Return of Traffic for week ended 6th August 1887, on 39 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 4,900                 | †1,000 0 0         | 11,700 0                         | 2,500 0 0  | 30 0 0                      | 4,130 0 0       | 608                      | 410          | 1,078  |
| Or per mile of railway ...                                    | 126                   | 41 0 0             | 300 0                            | 64 0 0     | 1 0 0                       | 106 0 0         | .....                    | .....        | .....  |
| For previous 4 weeks of half-year ...                         | 12,030                | 3,000 0 0          | 81,000 0                         | 8,050 0 0  | 160 0 0                     | 12,110 0 0*     | 2,870                    | 1,750        | 4,620  |
| Total for 5 weeks ...   | 16,930                | 5,500 0 0          | 92,700 0                         | 10,550 0 0 | 190 0 0                     | 16,240 0 0      | 3,538                    | 2,160        | 5,698  |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

\* Audited up to week ending 18s .  
† Increase as compared with the previous week due to M&M passengers.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Assam-Bihar State Railway.

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 7TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 6TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   |           |                  |   | Rs.       | Rs.              |  |                 |                  |  | Rs.             | Rs.              |                         |                         |
| .....                                     | .....     | .....            | 39  | 4,130     | 106              | .....  | .....           | .....            | 39   | 56,756          | 81               | 36,756                  | .....                   |

## TIRHOOT STATE RAILWAY.

*Approximate Return of Traffic for the week ending 6th August 1887, on 249 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week on 249 miles open ... ..             | 37,093                | 12,833 0 0         | 98,229 0                         | 5,847 0 0  | 2,216 0 0                   | 23,846 0 0      | 6,417                    | 3,765        | 10,182 |
| Or per mile of railway ... ..                                   | 149                   | 51 9 0             | 395 0                            | 35 8 0     | 2 14 0                      | 89 15 0*        | .....                    | .....        | .. ..  |
| For previous 4 week of half-year ... ..                         | 156,773               | 51,524 0 0         | 6,40,404 0                       | 54,963 0 0 | 10,718 0 0                  | 1,17,220 0 0    | 28,163                   | 21,128       | 52,291 |
| Total for 5 weeks ... ..  | 193,866               | 61,359 0 0         | 7,38,725 0                       | 68,820 0 0 | 12,938 0 0                  | 1,41,122 0 0    | 34,580                   | 27,893       | 62,473 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year on 248 miles open | 29,416                | 8,704 3 10         | 99,769 20                        | 12,039 5 0 | 2,365 7 1                   | 23,108 15 11    | 4,816                    | 4,043        | 8,859  |
| Per mile of railway corresponding week of previous year ...     | 120                   | 35 0 0             | 406 0                            | 49 15 0    | 0 11 0                      | 85 0 0*         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ... ..             | 176,270†              | 57,661 8 2         | 6,04,733 0                       | 72,339 7 0 | 18,228 0 11                 | 1,44,230 0 1    | 26,688                   | 24,386       | 51,074 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of railway."

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tirhoot State Railway.*

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 7TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 6TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 248                                       | 23,109    | 94               | 249                                       | 23,896    | 96               | 246  | 5,96,357        | 2,424†           | 248*44   | 6,23,086        | 2,506            | 26,729                  | .....                   |

## TIRHOOT STATE RAILWAY.

*Approximate Return of Traffic for the week ending 13th August 1887, on 249 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week on 249 miles open ... ..             | 30,141                | 9,806 12 6         | 78,352 20                        | 7,675 0 0   | 2,000 6 0                   | 19,482 2 6      | 5,171                    | 5,056        | 10,227 |
| Or per mile of railway ... ..                                   | 121                   | 39 6 0             | 315 0                            | 30 13 0     | 2 13 0                      | 73 0 0*         | .....                    | .....        | .....  |
| For previous 5 weeks of half-year ... ..                        | 105,133               | 64,922 3 6         | 7,49,364 20                      | 64,037 0 0  | 13,310 10 0                 | 1,42,269 13 6   | 34,606                   | 28,017       | 62,623 |
| Total for 6 weeks ... ..  | 225,274               | 74,729 0 0         | 8,27,717 0                       | 71,712 0 0  | 16,311 0 0                  | 1,61,752 0 0    | 39,777                   | 33,053       | 72,830 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year on 248 miles open | 31,280                | 9,711 2 11         | 91,846 0                         | 8,398 4 0   | 2,065 12 9                  | 20,175 3 8      | 4,766                    | 3,477        | 8,243  |
| Per mile of railway corresponding week of previous year ...     | 127                   | 39 8 0             | 373 0                            | 34 2 0      | 0 13 0                      | 74 0 0*         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ... ..             | 206,409†              | 67,375 11 1        | 7,56,579 0                       | 80,737 11 0 | 20,291 13 8                 | 1,68,405 3 9    | 31,474                   | 27,863       | 59,337 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tirhoot State Railway.*

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 14TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 246  | 20,175    | 82               | 249  | 19,482    | 78               | 246   | 6,16,532        | 2,506            | 248*47  | 6,43,716        | 2,590            | 27,184                  | .....                   |

## NALHATI STATE RAILWAY.

*Approximate Return of Traffic for the week ending 6th August 1887, on 27½ miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 4,444                 | 1,648 0 0          | 10,719 0                         | 672 0 0   | 12 0 0                      | 2,332 0 0       | 569                      | 254          | 763    |
| Or per mile of railway ...                                  | 163                   | 60 8 0             | 393 0                            | 24 10 0   | 0 7 0                       | 85 0 0          | .....                    | .....        | .....  |
| For previous 4 weeks of half-year ...                       | 13,210                | 5,177 0 0          | 31,094 0                         | 2,194 0 0 | 54 0 0                      | 7,425 0 0       | 2,218                    | 1,321½       | 3,540  |
| Total for 5 weeks ...                                       | 17,654                | 6,825 0 0          | 42,713 0                         | 2,866 0 0 | 66 0 0                      | 9,757 0 0       | 2,727                    | 1,575½       | 4,302½ |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 1,883                 | 802 15 10          | 2,204 20                         | 176 8 0   | 12 4 0                      | 991 11 40       | 569                      | 254          | 763    |
| Per mile of railway corresponding week of previous year ... | 69                    | 29 7 0             | 81 0                             | 6 8 0     | 0 7 0                       | 36 6 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 11,867                | 4,823 11 5         | 33,856 30                        | 2,554 1 0 | 68 14 3                     | 7,146 10 8      | 2,763                    | 1,432½       | 4,195½ |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Nalhati State Railway.*

| RECEIPTS FOR WEEK ENDING 7TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 7TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 6TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                      | Receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. | Mean mileage worked.                                   | Total receipts. | Per mile worked. | Rs.                     |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 27½                                       | 162       | 36               | 27½                                       | 2,312     | 86               | 27½  | 31,782          | 1,163            | 27½  | 35,094          | 1,288            | 3,312                   | .....                   |

## NALHATI STATE RAILWAY.

*Approximate Return of Traffic for the week ending 13th August 1887, on 27½ miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated), including steam boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|---|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |   |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,638½                | 946 4 9            | 7,246 30                         | 415 14 0  | 15 0 0  | 1,377 2 9       | 569                      | 254          | 763    |
| Or per mile of railway ...                                  | 97                    | 34 12 0            | 263 0                            | 15 4 0    | 0 9 0   | 50 9 0          | .....                    | .....        | .....  |
| For previous 5 weeks of half-year ...                       | 18,182½               | 7,014 11 3         | 42,902 10                        | 2,886 2 0 | 66 0 0  | 9,976 13 3      | 2,727                    | 1,578½       | 4,305½ |
| Total for 6 week ...  | 20,822                | 7,961 0 0          | 50,140 0                         | 3,312 0 0 | 81 0 0  | 11,354 0 0      | 3,296                    | 1,832½       | 5,068½ |
| COMPARISON.   |                       |                    |                                  |           |   |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 3,455½                | 1,649 2 3          | 8,411 10                         | 593 7 0   | 7 6 0   | 1,619 15 3      | 569                      | 254          | 763    |
| Per mile of railway corresponding week of previous year ... | 127                   | 38 3 0             | 309 0                            | 21 12 0   | 0 4 0   | 60 3 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 15,322½               | 5,863 13 8         | 42,268 0                         | 3,147 8 0 | 76 4 3  | 9,087 9 11      | 3,272                    | 1,687½       | 4,959½ |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Nalhati State Railway.*

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 14TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 27½  | 1,641     | 60               | 27½  | 1,577     | 51               | 27½   | 33,423          | 1,227            | 27½   | 36,601          | 1,346            | 3,268                   | .....                   |

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|  | Rs.      |
|--|----------|
| Approximate earnings for week ending 6th August 1887 | 8,962    |
| Corresponding week last year                         | 8,710    |
| Increase   | 252      |
| Receipts from 1st July to 6th August 1887            | 46,709   |
| From 1st July to 7th August 1886                     | 46,307   |
| Increase   | 2,598    |
| Miles open, week ending 6th August 1887              | 51       |
| Corresponding week last year                         | 51       |
| Receipts per mile open, week ending 6th August 1887  | 175 11 7 |
| Corresponding week last year                         | 170 12 8 |
| Increase   | 4 14 11  |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 13th August 1887.

W. STEVENSON, Acting Manager, D.-H. Railway.

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|   | Rs.      |
|---|----------|
| Approximate earnings for week ending 13th August 1887 | 7,686    |
| Corresponding week last year                          | 5,755    |
| Increase  | 1,930    |
| Receipts from 1st July to 13th August 1887            | 51,395   |
| From 1st July to 14th August 1886                     | 55,062   |
| Increase  | 667      |
| Miles open, week ending 13th August 1887              | 51       |
| Corresponding week last year                          | 51       |
| Receipts per mile open, week ending 13th August 1887  | 150 11 7 |
| Corresponding week last year                          | 112 13 5 |
| Increase  | 37 13 7  |

CHIEF OFFICE, D. H. RAILWAY, DARJEELING, the 20th August 1887.

W. STEVENSON, Acting Manager.





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, AUGUST 31, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## RESOLUTION ON PROGRESS REPORT OF FOREST ADMINISTRATION IN BENGAL FOR 1886-87.

### REVENUE DEPARTMENT--FORESTS.

*Calcutta, the 26th August 1887.*

#### RESOLUTION.

READ—

The Progress Report of Forest Administration in Bengal for 1886-87.

The Report, which was due on the 1st, was received in the Secretariat on the 4th instant. The Annual Report has not in any recent year been submitted on so early a date, and the Conservator deserves commendation for his efforts to attain punctuality. Mr. Home was in charge of the Department throughout the year, except from the 9th June to 20th August 1886, when sickness obliged him to take privilege leave, and Mr. Chester officiated as Conservator.

2. The forests in the Lower Provinces under the control of the Department at the end of the year under review covered a total area of 7,317,594 acres, or 11,434 square miles, classified as follows:—

|  |     |     |     |     | Area in acres. |
|--|-----|-----|-----|-----|----------------|
| Reserved                                   | ... | ... | ... | ... | 3,191,225      |
| Protected                                  | ... | ... | ... | ... | 1,404,923      |
| Unclassed                                  | ... | ... | ... | ... | 2,581,420      |
| Total                                      |     |     |     |     | 7,177,568      |
| Proposed reserves not yet finally gazetted |     |     |     |     | 140,026        |
| Total                                      |     |     |     |     | 7,317,594      |

There was an increase of 9,157 acres in the area of reserves by addition of the Dondimal and Khorda ranges in Orissa, which were taken out of the class of Protected Forests, and the area of forests of the latter class was further diminished by transfer of 5,765 acres in the Sunderbans and Khorda to the Revenue officers for settlement. The area of unclassed forests includes only the forests in Chittagong shown in former reports under the name of District Forests. The forests gazetted as proposed reserves, but not yet finally notified under section 19 of the Forest Act, are, for the most part, in Chota Nagpore. The forests last referred to were notified as proposed reserves as long ago as 1880 and 1882; but on account of difficulties which have arisen in determining the rights of the villagers who dwell on the borders of the proposed reserves local enquiries are still going on. In the case of the Porahat Forests there was unnecessary delay in the proceedings of the Forest Settlement Officer first appointed; and in proceedings relating to the Khurchuta forests, the Lieutenant-Governor was unable to accept the views of the Conservator as to the sufficiency of the investigation which had been made of the rights of the cultivators.

3. The record for the reserved forests of the length of boundaries and number of boundary marks, as corrected during the year (but stated to be not yet accurate), shows a total length of 3,531 miles, of which 2,072 miles are demarcated with 27,842 posts or pillars, and the remaining 1,459 miles are natural boundaries which it is not necessary to demarcate. Seventy-seven miles of boundaries were newly demarcated during the year, 1,236 miles were re-cleared, and 628 more miles were kept clear as fire traces. The average cost per mile of the new demarcation was Rs. 8-2 and of the re-clearing Rs. 5-12, in both cases less than the cost of the preceding year. Under the head of Survey, the most important operations of the year were those carried on in Singbhoom by the Forest Survey party, who surveyed 431 miles of forests, which it is proposed to reserve. In Angul the demarcation of the reserves bordering on Native States was begun by the Revenue Survey party.

4. A special Working Plans Division was created in April 1886, and was placed in charge of Mr. Chester, Deputy Conservator of Forests, who, however, had also other charges including the charge of the Darjeeling Division throughout the year, and was therefore only able to give a portion of his time to the Working plans. The new division was able to complete a plan for the Bamanpokri Forest in the Kurseong sub-division, which has been approved by the Inspector-General of Forests and by Government, and to take in hand the plan for working the forests in the Darjeeling sub-division, from which the stations of Darjeeling and Jalapahar and the adjacent tea gardens are supplied with timber, fuel and fodder. The work done by Messrs. Chester and French and by Messrs. James and Wittenbaker in preparation of these plans is favourably noticed by the Conservator. The Lieutenant-Governor much regrets that on account of the present paucity of officers of the controlling staff (of whom three are at present absent on leave), it has been necessary to close the Working Plans Division for a time, and he hopes that, when the staff is again at its full strength, the useful work done under this head will be resumed with energy.

5. A separation of the Bengal Controlling Staff from that of Assam was sanctioned by the Government of India in September last.

The controlling staff now sanctioned for Bengal consists of one Conservator, seven Deputy Conservators, and five Assistant Conservators. In fact, Bengal has now, besides the Conservator, nine Deputy Conservators and two Assistant Conservators. The staff was therefore one officer short of its sanctioned strength during the year. The Lieutenant-Governor has been informed by the Government of India that one of the officers newly appointed to the Indian Forest Service, who will arrive in India next cold weather, will be appointed to these Provinces. The Executive staff of Sub-Assistant Conservators and Forest Rangers had seven officers of the former and 23 of the latter rank at the close of the year, and the Protective staff, which consists of Foresters and forest peons, had 83 of the former and 308 of the latter. From the statement given on page 8 of Mr. Home's report, it appears that a Forest Ranger in the Lower Provinces has on an average 497 square miles, a Forester 137 square mile, and a forest peon 37 square miles of forest to supervise.



Prosecutions were instituted during the year against three forest guards for misappropriation. One of these was convicted and one acquitted; the third case was pending at the end of the year, and the result has not been shown. Three forest peons, who were dismissed from Government service by the Divisional Officer of Chittagong in connection with a charge of extortion, were reinstated under the orders of the Lieutenant-Governor. On the whole, prosecutions and dismissals of subordinate employes were less numerous than in the two preceding years. The Conservator repeats in this report remarks which he has made in former reports with regard to the distaste generally felt by educated natives of the Lower Provinces for employment in the lower grades of the Forest service.

6. Eight hundred and thirty-nine new cases of breaches of the forest law and offences under the Penal Code were taken into Court during the year, against 624 cases instituted in the preceding year. The Conservator has not commented on this increase which requires explanation. From Statement No. 50 appended to the report, it appears that the increase was chiefly in the Sundarbuns division. The number of cases decided by the Courts, including cases pending from the previous year, was 920, of which 821, or 89·2 per cent., resulted in convictions. Besides these cases, 882 cases were compounded out of Court. The Lieutenant-Governor requests that some particulars may be given in future reports of the cases taken into Court and compounded which are returned under the head "Other offences." More than half the cases disposed of by the Courts during the year have been returned under this head without any details.

7. The area of reserved forest which the Department attempted to protect from fire during the year was 1,007,283 acres, or not quite one-third of the whole area of the reserves. The remaining area, except the forests of the Singbhoom Division, is not liable to fires. The result of the measures adopted for protection was more satisfactory than in any previous year, 897,372 acres, or 80·9 per cent. of the area in which special measures were taken, having escaped. To the 109,911 acres burned, though specially guarded, have to be added 236,220 acres and 2,046 acres burned in unprotected forests in Singbhoom and Buxa, respectively, making a total of 348,171 acres burned. The noticeable features in this part of the report are the measures of success which were attained in Singbhoom and in Angul as compared with the results of former years and the failure in the Jalpaiguri Division. In the lastnamed division, where 19,511 acres were burned, the failure was due, in the Conservator's opinion, chiefly to neglect in inspection and posting of fire guards. The special difficulties which have to be encountered in attempting protection of the Singbhoom and Angul forests were mentioned in last year's Resolution. The total amount expended in fire protection was Rs. 14,378 only, a smaller sum than was spent in the two preceding years in protecting smaller areas, and it appears to the Lieutenant-Governor that a less stinted expenditure under this head is called for.

8. The revenue realised from grazing and the sale of fodder was Rs. 6,680, half of which was raised in the Darjeeling sub-division. The Conservator's proposals for restricting sheep-grazing in the Singalila Range in this sub-division, to which reference is made in paragraph 66 of the report, are now before the Lieutenant-Governor, and it is only necessary here to remark that the question cannot be decided with reference to considerations of forest conservancy only.

9. The area of regular plantations was increased during the year by 270 acres, and the area of cultural operations (which include nurseries and the planting of blank spaces in the forests) by 19 acres. The cost of these additions, which were made chiefly in Darjeeling, Chittagong, and Khoorda, and the up-keep of plantations already existing, was Rs. 7,460. The total area of plantations of all kinds, including oak, tûn, sâl, teak, bamboos, &c., is now 3,410 acres. Cutting of creepers was actively carried on in Buxa and Kurseong, but comparatively little was done in other divisions.

10. Twenty-three miles of export roads and nearly 14 miles of inspection paths were opened during the year, and 420 miles of existing export roads and inspection paths were repaired at a total cost of Rs. 6,468. Most work was done under this head in the Chota Nagpore and Darjeeling Divisions. The total expenditure on buildings was Rs. 14,998.

11. The total amount of timber and fuel removed from the forests Working and yield of the during the year is compared with the yield of the preceding year in the following statement :—

|                               | By departmental agency. |          | Permit-holders. |            | Free grants. |          | Total.     |            |
|-------------------------------|-------------------------|----------|-----------------|------------|--------------|----------|------------|------------|
|                               | 1886-87.                | 1885-86. | 1886-87.        | 1885-86.*  | 1886-87.     | 1885-86. | 1886-87.   | 1885-86.   |
|                               | C. ft.                  | C. ft.   | C. ft.          | C. ft.     | C. ft.       | C. ft.   | C. ft.     | C. ft.     |
| Reserved forests—             |                         |          |                 |            |              |          |            |            |
| Timber ... ..                 | 119,288                 | 81,841   | 6,358,006       | 5,959,063  | 1,495        | 8,120    | 6,470,877  | 6,040,024  |
| Fuel ... ..                   | 304,127                 | 160,208  | 10,317,980      | 18,228,608 | 11,007       | 175      | 10,638,073 | 13,384,071 |
| Total ... ..                  | 423,415                 | 242,139  | 16,675,986      | 19,188,261 | 12,490       | 8,295    | 17,112,450 | 19,424,095 |
| Protected Forests—            |                         |          |                 |            |              |          |            |            |
| Timber ... ..                 | 18                      | .....    | 343,887         | 105,430    | 920          | 1,206    | 344,773    | 106,726    |
| Fuel ... ..                   | .....                   | .....    | 6,691,832       | 5,201,387  | .....        | .....    | 6,691,832  | 5,201,387  |
| Total ... ..                  | 16                      | .....    | 7,035,699       | 5,306,817  | 920          | 1,206    | 7,036,005  | 5,308,113  |
| Unclassed Forests—            |                         |          |                 |            |              |          |            |            |
| Timber ... ..                 | 6,784                   | 5,524    | 230,473         | 333,642    | .....        | .....    | 240,257    | 330,166    |
| Fuel ... ..                   | 128                     | .....    | 80,653          | 173,688    | .....        | .....    | 89,781     | 173,688    |
| Total ... ..                  | 6,912                   | 5,524    | 329,126         | 507,330    | .....        | .....    | 330,038    | 512,854    |
| GRAND TOTAL OF ALL FORESTS... | 430,343                 | 247,663  | 24,641,310      | 25,087,408 | 13,410       | 9,601    | 24,483,003 | 25,344,002 |

\* The figures of the report for 1885-86 have been corrected.

More forest produce was removed by departmental agency than in the preceding year, the increase being due chiefly to indents received for the Northern Bengal State Railway, and to larger demands of the military authorities for fuel in the Darjeeling Division. With reference to the remarks made by Mr. Home in paragraph 109 of his report regarding the transactions of his Department with the Railway authorities, it is to be noticed that the Lieutenant-Governor has already expressed his desire that the Forest and Public Works Departments should come to an understanding for the delivery and purchase of sleepers in which the pecuniary effect to Government of the transactions as a whole rather than departmental profit should be kept in view.

The removals of timber by permit-holders increased by 453,181 cubic feet, but there was a large falling off of 1,499,249 cubic feet in the exports of fuel under permits. These fluctuations occurred chiefly in the Sunderbuns Division, where there was a more brisk demand for timber for the Calcutta market, but a greatly decreased demand for permits to remove fuel, the decrease being apparently connected with the notification of last year, which raised the rates for *sundri* firewood. The number of bamboos removed from the forests by Government agency and by purchasers was 17,973,964 against 16,664,460 in the previous year, and minor forest produce was removed in all amounting to 52,01,317 maunds, a yield somewhat less than that of the previous year.

#### Financial results.

12. The financial results of the year compare as follows with those of the two preceding years :—

|             | Receipts. | Charges. | Surplus. | Proportion of surplus to gross revenue. |
|-------------|-----------|----------|----------|---|
|             | Rs.       | Rs.      | Rs.      |   |
| 1884-85 ... | 5,71,152  | 4,11,915 | 1,59,237 | 28                                      |
| 1885-86 ... | 5,97,432  | 3,70,399 | 2,27,033 | 38                                      |
| 1886-87 ... | 6,53,634  | 4,22,781 | 2,30,853 | 35.3                                    |

The gross revenue of the year is considerably larger than that of the last two years, and there has been a small increase in the surplus. The increase in expenditure was caused chiefly by a charge of Rs. 33,282 on account of the construction of a second steamer for the Sunderbuns Division, and by increased charges for carriage of railway sleepers. On the whole these results are satisfactory.

13. The Conservator's remarks on the conduct of officers will be noted in the Appointment Department. Mr. Home has again earned the Lieutenant-Governor's thanks for his efficient administration of his Department.

By order of the Lieutenant-Governor of Bengal,

W. C. MACPIERSON,

Offg. Secretary to the Government of Bengal.

## REPORT ON THE STATE OF THE SALT MARKET FOR THE FIRST QUARTER OF 1887-88.

No. 640B, dated Calcutta, the 17th August 1887.

From—K. G. GUPTA, Esq., Offg. Secretary to the Board of Revenue, L. P.,  
To—The Secretary to the Government of Bengal, Financial Department.

I AM directed to submit the following report on the state of the salt market for the first quarter of 1887-88, comprising the months of April, May, and June 1887.

SALT.

F. M. HALLIDAY, Esq.

2. The quantity of salt of every description cleared during the quarter under report amounted to 25,84,676 maunds 8 seers 12 chittacks, against 26,06,814 maunds 38 seers 7 chittacks in the previous quarter, and 24,77,614 maunds 16 seers 14 chittacks in the corresponding quarter of the previous year; and the net amount of duty levied thereon was Rs. 49,02,270, against Rs. 48,91,893-8 in the previous quarter, and Rs. 47,09,713-8 in the corresponding quarter of the previous year.

3. The quantity of excise salt sold in the districts of Cuttack, Pooree, and Balasore during the quarter under review from the stock of the different seasons' manufacture, and the quantities which remained in store at the close of the quarter, are shown in Table I:—

TABLE I.

|   | CUTTACK.        |            |             |            | POOREE.         |             |            |             |            |             |
|---|-----------------|------------|-------------|------------|-----------------|-------------|------------|-------------|------------|-------------|
|   | Manufacture of— |            |             |            | Manufacture of— |             |            |             |            |             |
|   | 1884-85.        | 1885-86.   | 1886-87.    | 1880-81.   | 1881-82.        | 1882-83.    | 1883-84.   | 1884-85.    | 1885-86.   | 1886-87.    |
|   | Mds. s. c.      | Mds. s. c. | Mds. s. c.  | Mds. s. c. | Mds. s. c.      | Mds. s. c.  | Mds. s. c. | Mds. s. c.  | Mds. s. c. | Mds. s. c.  |
| Balance at close of the last quarter.     | 8,211 25 0      | 18,790 0 0 | 136 25 0    | 321 0 0    | 655 29 0        | 18,735 20 0 | 4,365 25 0 | 56,354 21 0 | 4,172 0 0  | .....       |
| Manufactured or added during the quarter. | .....           | .....      | 11,224 27 0 | .....      | .....           | .....       | .....      | .....       | .....      | 78,428 32 0 |
| Total                                     | 8,211 25 0      | 18,790 0 0 | 11,661 22 0 | 321 0 0    | 655 29 0        | 18,735 20 0 | 4,365 25 0 | 56,354 21 0 | 4,172 0 0  | 78,428 32 0 |
| Sales during the quarter                  | 3,835 20 0      | 7,908 0 0  | .....       | .....      | .....           | 16,364 0 0  | 13 39 0    | 14,446 0 0  | 2,402 0 0  | .....       |
| Wastage                                   | 302 0 0         | .....      | .....       | .....      | 655 29 0        | 2,828 19 0  | 527 28 10  | 53 26 0     | .....      | .....       |
| Total                                     | 4,227 20 0      | 7,908 0 0  | .....       | .....      | 655 29 0        | 9,762 19 0  | 671 18 10  | 14,499 26 0 | 2,402 0 0  | .....       |
| Balance at close of the quarter           | 3,984 5 0       | 10,882 0 0 | 11,661 22 0 | 321 0 0    | .....           | 8,973 10 0  | 3,794 6 6  | 41,854 35 0 | 1,710 0 0  | 78,428 32 0 |

|   | BALASORE.       |            |             |            |            |            |              |            |
|---|-----------------|------------|-------------|------------|------------|------------|--------------|------------|
|   | Manufacture of— |            |             |            |            |            |              |            |
|   | 1879-80.        | 1880-81.   | 1881-82.    | 1882-83.   | 1883-84.   | 1884-85.   | 1885-86.     | 1886-87.   |
|   | Mds. s. c.      | Mds. s. c. | Mds. s. c.  | Mds. s. c. | Mds. s. c. | Mds. s. c. | Mds. s. c.   | Mds. s. c. |
| Balance at close of the last quarter.     | 623 25 0        | 2,909 10 8 | 3,671 17 11 | 154 20 0   | 3,761 24 0 | 8,202 27 0 | *33,832 15 0 | 8 25 0     |
| Manufactured or added during the quarter. | .....           | .....      | .....       | .....      | .....      | .....      | .....        | 2,939 10 0 |
| Total                                     | 623 25 0        | 2,909 10 8 | 3,671 17 11 | 154 20 0   | 3,761 24 0 | 8,202 27 0 | 33,832 15 0  | 2,947 35 0 |
| Sales during the quarter                  | .....           | .....      | .....       | .....      | .....      | 2,167 0 0  | 15,534 0 0   | 1,209 0 0  |
| Wastage                                   | .....           | .....      | .....       | 154 20 0   | .....      | .....      | .....        | 1,274 20 0 |
| Total                                     | .....           | .....      | .....       | 154 20 0   | .....      | 2,167 0 0  | 15,534 0 0   | 2,483 20 0 |
| Balance at close of the quarter           | 623 25 0        | 2,909 10 8 | 3,671 17 11 | .....      | 3,761 24 0 | 6,035 27 0 | 18,298 15 0  | 404 15 0   |

\* The difference between these figures and the corresponding figures in the statement submitted with the report for the previous quarter is due to revised figures since received from the Collectors.  
† Inclusive of 3,157 maunds of consolidated salt sold.

4. The above statement shows that the total sale of excise salt during the quarter under review amounted to 54,509 maunds 10 seers, against 52,848 maunds 30 seers in the previous quarter, and 1,06,079 maunds 4 seers in the corresponding quarter of the previous year.

5. The subjoined Table II shows in comparison the importations into the port of Calcutta and the total clearances of sea-imported salt during the quarter under review and the corresponding quarters of the previous two years :—

TABLE II.

|                         | 1885-86.       |           | 1886-87.       |           | 1887-88.       |           |
|-------------------------|----------------|-----------|----------------|-----------|----------------|-----------|
|                         | First quarter. |           | First quarter. |           | First quarter. |           |
|                         | Imported.      | Cleared.  | Imported.      | Cleared.  | Imported.      | Cleared.  |
|                         | Mds.           | Mds.      | Mds.           | Mds.      | Mds.           | Mds.      |
| Liverpool pungah ... .. | 20,45,124      | 15,00,036 | 12,40,502      | 16,15,963 | 24,54,328      | 17,81,904 |
| Foreign kurkutch ... .. | 1,74,592       | 2,83,255  | 11,00,817      | 5,59,369  | 1,29,349       | 5,81,375  |
| Indian ditto ... ..     | 94,517         | 54,051    | 84,179         | 98,722    | 1,45,817       | 1,06,681  |
| Total ... ..            | 22,14,233      | 17,37,342 | 24,25,578      | 22,73,922 | 27,29,594      | 24,69,960 |

6. The following are the details of the Indian kurkutch salt shown in the above table :—

TABLE III.

|                  | 1885-86.       |          | 1886-87.       |          | 1887-88.       |          |
|------------------|----------------|----------|----------------|----------|----------------|----------|
|                  | First quarter. |          | First quarter. |          | First quarter. |          |
|                  | Imported.      | Cleared. | Imported.      | Cleared. | Imported.      | Cleared. |
|                  | Mds.           | Mds.     | Mds.           | Mds.     | Mds.           | Mds.     |
| Bombay ... ..    | 94,517         | 52,545   | 84,179         | 98,722   | 1,45,817       | 1,06,681 |
| Tuticoria ... .. | .....          | 2,106    | .....          | .....    | .....          | .....    |
| Total ... ..     | 94,517         | 54,651   | 84,179         | 98,722   | 1,45,817       | 1,06,681 |

7. Table IV shows the quantity of sea-imported salt remaining in the warehouses at the close of the quarter as compared with the results of the previous four quarters :—

TABLE IV.

| WHERE STORED.                    |  | First quarter of 1886-87. | Second quarter of 1886-87. | Third quarter of 1886-87. | Fourth quarter of 1886-87. | First quarter of 1887-88. |
|----------------------------------|--|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
|                                  |  | Mds.                      | Mds.                       | Mds.                      | Mds.                       | Mds.                      |
| Bulken Government godowns ... .. |  | 9,00,328                  | 8,39,355                   | 10,53,923                 | 8,07,692                   | 8,07,700                  |
| Chittagong do. do. ... ..        |  | 1,26,079                  | 84,745                     | 79,390                    | 13,180                     | 63,223                    |
| Total ... ..                     |  | 10,26,407                 | 9,24,100                   | 11,33,313                 | 8,20,872                   | 8,70,923                  |

8. The despatches of salt from Calcutta by water and the three railways passing the several salt-pass stations into the interior of the country, both east and west of the river Hooghly during the quarter under review, and the corresponding quarters of the previous two years, are shown in Table V :—

TABLE V.

| PERIOD.                         | Via Balikhali. | Via Sankrail. | Via Gowakhally. | Via Kidderpore. | Via Ballhaghatta. | Via Buttolah Ghat. | By the East Indian Railway. | By the Eastern Bengal and South-Eastern Railways or via Chitpore. |
|---------------------------------|----------------|---------------|-----------------|-----------------|-------------------|--------------------|-----------------------------|---|
|                                 | Mds.           | Mds.          | Mds.            | Mds.            | Mds.              | Mds.               | Mds.                        | Mds.  |
| First quarter of 1885-86 ... .. | 1,41,556       | 1,54,825      | 44,133          | 69,659          | 2,54,047          | 1,69,726           | 8,57,238                    | 1,44,478  |
| Ditto of 1886-87 ... ..         | 1,71,994       | 1,78,267      | 88,582          | 82,087          | 2,26,553          | 1,61,017           | 10,11,617                   | 1,55,979  |
| Ditto of 1887-88 ... ..         | 2,12,672       | 1,75,053      | 51,169          | 70,480          | 2,43,929          | 1,14,363           | 11,33,210                   | 2,43,764  |

|   |            |     |
|---|------------|-----|
| 9. The quantity of salt despatched by the East Indian Railway to stations beyond Buxar during the quarter under review amounted to 50,524 maunds 20 seers as noted in the margin, against 67,607 maunds 30 seers in the previous quarter, and 85,958 maunds 30 seers in the corresponding quarter of the previous year. |            |     |
| April   | Mds. s.    | ... |
| May   | ... 14,947 | 30  |
| June  | ... 20,111 | 10  |
|   | ... 15,465 | 20  |
| Total   | ... 50,524 | 20  |

10. The shipments of Liverpool salt for the port of Calcutta according to published market reports were as follows:—

|       |     |     |     |     |     |        |
|-------|-----|-----|-----|-----|-----|--------|
|       |     |     |     |     |     | Tons.  |
| April | ... | ... | ... | ... | ... | 18,670 |
| May   | ... | ... | ... | ... | ... | 37,180 |
| June  | ... | ... | ... | ... | ... | 33,430 |
| Total | ... | ... | ... | ... | ... | 89,280 |

No shipments were reported during the quarter under review for the port of Chittagong.

11. Table VI shows the market price per 100 maunds of Liverpool salt and other descriptions of salt at the close of each fortnight during the quarter as compared with those obtaining during the same period last year:—

TABLE VI.

| DESCRIPTION OF SALT. | Prices on the 15th April |       | Prices on the 30th April |       | Prices on the 15th May |       | Prices on the 31st May |       | Prices on the 15th June |       | Prices on the 30th June |       |
|----------------------|--------------------------|-------|--------------------------|-------|------------------------|-------|------------------------|-------|-------------------------|-------|-------------------------|-------|
|                      | 1886.                    | 1887. | 1886.                    | 1887. | 1886.                  | 1887. | 1886.                  | 1887. | 1886.                   | 1887. | 1886.                   | 1887. |
|                      | Rs.                      | Rs.   | Rs.                      | Rs.   | Rs.                    | Rs.   | Rs.                    | Rs.   | Rs.                     | Rs.   | Rs.                     | Rs.   |
| Liverpool punyah     | 56                       | 67    | 60                       | 64    | 65                     | 59    | 78                     | 57    | 80                      | 65    | 80                      | 66    |
| French kukutch       | 60                       | 47    | 59                       | 49    | 58                     | 53    | 48                     | 53    | 50                      | 63    | 55                      | 56    |
| Jedda ditto          | 60                       | 48    | 59                       | 46    | 61                     | 52    | 61                     | 54    | 60                      | ...   | 60                      | ...   |
| Bombay ditto         | 61                       | 50    | 61                       | 50    | 58                     | 50    | 68                     | 55    | 60                      | 55    | 65                      | 53    |
| Madras ditto         | ...                      | ...   | ...                      | ...   | ...                    | ...   | ...                    | ...   | ...                     | ...   | ...                     | ...   |
| Italian ditto        | 61                       | 47    | 59                       | 47    | 57                     | 53    | 48                     | 53    | 50                      | 53    | 55                      | 56    |
| Muscat ditto         | 66                       | 46    | 66                       | 46    | 69                     | 45    | 64                     | 51    | 64                      | 55    | 63                      | 15    |
| Rock                 | 110                      | 100   | 110                      | 100   | 110                    | 100   | 75                     | 100   | 75                      | 100   | 75                      | 100   |

12. The following table shows the quantity of sea-imported salt admitted into bond and cleared from bond and shipboard at Chittagong, and Narain-gunge during the quarter under review and the corresponding quarter of 1886-87:—

TABLE VII.

| PORT.       | DESCRIPTION OF SALT. | ADMITTED INTO BOND.       |                           | CLEARED.                  |                           |
|-------------|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|
|             |                      | First quarter of 1886-87. | First quarter of 1887-88. | First quarter of 1886-87. | First quarter of 1887-88. |
|             |                      | Mds. s. c.                | Mds. s. c.                | Mds. s. c.                | Mds. s. c.                |
| Chittagong  | Liverpool punyah     | 27,836 0 0                | 5,400 0 0                 | 93,705 20 0               | 43,746 33 0               |
|             | Hamburg kukutch      | ...                       | ...                       | ...                       | 16,438 20 0               |
|             | British Burmah       | ...                       | ...                       | 0 20 8                    | ...                       |
|             | Ceylon               | ...                       | ...                       | 0 3 0                     | ...                       |
|             | Cochin               | ...                       | ...                       | 0 3 0                     | ...                       |
| Naraingunge | Jedda                | 27,422 0 0                | ...                       | ...                       | ...                       |
|             | Liverpool punyah     | ...                       | ...                       | 3,831 0 0                 | ...                       |
| Total       |                      | 27,836 0 0                | 32,822 0 0                | 97,540 12 8               | 60,205 13 0               |

No transactions in sea-imported salt have been reported for the quarter from the ports of Cuttack, Pooree and Balasore.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 27th August 1887.

| No.                       | District and date of return. | Rainfall at Sudder station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|---------------------------|------------------------------|---------------------------------------|---|
| <b>BENGAL.</b>            |                              |                                       |   |
| <i>Western Districts.</i> |                              |                                       |   |
| <b>BURDWAN DIV.</b>       | 1 Burdwan. Aug. 27, '87      | 1.88                                  | Weather—Some days rainy; others sultry. Crop prospects improved by timely rain. <i>Aus</i> paddy being reaped and jute steeped. Prices pretty stationary. Common rice 22 or 22½ seers per rupee. Cholera still prevails in Sudder; public health elsewhere good.                        |
|                           | Culna ..                     | 1.40                                  |   |
|                           | Culwa ..                     | 1.18                                  | Weather—cloudy with occasional light showers. Transplantation of <i>amun</i> rice still continues on high lands in some parts of the Bishenpore subdivision, where more rain is wanted. Sugarcane and other standing crops doing well. Prices have slightly fallen. Public health good. |
|                           | 2 Ranee-gunge ..             | 2.75                                  |   |
|                           | 2 Bishenpore ..              | 1.31                                  | Weather—sultry. Condition of crops (paddy and sugarcane) very good. Public health good. Prices stationary.  |
|                           | Bishenpore ..                | 2.20                                  |   |
|                           | 3 Beerbhoom ..               | 0.95                                  | Weather—sultry. State and prospects of crops good. Sporadic cases of cholera.   |
|                           | Rampore Haut ..              | 0.77                                  |   |
|                           | 4 Midnapore ..               | 2.78                                  | Weather—unusually hot and dry. More rain now urgently required. High lands are dry and growth of young rice retarded, especially in Jehanabad. Public health continues good.  |
|                           | 5 Hooghly ..                 | 1.79                                  |   |
| <b>PRESIDENCY DIV.</b>    | Serampur ..                  | 2.44                                  | Weather—cool with light rain and clouds. Harvesting of <i>aus</i> and jute commenced. Transplanting of <i>amun</i> rice nearly completed. Public health good, though slight cholera in one or two villages.   |
|                           | Jehanabad ..                 | 0.81                                  |   |
|                           | Howrah ..                    | 2.14                                  | Weather—seasonable with occasional heavy falls of rain. Prospects of <i>aus</i> , jute and sugarcane good, but more rain still wanted in places for <i>amun</i> crop. Harvesting of <i>aus</i> has begun. Public health fairly good for the time of year.                               |
|                           | 6 24-Perahia. Aug. 27, '87   | 3.89                                  |   |
|                           | 7 Nuddea ..                  | 1.77                                  | Weather—drying early part of week cloudy with showers, later on sunny and hot. Harvesting of <i>aus</i> rice in progress. More rain wanted for <i>amun</i> . Sugarcane, turmeric, and jute doing well. Fever somewhat prevalent. Flood level slightly fallen.                           |
|                           | Kushtea ..                   | 1.18                                  |   |
|                           | Moherpur ..                  | 1.66                                  | Weather—seasonable. <i>Aus</i> paddy ripening; crop reported to be good. Transplantation of <i>amun</i> paddy getting on with the rain of the week. Public health generally good.   |
|                           | 8 Chundanga ..               | 1.28                                  |   |
|                           | Ranaghat ..                  | 1.38                                  | Weather—still very hot, though some rain fell. Harvesting of <i>aus</i> and transplanting of <i>amun</i> going on. Rain still wanted. State of crops satisfactory. Public health good.  |
|                           | 9 Khoolna ..                 | 1.71                                  |   |
| <b>RAJSHAHY DIV.</b>      | 9 Jessore ..                 | 1.54                                  | Weather—hot. Rain at intervals. <i>Bhadai</i> paddy is being reaped. <i>Amun</i> paddy growing well. <i>Til</i> , sugarcane and jute progressing. Public health good.   |
|                           | Jhenidah ..                  | 1.33                                  |   |
|                           | Mugdaha ..                   | 0.87                                  | Slight rain during the week. About four annas of <i>bhadai</i> paddy and ten annas of jute harvested. Transplantation of <i>kaimati</i> paddy about three-fourths done. Rice 18 to 26 seers per rupee.  |
|                           | 10 Moorhedabad ..            | 0.70                                  |   |
|                           | Lalbagh ..                   | 0.65                                  | Weather—hot and generally cloudless. Cutting of <i>aus</i> paddy continues. Prospects of crops continue good. Public health generally fair.   |
|                           | 11 Dinagepore ..             | 0.21                                  |   |
|                           | Thakurgaon ..                | 0.89                                  | Weather—hot and still. Crops promising fairly. Public health good.  |
|                           | 12 Rajshahye ..              | 0.52                                  |   |
|                           | Nattore ..                   | 1.85                                  | Weather—dry and close. State and prospects of standing crops satisfactory, but more rain wanted. Public health fair. No cases of cow-pox reported from thana Sherpur.   |
|                           | 13 Rangpore ..               | 3.34                                  |   |
| <b>DACCA DIVISION.</b>    | 13 Rangpore ..               | 0.18                                  | Weather—very hot. Prospects of crops good. Public health good.  |
|                           | Nilphamari ..                | 0.34                                  |   |
|                           | 14 Bogra ..                  | 0.12                                  | Weather—seasonable. State and prospects of crops good.  |
|                           | Sherpur ..                   | 1.39                                  |   |
|                           | 15 Pabna ..                  | 1.26                                  | Weather—hot and cloudy with occasional showers. Transplantation of winter paddy still going on. More rain wanted. Sugarcane doing well. Reaping of <i>bhadai</i> continues. Cattle-disease prevalent in some places. Public health good.  |
|                           | Nowgong ..                   | 1.74                                  |   |
|                           | 16 Darjeeling ..             | 1.92                                  | Weather—mostly cloudy with rain. <i>Aus</i> paddy and jute are being harvested. Transplantation of winter crops going on. Rivers rising. Prospects of crops improving. Public health good.  |
|                           | 17 Jalpigoree ..             | 1.36                                  |   |
|                           | 18 Dacca. Aug. 27, '87       | 2.99                                  | Weather—seasonable. <i>Aus</i> harvested. <i>Amun</i> doing well. Jute-steeping commenced. Public health good.  |
|                           | Manickgunge ..               | 1.91                                  |   |
| <b>Dacca Division.</b>    | 19 Furreedpore ..            | 2.21                                  | Weather—very hot. Cultivation of <i>amun</i> crop continues; prospects favourable. Rain wanted. General health fair.  |
|                           | Gadaiundo ..                 | 2.42                                  |   |
|                           | 20 Backergunge ..            | 2.29                                  | Rain every day. Weather cool. Harvesting of <i>aus</i> rice and transplanting of <i>amun</i> rice proceeding. Prospects good.   |
|                           | Madaripore ..                | 3.46                                  |   |
|                           | 21 Mymensingh ..             | 2.40                                  |   |
|                           | Jamalpur ..                  | 2.48                                  |   |
|                           | Kishorigunge ..              | 1.45                                  |   |
|                           | Attea ..                     | 1.52                                  |   |
|                           | Netrokona ..                 | 1.48                                  |   |
|                           |                              | 4.93                                  |   |

| No.                             | District and date of return.         | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|---------------------------------|--------------------------------------|---------------------------------------|--|
| <b>BENGAL—contd.</b>            |                                      |                                       |  |
| <i>Eastern Districts—contd.</i> |                                      |                                       |  |
| CHITTAGONG DIV.                 | 22 Chittagong, Aug. 30, '87          | 1.29                                  | Weather—seasonable. <i>Ass</i> still being harvested and <i>amun</i> transplanted. Rain still wanted. Prices stationary. Cholera reported. Public health fair.   |
|                                 | 23 Noakhally " 26, "                 | 4.85                                  | Weather—seasonable. Reaping of <i>ass</i> nearly finished; outturn on the whole fair. Transplantation of <i>amun</i> continues. Public health fair.  |
|                                 | 24 Fenny " " "                       | 4.56                                  | Weather—seasonable, but still not anything like sufficient rain. Prospects of crops excellent down to the present time. Transplantation of <i>amun</i> is in full swing, but very much more rain still wanted.   |
|                                 | 25 Tipperah " 25, '87                | 2.92                                  | Weather—cloudy and rainy with occasional sunshine throughout the week. <i>Jum</i> paddy progressing. Transplanting in low lands still continues. Fever prevalent.  |
|                                 | 26 Brahmanbariah " " "               | 1.79                                  | Weather—hot. More rain wanted. Transplantation of <i>amun</i> paddy still continues. Sugarcane doing well. Prospects of <i>jum</i> crops fair. Fever disappearing. Public health generally good.   |
|                                 | 26 Chittagong Hill Tracts, " 23, '87 | 1.36                                  | Weather—occasionally cloudy. Prospects of <i>bhadoi</i> continue very favourable. <i>Jowar</i> , <i>flax</i> , and <i>rahar</i> growing well. Transplantation of rice seedlings suffering for want of rain. Cholera still reported from Behar and Dinapore.  |
| PATNA DIV.                      | Hill Tipperah " 24, "                | 2.26                                  | Weather—cloudy. Prospects of both <i>bhadoi</i> and <i>aghani</i> good. Cholera decreasing. A few cases of fever and small-pox.  |
|                                 | 86 Patna, Aug. 27, '87               | 0.15                                  | Weather—fair and cloudy alternately with occasional drizzle. Transplanting of paddy progressing vigorously all over the district, but more rain wanted. <i>Bhadoi</i> crops and sugarcane look promising and prospects good. Cholera not yet disappeared. Public health generally good. Prices stationary.   |
|                                 | Barh " " "                           | 0.05                                  | Weather—cloudy. Prospects of <i>bhadoi</i> favourable. <i>Makai</i> and <i>marua</i> begun to be harvested in some places. Indigo manufacture is in progress. Prices stationary. Public health generally good.   |
|                                 | 87 Gya, " 27, "                      | 0.80                                  | Weather—hot and cloudy. Harvesting of <i>bhadoi</i> crops begun in places. Prospects of standing crops fair. Cholera still reported from the interior.   |
|                                 | 88 Shahabad " 27, "                  | 0.36                                  | Weather—hot with occasional clouds. Prospects of crops continue good. River rising and danger to <i>deara</i> crops apprehended. Cholera still had in the amofussil and in the Chupra town. No cattle-disease reported.  |
|                                 | 88 Sasseram " " "                    | 0.14                                  | Weather—hot in the beginning of the week; cool in the end. Clouds hanging. Prospect of crops good. New <i>makai</i> has begun to come into the market. More rain wanted in some parts of the district. Prices fluctuating. Public health improving.  |
| BHAGALPORE DIV.                 | 89 Durbhanga " 27, "                 | 0.35                                  | Weather—sultry and generally cloudy. State and prospects of standing crops good, but more rain very much wanted for transplantation of winter rice still remaining to be completed. Reaping of <i>makai</i> going on everywhere with fair outturn. Cholera much abated in the interior, but a few new cases have occurred in the Monghyr town and Khurda-pore. |
|                                 | 80 Mozufferpore " 27, '87            | 0.90                                  | Weather—sultry. Harvesting of <i>marua</i> and early rice begun; outturn of former likely to disappoint expectations. Prospects of late rice good, but rain wanted.  |
|                                 | 81 Hajipur " " "                     | 0.67                                  | Weather—cloudy and showery with intervals of great heat. Crops promising. <i>Aghani</i> transplantation is being rapidly pushed on. <i>Bhadoi</i> cut in places with fair outturn.   |
|                                 | 81 Sitamarhi " " "                   | 2.52                                  | Weather—hot, dry and generally fine. Harvesting of <i>bhadoi</i> paddy going on with good outturn. Winter paddy thriving, and is still being transplanted. Common rice 21 seers per rupee. Public health generally good.   |
|                                 | 81 Saran " 27, "                     | 0.46                                  | Weather—hot and sunny, except last two days, which were cloudy. More rain wanted for transplanting of paddy. Indian-corn promises a fair outturn on the whole. General health good.  |
|                                 | 81 Sewan " " "                       | 0.38                                  |  |
| OKINHA.                         | 81 Gopalgungo " " "                  | 0.72                                  |  |
|                                 | 82 Chunarwan " 27, "                 | 1.00                                  |  |
|                                 | 82 Bettiah " " "                     | 0.43                                  |  |
|                                 | 83 Monghyr, Aug. 27, '87             | 0.70                                  |  |
|                                 | 83 Begusarai " " "                   | 0.59                                  |  |
|                                 | 83 Jamui " " "                       | 0.92                                  |  |
| OBIDIA DIV.                     | 84 Bhagulpore " 27, "                | 1.08                                  |  |
|                                 | 85 Purneah " 27, "                   | 1.43                                  |  |
|                                 | 85 Kishengunge " " "                 | 3.01                                  |  |
|                                 | 85 Arrareah " " "                    | 1.94                                  |  |
|                                 | 86 Maldah " 27, "                    | 0.70                                  |  |
|                                 | 86 Chanchal " " "                    | 0.57                                  |  |
| CHOTA NAGPORE.                  | 86 Yilgungo " " "                    | 0.60                                  |  |
|                                 | 86 Gajole " " "                      | 0.80                                  |  |
|                                 | 87 Santal Pargana, " 27, "           | 2.65                                  |  |
|                                 | 87 Deoghur " " "                     | 0.98                                  |  |
|                                 | 87 Godda " " "                       | 1.17                                  |  |
|                                 | 87 Pakour " " "                      | 1.26                                  |  |
| SOUTH-WEST FRONTIER AGENCIES.   | 87 Rajmehal " " "                    | 1.64                                  |  |
|                                 | 88 Cuttack, Aug. 26, '87             | 3.77                                  | Weather—fair. <i>Beali</i> rice in ear and in some places ripening. <i>Sarad</i> rice weeded and growing well. Prospect of rice crops satisfactory. Price of rice unchanged. Public health generally good except that a few cases of cholera reported from the interior. Rivers rising again.  |
|                                 | 89 Poirat " 25, "                    | 2.49                                  | Weather—cloudy with very little rain. Weeding and transplantation of <i>sarad</i> crop going on. <i>Beali</i> is being harvested. Common rice 24 seers 1 chittack per rupee in the sudder sub-division and 18 seers 15 chittacks in the Khorda sub-division. Cases of cholera still reported.  |
|                                 | 89 Khorda " " "                      | 2.97                                  | Weather—hot and cloudy. <i>Beali</i> crop in flower. Weeding and transplanting of <i>sarad</i> crop going on. Prospects of crops generally good. A few cases of cholera still reported. Public health good.  |
|                                 | 40 Balasore " 26, "                  | 2.43                                  |  |
|                                 |                                      |                                       |  |
| SOUTH-WEST FRONTIER AGENCIES.   | 41 Hazaribagh, Aug. 26, '87          | 1.35                                  | Weather—bright. Moderate rain; more rain wanted in some parts of the district. Transplanting of rice completed over the greater part of the district. All crops doing well. General health fair.   |
|                                 | 42 Lohardugga " 27, "                | 1.79                                  | Weather—seasonable. Fair amount of rain during the week. Prospects of crops continue favourable. Prices as before. Cholera still prevails; otherwise general health good.  |
|                                 | 42 Palamow " " "                     | 0.50                                  | Weather—cool. Some showers. Prospects of crops good. Showers during the week were much needed and did great good. General health good.   |
|                                 | 43 Singbhoom " 26, "                 | 1.99                                  | Weather—cool, with rain towards the end of the week. Prospects of all crops good. Public health good, except at Paru, where there is fever.  |
|                                 | 44 Manbhoom " 27, "                  | 3.24                                  |  |
|                                 | 44 Govindpore " " "                  | 0.36                                  |  |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 30th August 1887.W. C. MACPHERSON,  
Offg. Secy. to the Govt. of Bengal.

# Meteorological Report of the Province of

| METEOROLOGICAL DIVISIONS. | DISTRICT.                 | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|---------------------------|---------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------|-----------|---------------------|-----------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|
|                           |                           |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.         |           |                     |                 |                           |                                   |                                 |                                     |
|                           |                           |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week. | Date.     | Lowest during week. | Date.           | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. |
| ORISSA.                   | Pooree                    | Gopalpore               | 29.633                          | 29.683                     | -.007                | SW                    | 288                 | 88.2                 | 26th Aug. | 79.8                | 20th Aug.       | 86.3                      | 80.7                              | 83.5                            | +0.1                                |
|                           |                           | False Point             | 29.667                          | 29.686                     | -.017                | WSW                   | 285                 | 91.5                 | 26th "    | 74.6                | 23rd "          | 86.1                      | 77.9                              | 82.0                            | -0.1                                |
|                           | Cuttack                   | Cuttack                 | 29.598                          | 29.679                     | -.012                | Calm, SW              | 52                  | 95.4                 | 26th "    | 76.8                | 20th, 23rd Aug. | 88.4                      | 78.3                              | 83.4                            | -0.1                                |
|                           | Balasore                  | Balasore                | 29.610                          | 29.689                     | -.011                | S                     | 115.6               | 90.4                 | 26th "    | 74.8                | 21st, 22nd Aug. | 87.0                      | 76.8                              | 81.9                            | 0                                   |
|                           | South-West Midnapore      | Saugor Island           | 29.656                          | 29.682                     | -.021                | SSW                   | 357                 | 90.2                 | 20th "    | 76.5                | 22nd "          | 87.0                      | 80.0                              | 83.5                            | +0.1                                |
| SOUTH-WEST BENGAL.        | South 24-Pergunnahs       | Midnapore               | 29.542                          | 29.692                     | -.004                | S                     | 97.6                | 91.3                 | 25, 26 "  | 76.8                | 22nd, 23rd Aug. | 89.3                      | 78.1                              | 83.7                            | +0.1                                |
|                           | 24-Pergunnahs             |                         |                                 |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|                           | Howrah                    | Calcutta                | 29.650                          | 29.672                     | -.039                | SSE                   | 117.0               | 89.5                 | 26th Aug. | 76.7                | 23rd, 23rd Aug. | 86.3                      | 78.3                              | 82.6                            | +0.3                                |
|                           | Hooghly                   |                         |                                 |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|                           | Burdwan                   | Burdwan                 | 29.573                          | 29.673                     | -.027                | SE                    | 53                  | 91.6                 | 20, 25 "  | 78.4                | 22, 23, 24 "    | 89.8                      | 79.5                              | 84.7                            | +0.3                                |
|                           | Bankoora                  | Bankoora                | 29.585                          | -                          | -                    | SE*                   | 40*                 | 91.1                 | 26th "    | 76.6                | 23rd, 24th Aug. | 88.3                      | 77.7                              | 83.0                            | -                                   |
|                           | Beerbhoom                 | Raneegunge              | 29.531                          | 29.638                     | -.012                | Variable              | 112.0               | 91.5                 | 26th "    | 76.4                | 24th Aug.       | 89.0                      | 77.8                              | 83.4                            | +0.3                                |
|                           | West Burdwan              |                         |                                 |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|                           | Mooredabad                | Berhampore              | 29.615                          | 29.682                     | -.024                | E. & Southerly ESE    | 117.4               | 91.7                 | 26th "    | 77.3                | 23rd "          | 88.3                      | 78.9                              | 83.6                            | -0.2                                |
|                           | Nuddea                    | Krishnagur              | 29.617                          | 29.683                     | -                    |                       | 139.5               | 90.8                 | 25, 26 "  | 76.3                | 24th "          | 89.2                      | 77.8                              | 83.5                            | -                                   |
| EAST BENGAL.              | Jessore                   | Jessore                 | 29.682                          | 29.696                     | -.019                | Southerly             | 93.4                | 92.8                 | 26th "    | 77.4                | 22nd, 24th Aug. | 89.1                      | 78.9                              | 84.0                            | +0.4                                |
|                           | Khoolna                   |                         |                                 |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|                           | Chittagong                | Chittagong              | 29.678                          | 29.765                     | +0.10                | SSE                   | 134.0               | 87.6                 | 26th "    | 71.0                | 26th "          | 86.1                      | 75.4                              | 80.8                            | -0.6                                |
|                           | Chittagong Hill Tracts    | Demagiri                |                                 |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|                           | Backergunge               | Barisal                 | 29.691                          | 29.708                     | +0.10                | SE                    | 135.6               | 90.3                 | 26th "    | 75.9                | 26th, 21st Aug. | 86.5                      | 77.8                              | 82.2                            | +1.3                                |
|                           | Noakholly                 | Noakholly               | 29.678                          | 29.720                     | -                    | SE                    | 53.3                | 86.5                 | 26th "    | 75.8                | 23rd "          | 85.7                      | 78.0                              | 81.8                            | -                                   |
|                           | Furzedpore                | Furzedpore              | 29.675                          | 29.716                     | +0.12                | S                     | 128.7               | 88.0                 | 26th "    | 74.9                | 23rd Aug.       | 86.4                      | 77.4                              | 81.9                            | -0.7                                |
|                           | Dacca                     | Dacca                   | 29.689                          | 29.712                     | +0.02                | SSE                   | 147.0               | 89.1                 | 22, 26 "  | 77.6                | 21st "          | 87.9                      | 78.7                              | 83.3                            | -0.1                                |
|                           | Commillah                 | Commillah               | 29.694                          | 29.729                     | +0.14                | SE                    | 88.1                | 89.4                 | 26th "    | 75.8                | 21, 23, 24 "    | 87.7                      | 76.5                              | 82.1                            | +0.0                                |
|                           | Mymensingh                | Mymensingh              | 29.693                          | 29.742                     | +0.30                | E                     | 108.0               | 89.3                 | 26th "    | 76.1                | 21st, 23rd Aug. | 87.2                      | 77.6                              | 82.4                            | -0.4                                |
| NORTH BENGAL.             | Bogra                     | Bogra                   | 29.618                          | 29.681                     | -                    | E                     | 102.7               | 91.8                 | 26th "    | 75.8                | 24th "          | 88.4                      | 78.0                              | 83.1                            | -                                   |
|                           | Pubna                     | Serajgunge              | 29.658                          | 29.704                     | +0.01                | E, SE                 | 98.9                | 89.6                 | 22nd "    | 77.3                | 22, 23 "        | 88.3                      | 78.6                              | 83.5                            | +0.6                                |
|                           | Rajahmhye                 | Rampore Beau-leah.      | 29.612                          | 29.682                     | +0.06                | E, SW                 | 114.1               | 91.3                 | 26th "    | 74.6                | 21st "          | 88.0                      | 76.3                              | 82.1                            | -0.3                                |
|                           | Maldah                    | Maldah                  | 29.521                          | -                          | -                    | NE                    | -                   | 92.6                 | 21st "    | 77.4                | 23rd "          | 90.1                      | 79.2                              | 84.7                            | -                                   |
|                           | Dinapore                  | Dinapore                | 29.588                          | 29.706                     | +0.03                | ESE                   | 43.5                | 90.6                 | 26th "    | 77.6                | 23, 24 "        | 89.2                      | 79.0                              | 84.1                            | +0.5                                |
|                           | Rungpore                  | Rungpore                | 29.596                          | 29.710                     | +0.16                | SE                    | 72.0                | 91.3                 | 21st "    | 77.3                | 23, 24 "        | 89.7                      | 78.4                              | 84.1                            | +0.9                                |
|                           | Julpigoree                | Julpigoree              | 29.441                          | 29.729                     | +0.046               | NE                    | 90.3                | 90.0                 | 22, 26 "  | 74.6                | 23, 24 "        | 88.4                      | 78.9                              | 82.2                            | -0.7                                |
|                           | Oooch Behar               |                         |                                 |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|                           | Darjeeling Hill Districts | Darjeeling              | 29.546                          | -                          | +0.06                | Calm                  | 45.0                | 68.1                 | 26th "    | 54.6                | 23rd "          | 64.4                      | 56.2                              | 60.3                            | -1.3                                |
|                           | Purneah                   | Purneah                 | 29.576                          | 29.701                     | +0.13                | Calm                  | 25.2                | 92.2                 | 22nd "    | 75.6                | 23th "          | 88.6                      | 77.5                              | 83.1                            | -1.1                                |
| SOUTH BENGAL.             | North Bhagulpore          |                         |                                 |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|                           | Mozufferpore              | Mozufferpore            |                                 |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|                           | Durbhunga                 | Durbhunga               | 29.510                          | 29.677                     | -.006                | ESE                   | 151.0               | 91.9                 | 26th "    | 78.0                | 23rd "          | 89.5                      | 80.2                              | 84.9                            | +1.0                                |
|                           | Chumparan                 | Motihari                | 29.442                          | 29.608                     | +0.05                | SE, SSE               | 2.6.7               | 92.2                 | 26th "    | 77.4                | 23rd "          | 89.4                      | 78.5                              | 84.0                            | +0.4                                |
|                           | Barua                     | Chupra                  | 29.401                          | 29.651                     | -.006                | E                     | 16.7                | 94.8                 | 26th "    | 77.0                | 24th "          | 91.0                      | 79.3                              | 83.2                            | +0.9                                |
|                           | Shahabad                  | Dehra                   | 29.329                          | 29.682                     | +0.21                | South-easterly.       | 191.2               | 89.4                 | 26, 26 "  | 75.0                | 24th "          | 88.3                      | 78.6                              | 83.4                            | +0.6                                |
|                           |                           | Buxar                   | 29.408                          | 29.636                     | -.011                | E                     | 208.4               | 91.9                 | 21st "    | 76.7                | 24th "          | 89.3                      | 78.7                              | 84.0                            | 0                                   |
|                           |                           | Arrah                   | 29.542                          | 29.638                     | -.018                | E                     | 122.9               | 91.9                 | 21, 26 "  | 77.6                | 23rd "          | 90.3                      | 79.3                              | 84.8                            | -0.6                                |
|                           | Gya                       | Gya                     | 29.258                          | 29.636                     | -.050                | North-easterly.       | 98.0                | 93.4                 | 26th "    | 76.3                | 23rd "          | 90.8                      | 78.4                              | 84.6                            | +0.4                                |
|                           | Patna                     | Bankipore               | 29.485                          | 29.668                     | -.016                | E                     | 113.0               | 90.9                 | 26th "    | 75.7                | 23rd "          | 90.3                      | 80.1                              | 85.2                            | +0.7                                |
| ASSAM.                    | South Bhagulpore          | Bhagulpore              | 29.493                          | 29.655                     | -.012                | E                     | 70.0                | 89.4                 | 26th "    | 77.0                | 23rd "          | 88.8                      | 79.1                              | 84.0                            | -0.1                                |
|                           | Monghyr                   |                         |                                 |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|                           | Sonthal Pergunnahs        | Doonka                  | 29.158                          | -                          | -                    | ESE                   | 39.7                | 91.6                 | 26th "    | 76.7                | 22, 23 "        | 89.3                      | 77.4                              | 83.4                            | -                                   |
|                           | Hazaribagh                | Hazaribagh              | 27.671                          | 29.696                     | -.014                | South-easterly.       | 204.0               | 86.3                 | 26th "    | 70.7                | 23, 25 "        | 83.6                      | 71.7                              | 77.8                            | -0.3                                |
|                           | Lohardugga                | Ranchee                 | 27.541                          | 29.646                     | -.025                | SSE                   | 186.9               | 85.3                 | 26th "    | 69.4                | 24th "          | 81.9                      | 70.7                              | 76.3                            | -0.5                                |
|                           | Manbhoom                  |                         |                                 |                            |                      |                       |                     |                      |           |                     |                 |                           |                                   |                                 |                                     |
|                           | Singbhoom                 | Chyabansa               | 28.901                          | -                          | -                    | Southerly             | 54.3                | 89.9                 | 21st "    | 74.3                | 23rd "          | 87.4                      | 75.6                              | 81.5                            | -                                   |
|                           |                           | Sibsagar                | 29.429                          | 29.763                     | +0.001               | SW                    | 65.0                | 90.6                 | 20, 26 "  | 74.5                | 23rd "          | 89.6                      | 77.2                              | 83.4                            | +0.1                                |
|                           | Assam                     | Dhubr                   | 29.618                          | 29.734                     | +0.006               | Calm                  | 127.0               | 90.3                 | 26th "    | 76.8                | 22, 24 "        | 87.9                      | 78.1                              | 83.0                            | -0.2                                |
|                           |                           | Silchar                 | 29.686                          | 29.792                     | -.009                | E                     | 72.0                | 93.5                 | 22, 23 "  | 74.3                | 21, 23 "        | 91.5                      | 76.3                              | 85.9                            | +1.0                                |

Representation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the past years. The humidity of the atmosphere is expressed as percentage, saturated air being represented by 100. A clear sky is denoted by C and an overcast sky by O. The rainfall is the numerical means or average of the rainfall in that district determined from the returns sent in by the sub-divisional stations for the period in question during the year. A rainy day is one on which at least 0.01 inch of rain has fallen.



for the week ending Friday, the 26th August 1887.

| DISTRICT OBSERVATIONS.      |   |  |                    |              |                    |                     |            |                    |                      |            |     |                               |                              |                            | Representative station.      | DISTRICT.          | METEOROLOGICAL VISION. |
|-----------------------------|---|--|--------------------|--------------|--------------------|---------------------|------------|--------------------|----------------------|------------|-----|-------------------------------|------------------------------|----------------------------|------------------------------|--------------------|------------------------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | RAINFALL.          |              |                    |                     |            |                    |                      |            |     |                               |                              |                            |                              |                    |                        |
|                             |   |  | Of week.           |              |                    | Since 1st of month. |            |                    | Since 15th May 1887. |            |     | Average number of rainy days. | Normal number of rainy days. |                            |                              |                    |                        |
|                             |   |  | Mean for district. | Normal mean. | Mean for district. | Normal mean.        | Variation. | Mean for district. | Normal mean.         | Variation. |     |                               |                              |                            |                              |                    |                        |
| 78                          | 4.9                                       | 0.35                                   | —                  | —            | —                  | —                   | —          | —                  | —                    | —          | —   | —                             | —                            | Gopalpore ...              | Pooree ...                   | Orissa.            |                        |
| 81                          | 7.4                                       | 0.73                                   | —                  | 2.42         | —                  | 10.26               | —          | —                  | 32.82                | —          | —   | 4.5                           | —                            | False Point ...            | Cuttack ...                  |                    |                        |
| 78                          | 8.3                                       | 3.40                                   | —                  | 2.40         | —                  | 9.51                | —          | —                  | 33.55                | —          | —   | 4.4                           | —                            | Cuttack ...                | Balasore ...                 |                    |                        |
| 81                          | 5.9                                       | 3.04                                   | —                  | 2.27         | —                  | 10.43               | —          | —                  | 33.40                | —          | —   | 4.2                           | —                            | Balasore ...               | South-West Midnapore ...     |                    |                        |
| 83                          | 9.0                                       | 3.56                                   | 2.33               | 3.55         | 8.41               | 12.77               | —4.36      | 36.90              | 40.21                | —3.22      | 4.0 | 4.6                           | —                            | Rangor Island ...          | South 24-Pargunnahs ...      | SOUTH-WEST BENGAL. |                        |
| 74                          | 4.0                                       | 3.03                                   | 2.01               | 3.76         | 9.35               | 12.50               | —3.15      | 30.66              | 36.36                | +5.30      | 3.3 | 4.1                           | —                            | Midnapore ...              | Midnapore ...                |                    |                        |
| 81                          | 8.6                                       | 2.42                                   | 1.78               | 2.93         | 7.54               | 11.72               | —4.18      | 30.13              | 36.81                | —6.68      | 4.2 | 4.8                           | —                            | Calcutta ...               | Howrah ...                   |                    |                        |
| 73                          | 7.7                                       | 1.84                                   | 1.40               | 2.77         | 7.03               | 10.75               | —3.72      | 34.84              | 32.40                | +2.35      | 3.3 | 3.9                           | —                            | Burdwan ...                | Burdwan ...                  |                    |                        |
| 78                          | 6.9                                       | 1.32                                   | 1.60               | 3.22         | 13.63              | 12.38               | +3.25      | 42.22              | 37.10                | +5.06      | 3.5 | 4.6                           | —                            | Bankoora ...               | Bankoora ...                 | SOUTH-WEST BENGAL. |                        |
| 77                          | 7.3                                       | 2.79                                   | 1.71               | 2.86         | 9.59               | 11.46               | —1.87      | 36.01              | 36.21                | +0.40      | 3.3 | 4.8                           | —                            | Raneegunge ...             | Beerbhoom ...                |                    |                        |
| 82                          | 8.6                                       | 0.70                                   | 1.33               | 2.39         | 9.40               | 10.18               | —0.72      | 43.19              | 32.57                | +10.62     | 3.3 | 4.1                           | —                            | Berhampore ...             | West Burdwan ...             |                    |                        |
| 76                          | 2.4                                       | 0.64                                   | 1.31               | 2.82         | 7.40               | 10.89               | —3.29      | 28.78              | 34.31                | —5.55      | 4.0 | 3.9                           | —                            | Krishnagpur ...            | Moorsheadabad ...            |                    |                        |
| 83                          | 8.0                                       | 2.33                                   | 1.87               | 2.68         | 7.33               | 11.11               | —3.78      | 27.29              | 38.32                | —11.03     | 4.5 | 4.0                           | —                            | Jessore ...                | Nuddea ...                   | SOUTH-WEST BENGAL. |                        |
| 81                          | 9.1                                       | 1.15                                   | —                  | 4.59         | —                  | 21.67               | —          | —                  | 38.57                | —          | —   | 4.6                           | —                            | Chittagong ...             | Jessore ...                  |                    |                        |
| 80                          | 8.7                                       | 2.33                                   | 2.10               | 3.14         | 9.53               | 14.01               | —4.48      | 38.34              | 55.85                | —17.51     | 5.8 | 5.3                           | —                            | Chittagong ...             | Khoolna ...                  |                    |                        |
| 86                          | 4.3                                       | 3.07                                   | 4.55               | 5.08         | 20.09              | 22.15               | —1.46      | 53.30              | 79.84                | —25.94     | 6.5 | 5.0                           | —                            | Chittagong Hill Tracts ... | Backergunge ...              |                    |                        |
| 86                          | 4.7                                       | 2.36                                   | 2.83               | 2.67         | 6.73               | 10.70               | —3.97      | 26.78              | 39.66                | —12.88     | 4.3 | 4.4                           | —                            | Noakholly ...              | Noakholly ...                | EAST BENGAL.       |                        |
| 81                          | 6.6                                       | 4.40                                   | 2.51               | 2.44         | 7.30               | 11.27               | —3.97      | 30.02              | 42.31                | —12.79     | 5.3 | 4.4                           | —                            | Furteedpore ...            | Furteedpore ...              |                    |                        |
| 77                          | 6.0                                       | 3.26                                   | —                  | 3.33         | —                  | 14.56               | —          | —                  | 50.74                | —          | —   | 5.0                           | —                            | Dacca ...                  | Dacca ...                    |                    |                        |
| 86                          | 8.7                                       | 2.86                                   | 2.41               | 2.88         | 8.73               | 11.50               | —2.86      | 45.33              | 45.47                | —0.14      | 4.6 | 4.5                           | —                            | Commillah ...              | Tipperah ...                 |                    |                        |
| 85                          | 9.4                                       | 1.73                                   | 1.33               | 2.47         | 6.69               | 9.09                | —2.30      | 44.35              | 39.19                | +5.16      | 5.0 | 3.9                           | —                            | Mymensingh ...             | Mymensingh ...               | EAST BENGAL.       |                        |
| 84                          | 7.0                                       | 1.27                                   | 1.64               | 3.16         | 6.25               | 10.42               | —4.19      | 30.66              | 36.10                | —5.34      | 5.0 | 3.9                           | —                            | Bogra ...                  | Bogra ...                    |                    |                        |
| 80                          | 4.3                                       | 1.73                                   | 1.71               | 2.67         | 9.22               | 10.07               | —0.85      | 34.08              | 35.18                | —1.10      | 3.0 | 4.3                           | —                            | Serajgunge ...             | Pubna ...                    |                    |                        |
| 79                          | 4.6                                       | 0.70                                   | 0.89               | 2.79         | 5.34               | 10.01               | —4.67      | 34.27              | 36.00                | —2.33      | 3.5 | 4.9                           | —                            | Rampore Beaulah ...        | Rajshahye ...                |                    |                        |
| 81                          | 8.3                                       | 0.12                                   | 1.64               | 2.65         | 12.02              | 9.87                | +2.15      | 54.28              | 38.80                | +15.48     | 4.2 | 4.2                           | —                            | Maldah ...                 | Maldah ...                   | NORTH BENGAL.      |                        |
| 80                          | 4.6                                       | 0.19                                   | 0.46               | 2.67         | 11.69              | 9.85                | +1.74      | 63.88              | 51.78                | +12.10     | 2.3 | 3.7                           | —                            | Dinapore ...               | Dinapore ...                 |                    |                        |
| 85                          | 7.1                                       | 2.17                                   | 2.63               | 4.45         | 21.07              | 18.04               | +3.03      | 87.59              | 77.52                | +10.07     | 5.0 | 4.0                           | —                            | Rungpore ...               | Rungpore ...                 |                    |                        |
| 86                          | 9.1                                       | 3.09                                   | 4.06               | 5.74         | 25.51              | 24.31               | +1.30      | 90.64              | 82.03                | +8.61      | 6.0 | 5.7                           | —                            | Julpigoree ...             | Julpigoree ...               |                    |                        |
| 83                          | 5.3                                       | 1.43                                   | 2.03               | 3.22         | 13.72              | 11.13               | +2.59      | 49.22              | 38.79                | +10.43     | 4.0 | 4.0                           | —                            | Cooch Behar ...            | Cooch Behar ...              | NORTH BENGAL.      |                        |
| 83                          | —   | —                                      | 0.53               | 1.66         | 11.47              | 8.23                | +3.21      | 36.23              | 22.20                | +14.03     | 3.0 | 3.3                           | —                            | Darjeeling ...             | Darjeeling Hill District ... |                    |                        |
| 75                          | 7.9                                       | 1.16                                   | 0.72               | 2.16         | 9.36               | 10.13               | —0.78      | 31.46              | 31.19                | +0.29      | 2.0 | 3.0                           | —                            | Purneah ...                | Purneah ...                  |                    |                        |
| 73                          | 5.7                                       | 0.50                                   | 0.53               | 1.31         | 8.82               | 8.18                | +0.64      | 27.52              | 25.17                | +2.35      | 1.7 | 3.1                           | —                            | North Bhagulpore ...       | North Bhagulpore ...         |                    |                        |
| 73                          | 3.2                                       | 0.18                                   | —                  | —            | —                  | —                   | —          | —                  | —                    | —          | —   | —                             | —                            | Mosufferpore ...           | Mosufferpore ...             | NORTH BENGAL.      |                        |
| 73                          | 6.4                                       | 1.79                                   | 0.54               | 2.03         | 10.66              | 9.71                | +0.95      | 27.47              | 27.27                | +0.20      | 2.5 | 3.5                           | —                            | Durbhunga ...              | Durbhunga ...                |                    |                        |
| 73                          | 5.7                                       | 0.36                                   | —                  | —            | —                  | —                   | —          | —                  | —                    | —          | —   | —                             | —                            | Chumpran ...               | Chumpran ...                 |                    |                        |
| 71                          | 6.1                                       | 2.00                                   | 0.50               | 3.18         | 8.67               | 10.34               | —1.67      | 28.79              | 29.28                | —0.49      | 2.7 | 3.1                           | —                            | Chupra ...                 | Chupra ...                   |                    |                        |
| 84                          | 9.3                                       | 0.15                                   | 0.09               | 2.72         | 6.27               | 9.22                | —2.95      | 27.62              | 28.96                | —1.34      | 1.5 | 3.4                           | —                            | Dehree ...                 | Dehree ...                   | NORTH BENGAL.      |                        |
| 73                          | 3.6                                       | 1.06                                   | 0.66               | 2.66         | 8.22               | 9.03                | —1.40      | 32.68              | 29.54                | +3.14      | 2.2 | 3.0                           | —                            | Buxar ...                  | Buxar ...                    |                    |                        |
| 76                          | 5.4                                       | 2.12                                   | 2.33               | 2.68         | 10.07              | 10.31               | —0.24      | 40.90              | 34.24                | +6.66      | 4.0 | 4.0                           | —                            | Arrah ...                  | Arrah ...                    |                    |                        |
| 80                          | 9.0                                       | 1.44                                   | 1.61               | 3.14         | 11.18              | 11.04               | —0.16      | 36.44              | 34.95                | +1.49      | 3.8 | 4.7                           | —                            | Gya ...                    | Gya ...                      |                    |                        |
| 85                          | 9.4                                       | 1.79                                   | 1.55               | 3.01         | 10.16              | 11.56               | —1.40      | 34.43              | 33.33                | +1.11      | 3.5 | 4.3                           | —                            | Bankipore ...              | Bankipore ...                | SOUTH BENGAL.      |                        |
| 77                          | 8.6                                       | 2.12                                   | 2.31               | 2.94         | 12.40              | 12.31               | +0.09      | 41.38              | 37.82                | +3.56      | 5.0 | 4.6                           | —                            | South Bhagulpore ...       | South Bhagulpore ...         |                    |                        |
| 80                          | 9.3                                       | 5.93                                   | —                  | —            | —                  | —                   | —          | —                  | —                    | —          | —   | —                             | —                            | Monghyr ...                | Monghyr ...                  |                    |                        |
| 84                          | 8.0                                       | 0.29                                   | —                  | —            | —                  | —                   | —          | —                  | —                    | —          | —   | —                             | —                            | Dumka ...                  | Dumka ...                    |                    |                        |
| 81                          | 8.3                                       | 3.04                                   | —                  | —            | —                  | —                   | —          | —                  | —                    | —          | —   | —                             | —                            | Hasaribagh ...             | Hasaribagh ...               | SOUTH BENGAL.      |                        |
| 85                          | 9.4                                       | 1.79                                   | 1.55               | 3.01         | 10.16              | 11.56               | —1.40      | 34.43              | 33.33                | +1.11      | 3.5 | 4.3                           | —                            | Lohardugga ...             | Lohardugga ...               |                    |                        |
| 77                          | 8.6                                       | 2.12                                   | 2.31               | 2.94         | 12.40              | 12.31               | +0.09      | 41.38              | 37.82                | +3.56      | 5.0 | 4.6                           | —                            | Manbhoom ...               | Manbhoom ...                 |                    |                        |
| 80                          | 9.3                                       | 5.93                                   | —                  | —            | —                  | —                   | —          | —                  | —                    | —          | —   | —                             | —                            | Singhoom ...               | Singhoom ...                 |                    |                        |
| 84                          | 8.0                                       | 0.29                                   | —                  | —            | —                  | —                   | —          | —                  | —                    | —          | —   | —                             | —                            | Ohyebassa ...              | Ohyebassa ...                | SOUTH BENGAL.      |                        |
| 81                          | 8.3                                       | 3.04                                   | —                  | —            | —                  | —                   | —          | —                  | —                    | —          | —   | —                             | —                            | Sibsagar ...               | Sibsagar ...                 |                    |                        |
|                             |   |  |                    |              |                    |                     |            |                    |                      |            |     |                               |                              | Dhubri ...                 | Dhubri ...                   |                    |                        |
|                             |   |  |                    |              |                    |                     |            |                    |                      |            |     |                               |                              | Silchar ...                | Silchar ...                  |                    |                        |

years. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.  
denoting cloud amount represents the part of the sky covered, the whole sky being assumed by 10. Under the name District observations of rainfall, the normal mean  
years. The means of the district are the numerical averages of the rainfall returns received in the district, i.e., from the total rainfall at the sub-divisions





## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 26th of August 1887—con

| Met-oro logical Division. | District.           | Station.           | RAINFALL.            |                      |                       |                         |                        |                      |                        | TOTAL                 |                   | Total rain-fall since 1st of month. | Average total rain-fall from 1st of month. | Total rain-fall since 15th May 1887. | A. F. (in) |
|---------------------------|---------------------|--------------------|----------------------|----------------------|-----------------------|-------------------------|------------------------|----------------------|------------------------|-----------------------|-------------------|-------------------------------------|--|--------------------------------------|------------|
|                           |                     |                    | Sunday, 20th August. | Monday, 21st August. | Tuesday, 22nd August. | Wednesday, 23rd August. | Thursday, 24th August. | Friday, 25th August. | Saturday, 26th August. | Number of rainy days. | of rainfall week. |                                     |  |                                      |            |
| NORTH BENGAL—continued.   | Sargur              | Gopalgunge .....   | .....                | 0.30                 | .....                 | .....                   | .....                  | 0.42                 | .....                  | 2                     | 0.72              | 0.41                                | 7.91                                       | 26.84                                |            |
|                           |                     | Sowah .....        | .....                | 0.17                 | 0.21                  | .....                   | .....                  | .....                | .....                  | 2                     | 0.38              | 10.29                               | 8.62                                       | 26.34                                |            |
| SOUTH BENGAL              | Bhachabad           | Chaurah .....      | .....                | .....                | 0.46                  | .....                   | .....                  | .....                | .....                  | 1                     | 0.46              | 6.77                                | 8.72                                       | 26.31                                |            |
|                           |                     | Buxar .....        | 0.30                 | 0.01                 | 0.52                  | 0.06                    | .....                  | .....                | .....                  | 4                     | 0.94              | 7.50                                | 8.92                                       | 23.51                                |            |
|                           |                     | Deoria .....       | 0.07                 | 0.05                 | 0.03                  | 0.10                    | .....                  | .....                | .....                  | 4                     | 0.25              | 7.00                                | ?  | 26.58                                |            |
|                           |                     | Bhuthnah .....     | .....                | 0.15                 | 0.20                  | .....                   | .....                  | .....                | .....                  | 4                     | 0.35              | 1.00                                | 10.39                                      | 30.03                                |            |
|                           |                     | Sasaram .....      | .....                | .....                | 0.14                  | .....                   | .....                  | .....                | .....                  | 1                     | 0.14              | 15.16                               | 10.21                                      | 27.19                                |            |
|                           |                     | Arrah .....        | 0.42                 | 0.05                 | 0.20                  | .....                   | .....                  | .....                | .....                  | 3                     | 0.67              | 5.93                                | 9.26                                       | 28.50                                |            |
|                           |                     | Siwan .....        | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | Nil                   | Nil               | 12.50                               | ?  | ?                                    |            |
|                           | Gya                 | Aurangabad .....   | 0.38                 | 0.28                 | 0.14                  | .....                   | 1.81                   | .....                | .....                  | 4                     | 2.61              | 7.19                                | 11.61                                      | 25.92                                |            |
|                           |                     | Gya .....          | .....                | 0.04                 | 0.34                  | 0.42                    | .....                  | .....                | .....                  | 3                     | 0.80              | 10.80                               | 0.84                                       | 25.13                                |            |
|                           |                     | Nowadsh .....      | 0.16                 | 0.22                 | .....                 | .....                   | .....                  | .....                | .....                  | 2                     | 0.38              | 9.59                                | 9.01                                       | 24.88                                |            |
|                           |                     | Jehanabad .....    | .....                | 0.12                 | 0.03                  | 0.45                    | .....                  | .....                | .....                  | 3                     | 0.60              | 9.02                                | 10.28                                      | 30.17                                |            |
|                           |                     | Arwal .....        | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | Nil                   | Nil               | 8.64                                | ?  | 26.04                                |            |
|                           |                     | Bandanagar .....   | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | Nil                   | Nil               | 4.96                                | ?  | 21.96                                |            |
|                           |                     | Sherrghati .....   | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | Nil                   | Nil               | 0.43                                | ?  | 28.04                                |            |
|                           |                     | Rajauli .....      | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | Nil                   | Nil               | 7.97                                | ?  | 20.53                                |            |
|                           |                     | Pakri Barwan ..... | .....                | .....                | 0.20                  | .....                   | .....                  | .....                | .....                  | 1                     | 0.20              | 6.28                                | ?  | 14.85                                |            |
|                           | Patna               | Patna .....        | .....                | 0.11                 | .....                 | 0.04                    | .....                  | .....                | .....                  | 2                     | 0.15              | 5.03                                | 9.23                                       | 29.43                                |            |
|                           |                     | Dumra .....        | .....                | .....                | .....                 | .....                   | .....                  | 0.10                 | .....                  | 1                     | 0.10              | 6.11                                | 9.62                                       | 30.80                                |            |
|                           |                     | Bihar .....        | 0.02                 | 0.04                 | .....                 | .....                   | .....                  | .....                | .....                  | 1                     | 0.06              | 9.94                                | 9.38                                       | 27.98                                |            |
|                           |                     | Bar .....          | 0.05                 | .....                | .....                 | .....                   | .....                  | .....                | .....                  | 2                     | 0.05              | 4.10                                | 8.64                                       | 25.06                                |            |
|                           |                     | Bakram .....       | 0.05                 | 0.20                 | 0.15                  | 0.05                    | .....                  | .....                | .....                  | 1                     | 0.45              | 0.05                                | ?  | 27.19                                |            |
|                           |                     | Hilsa .....        | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | 4                     | Nil               | 4.68                                | ?  | 26.68                                |            |
|                           | Munshyr             | Bogomo .....       | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | Nil                   | Nil               | 11.71                               | 8.42                                       | 31.46                                |            |
|                           |                     | Aloumshyr .....    | 0.02                 | 0.21                 | .....                 | 0.17                    | .....                  | .....                | .....                  | 3                     | 0.70              | 0.05                                | 10.79                                      | 36.71                                |            |
|                           |                     | Jam .....          | .....                | 0.38                 | 0.12                  | .....                   | .....                  | .....                | .....                  | 3                     | 0.62              | 10.10                               | 10.25                                      | 30.28                                |            |
|                           |                     | Gyri .....         | 0.60                 | .....                | .....                 | .....                   | .....                  | .....                | .....                  | 1                     | 0.60              | 1.05                                | ?  | 31.27                                |            |
|                           |                     | Sheikpura .....    | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | Nil                   | Nil               | 5.31                                | ?  | 19.11                                |            |
|                           | South Bhaga-pore.   | Bakulpore .....    | .....                | 0.29                 | 0.10                  | 0.75                    | .....                  | .....                | .....                  | 3                     | 1.14              | 0.40                                | 8.80                                       | 33.85                                |            |
|                           |                     | Bansa .....        | .....                | 0.32                 | 0.21                  | .....                   | .....                  | .....                | .....                  | 3                     | 0.53              | 5.52                                | 9.52                                       | 27.04                                |            |
|                           |                     | Kolgong .....      | 0.76                 | 0.12                 | .....                 | 0.12                    | .....                  | .....                | .....                  | 3                     | 1.00              | 6.14                                | ?  | 35.73                                |            |
|                           | Sonthal Per-gumaha. | Bajmohal .....     | 0.31                 | .....                | 0.18                  | 0.90                    | 0.16                   | .....                | .....                  | 4                     | 1.61              | 7.35                                | 8.26                                       | 46.06                                |            |
|                           |                     | Gadua .....        | 0.04                 | .....                | 0.32                  | 0.58                    | .....                  | .....                | .....                  | 4                     | 3.24              | 8.22                                | 10.43                                      | 42.78                                |            |
|                           |                     | Pakour .....       | .....                | 0.25                 | 0.25                  | 0.75                    | .....                  | .....                | .....                  | 3                     | 5.12              | 17.33                               | 8.98                                       | 35.61                                |            |
|                           |                     | Nya Dookha .....   | 0.06                 | 0.32                 | 0.19                  | 0.13                    | 0.42                   | 0.80                 | .....                  | 6                     | 2.12              | 7.59                                | 12.11                                      | 31.62                                |            |
|                           |                     | Dookhur .....      | .....                | 0.75                 | 0.11                  | .....                   | .....                  | .....                | .....                  | 2                     | 0.86              | 0.76                                | 10.86                                      | 28.39                                |            |
|                           |                     | Samura .....       | .....                | 0.09                 | 0.39                  | 0.77                    | .....                  | .....                | 0.05                   | 4                     | 1.51              | 11.15                               | ?  | 36.43                                |            |
|                           |                     | Sinra .....        | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | 1                     | 0.16              | 5.24                                | ?  | 19.71                                |            |
|                           |                     | Nawhal .....       | .....                | .....                | 0.16                  | .....                   | .....                  | .....                | .....                  | 1                     | 0.16              | 5.24                                | ?  | 19.71                                |            |
| CHUTIA NAG-PUR.           | Hazaribagh ..       | Pacham .....       | 0.10                 | 0.40                 | 0.40                  | 0.40                    | .....                  | .....                | 0.18                   | 5                     | 1.53              | 11.67                               | 10.75                                      | 32.86                                |            |
|                           |                     | (Girdi) .....      | .....                | 0.08                 | 0.57                  | 0.56                    | 0.23                   | .....                | .....                  | 4                     | 1.44              | 11.14                               | 12.92                                      | 35.56                                |            |
|                           |                     | Hazaribagh .....   | .....                | .....                | 1.23                  | 0.35                    | .....                  | .....                | .....                  | 2                     | 1.58              | 0.95                                | 10.40                                      | 20.53                                |            |
|                           |                     | Sonmukur .....     | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | 2                     | .....             | .....                               | 11.87                                      | .....                                |            |
|                           |                     | Wanad. Hills ..... | 0.60                 | 0.60                 | 0.19                  | 0.50                    | 0.10                   | .....                | 0.20                   | 6                     | 2.10              | 15.99                               | 13.40                                      | 48.30                                |            |
|                           |                     | Burra .....        | .....                | .....                | 1.00                  | 0.07                    | .....                  | .....                | .....                  | 2                     | 1.07              | 11.25                               | ?  | 34.53                                |            |
|                           |                     | Chitra .....       | .....                | 0.02                 | 0.13                  | .....                   | .....                  | .....                | .....                  | 3                     | 0.75              | 10.65                               | ?  | 36.27                                |            |
|                           |                     | Karagaha .....     | 1.20                 | 0.80                 | .....                 | .....                   | 0.50                   | .....                | .....                  | 3                     | 2.50              | 17.12                               | ?  | 58.00                                |            |
|                           |                     | Kanghar .....      | 0.20                 | .....                | .....                 | .....                   | 1.09                   | .....                | .....                  | 2                     | 1.29              | 11.50                               | ?  | 41.44                                |            |
|                           | Lohardugga ..       | Lohardugga .....   | 0.07                 | 0.75                 | 0.35                  | 0.19                    | 0.01                   | 0.08                 | 0.01                   | 7                     | 1.75              | 17.42                               | ?  | 41.79                                |            |
|                           |                     | Bamra .....        | 0.10                 | 0.25                 | 0.19                  | .....                   | .....                  | .....                | 0.21                   | 4                     | 1.74              | 10.92                               | 12.72                                      | 44.74                                |            |
|                           |                     | Pamra .....        | 0.12                 | .....                | 0.38                  | .....                   | 0.20                   | .....                | .....                  | 3                     | 0.70              | 10.50                               | 10.07                                      | 37.38                                |            |
|                           |                     | Sila .....         | .....                | .....                | .....                 | .....                   | .....                  | .....                | 2.00                   | 1                     | 2.00              | 13.75                               | ?  | 35.74                                |            |
|                           |                     | Baikmat .....      | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | Nil                   | Nil               | 7.20                                | ?  | 27.19                                |            |
|                           |                     | Roosabhad .....    | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | Nil                   | Nil               | 11.93                               | ?  | 42.89                                |            |
|                           |                     | Gurkha .....       | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | Nil                   | Nil               | .....                               | ?  | .....                                |            |
|                           | Singbhum .....      | Chyom .....        | .....                | 0.20                 | 1.40                  | 0.34                    | 0.05                   | .....                | .....                  | 5                     | 2.31              | 12.40                               | 12.31                                      | 41.38                                |            |
|                           |                     | Chakradhar .....   | .....                | .....                | 1.33                  | .....                   | .....                  | .....                | 1.08                   | 2                     | 2.01              | 8.67                                | ?  | 32.07                                |            |
|                           |                     | Chaitilla .....    | 0.52                 | 0.39                 | 0.43                  | 0.25                    | .....                  | .....                | .....                  | 4                     | 1.79              | 13.85                               | ?  | 38.84                                |            |
|                           |                     | Baharagura .....   | 0.07                 | 1.00                 | 0.49                  | .....                   | .....                  | .....                | .....                  | 3                     | 1.56              | 7.10                                | ?  | 27.74                                |            |
|                           | Manbhum .....       | Puruli .....       | 1.08                 | .....                | 2.14                  | 0.02                    | .....                  | .....                | .....                  | 3                     | 5.24              | 12.94                               | 12.12                                      | 37.22                                |            |
|                           |                     | Gomdipore .....    | .....                | 0.20                 | .....                 | 0.16                    | .....                  | 0.06                 | 0.08                   | 4                     | 0.50              | 7.14                                | 11.34                                      | 22.36                                |            |
|                           |                     | Raghunath .....    | .....                | .....                | 0.61                  | 0.21                    | .....                  | .....                | .....                  | 2                     | 0.82              | 8.66                                | ?  | 27.64                                |            |
|                           |                     | pore. .....        | .....                | 0.09                 | 1.15                  | 0.23                    | .....                  | .....                | .....                  | 3                     | 1.47              | 11.20                               | ?  | 28.84                                |            |
|                           |                     | Barraboom .....    | .....                | .....                | 1.09                  | .....                   | .....                  | .....                | .....                  | 1                     | 1.09              | ?                                   | ?  | ?                                    |            |
|                           |                     | Jhalda .....       | .....                | .....                | 1.24                  | 0.07                    | .....                  | .....                | .....                  | 2                     | 1.30              | ?                                   | ?  | ?                                    |            |
|                           |                     | Chas .....         | .....                | .....                | .....                 | .....                   | .....                  | .....                | .....                  | 2                     | 1.30              | ?                                   | ?  | ?                                    |            |

Explanation.—Indicates how no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 30th August 1887.

**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVA-  
TIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
26TH OF AUGUST 1887.**

THE most prominent feature in the meteorology of week ending the 19th of August had been the formation of a feeble cyclonic storm in the northern half of the Bay, which had been remarkably persistent for some days, but which, on the morning of the 19th, was crossing the west coast of the Bay, the centre passing a little to the south of Gopalpore. On the morning of the 20th, it had practically entirely passed inland towards the Central Provinces, where it subsequently filled up. With the advance of the feeble depression inland, it then became possible for the monsoon winds to again flow over Bengal, and rain became pretty general in Orissa, South-West Bengal, and East Bengal on the 20th, but the general rainfall only reached North Bengal and the greater part of Behar and Chutia Nagpur on the 22nd. Thus, at the commencement of the week, the conditions over the Province were fairly normal, and up till its close the principal changes have been in the alternate strengthening and falling off in the two branches of the monsoon current. Up till the 24th the whole Province was principally influenced by the current blowing from the Bay of Bengal, but this, considered as a rain-bearing current, was somewhat weak. On the 24th, however, winds, which had been previously strongly easterly and south-easterly, became more southerly, and it was evident that the Bengal current was commencing to be driven back by the Bombay current. On the 25th the winds blowing over Bengal had become strongly westerly and south-westerly at all stations except those in the extreme east and north of the Province, and on this day the rain-bearing current from the Bay of Bengal was strongly deflected towards the east coast of the Bay; and with the commencement of these westerly winds rainfall almost ceased over the greater part of the Province, except in North Bengal. Owing, however, to the interaction between the two wind currents, on the 26th there was a distinct cyclonic circulation of winds set up over a part of South-East Bengal, and this was accompanied by the formation of a feeble area of low pressure; but the depression and wind circulation were exceedingly feeble on this day. At the close of the week, therefore, conditions were becoming more favourable for rainfall in the southern districts.

It will therefore be seen that, for a considerable part of the week, conditions have been fairly favourable for rainfall over a large portion of the Province. The amounts received, however, generally have not been large, for the current blowing was, in the first place, weak, and it was subsequently strongly deflected towards the east coast of the Bay. Except therefore in Orissa, which was subject to the actual passage of the depression above alluded to, the rainfall has generally been decidedly below the normal, though not quite so largely in defect as it was during the previous week.

*Pressure.*—The mean pressure during the previous week had been, to a great extent, influenced by the existence of the depression off the south coast of Orissa, and pressure was slightly above the normal in the south-western districts, and rather largely above it elsewhere. With the passage of the depression westwards, pressure continued to fall for the first two or three days of the week, particularly in the western and south-western districts; but on the 23rd pressure rose rapidly in South-West Bengal, where in several instances the rise equalled a tenth of an inch; while pressure fell in South Behar. Pressure generally rose on the 24th: the changes were variable on the 25th, while on the 26th pressure again fell over the whole Province, the fall being largest at the south-eastern, eastern, and southern stations. The tendency of the changes during the week has therefore been to make pressure far more nearly normal, though pressure on the average has still been comparatively low in the west and south-west of the Province. Thus, in South Behar, Chutia Nagpur, Orissa, and South-West Bengal, the mean pressure for the week has been slightly, though distinctly, below the normal, while elsewhere it has been slightly above the normal. For the whole Province of Bengal, therefore, the mean pressure has been very nearly normal. In Assam also the mean pressure for the week has been nearly normal, the variation at no station exceeding a few thousandths of an inch, while the average pressure for the whole of Assam is absolutely normal.

*Temperature.*—The variations of temperature throughout the week have generally been small, and the average temperature in each district has been very nearly normal, and the variation from the normal in no case equals half a degree. For the whole of Bengal the mean temperature of the week has not varied from the normal by so much as a tenth of a degree. In Assam, on the other hand, the mean temperature for the week has been  $0.3^{\circ}$  in excess of the normal.

*Rainfall.*—The actual rainfall during the week has been heaviest in East Bengal, which has received an average of three inches. In Orissa the fall has averaged rather more than two-and-a-half inches; in South-West Bengal, North Bengal and Chutia Nagpur it has averaged from one-and-a-half inches to two inches, and in Behar it has averaged between one and one-and-a-half inches. Compared with the normal, and expressed as a percentage of that amount, Orissa has received 104 per cent.; South-West Bengal 58 per cent.; East Bengal 92 per cent.; North Bengal 54 per cent.; North Behar 58 per cent.; South Behar 38 per cent.; and Chutia Nagpur 53 per cent. Taking these districts as having an equal value in the calculation, the rainfall of the whole Province for the week may be said to have averaged 67

per cent. of the normal. The following districts have received exceptionally small falls throughout the week:—Maldah, Rungpore, Chumparan, Sarun, Shahabad, Gya, Patna, (which has averaged less than a tenth of an inch), and South Bhagulpore and Monghyr.

In the Nuddea district Kishnaghur appears for the greater part of this month to have been a centre of exceptionally light rainfall, and so far as the returns show, it would appear that this station has only received a fall of 2·76 inches since the commencement of the month, while the normal fall would be 10·43 inches. The remainder of the Nuddea district shows a fall much more nearly normal, and generally averaging from about three-fourths to a fall actually above the normal at Meherpore. Sherpore, in the Bogra district, is also another station which has received very little rain since the 1st of the month.

In Assam, the following are the amounts which have been received during the week:—At Sibsagar 5·82 inches, at Silchar 3·04 inches, and at Dhubri 0·29 inch.

The following table gives the summary of the temperature and rainfall data of each of the eight meteorological divisions of the province for the week ending Friday, the 26th of August 1887:—

| METEOROLOGICAL<br>DIVISIONS. |     |     |     | TEMPERATURE.                  |                              |                         |                        |                       |  | RAINFALL. |                 |            |                         |                                |            |                     |                 |                      |                 |
|------------------------------|-----|-----|-----|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|
|                              |     |     |     | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week.  |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 15th May 1887. |                 |
|                              |     |     |     |                               |                              | If highest of each day. | If lowest of each day. | If mean for each day. |  | Average.  | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. | Average.             | Normal average. |
|                              |     |     |     |                               |                              |                         |                        |                       |  |           |                 |            |                         |                                |            |                     |                 |                      |                 |
| Orissa                       | ... | ... | ... | 85·4                          | 74·6                         | 87·0                    | 78·4                   | 82·7                  | - 0·3  | 2·70      | 2·37            | +0·33      | 4·5                     | 4·2                            | +0·3       | 7·75                | 10·07           | 30·60                | 33·60           |
| South-West Bengal            | ... | ... | ... | 92·8                          | 70·3                         | 88·5                    | 78·8                   | 83·6                  | -0·3   | 1·70      | 2·93            | -1·23      | 3·8                     | 4·3                            | -0·5       | 8·74                | 11·41           | 34·18                | 35·94           |
| East Bengal                  | ... | ... | ... | 90·3                          | 71·0                         | 86·8                    | 77·3                   | 82·1                  | +0·1   | 3·00      | 3·25            | -0·25      | 5·2                     | 4·8                            | +0·4       | 10·65               | 14·10           | 40·10                | 53·75           |
| North Bengal                 | ... | ... | ... | 92·6                          | 74·6                         | 89·0                    | 77·9                   | 83·5                  | +0·2   | 1·58      | 2·94            | -1·36      | 3·8                     | 4·2                            | -0·4       | 11·67               | 11·51           | 55·83                | 48·36           |
| North Behar                  | ... | ... | ... | 94·5                          | 75·6                         | 89·6                    | 78·9                   | 84·3                  | +0·3   | 1·37      | 2·36            | -0·99      | 3·0                     | 3·4                            | -0·4       | 11·50               | 9·40            | 38·80                | 32·02           |
| South Behar                  | ... | ... | ... | 93·4                          | 75·0                         | 89·6                    | 78·8                   | 84·2                  | +0·2   | 1·06      | 2·74            | -1·68      | 2·7                     | 3·6                            | -0·9       | 8·96                | 9·87            | 32·40                | 30·13           |
| Central Nagpur               | ... | ... | ... | 86·5*                         | 69·4*                        | 82·3*                   | 71·2*                  | 77·1*                 | -0·4*  | 1·63      | 3·07            | -1·44      | 3·7                     | 4·7                            | -1·0       | 10·86               | 11·68           | 36·08                | 34·52           |
| Assam                        | ... | ... | ... | 93·5                          | 74·5                         | 89·7                    | 77·2                   | 83·4                  | +0·3   |           |                 |            |                         |                                |            |                     |                 |                      |                 |

\* Chyobases not included.

METEOROLOGICAL OFFICE, BENGAL;

The 29th August 1887.

A. PEDLER,

Offy. Meteorological Reporter to the Govt. of Bengal.

## Results of the Meteorological Observations taken at the Alipore Observatory from 21st to 27th August 1887.

| Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 59° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                   |                 | Rain.   | WEATHER.                       |
|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-------------------------|-----------------|---------|--------------------------------|
|       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction.   | Miles recorded. |         |                                |
| 7.    | 0               |                                     | Inches.                              | 0            | 0        | 0      | 0        | 0              | Inches          | 0          | %         |                         |                 | Inches. |                                |
| 21st  | 144.6           | 4.7                                 | 29.540                               | 81.4         | 85.5     | 7.3    | 78.2     | 78.9           | 0.955           | 77.8       | 89        | ESE and SSW ...         | 126             | 1.39    | Chiefly cloudy, o, g, p, t, d. |
| 22nd  | 141.9           | 1.8                                 | 29.549                               | 81.1         | 85.7     | 9.0    | 76.7     | 78.6           | 0.947           | 77.6       | 89        | SSW, SSE and S by E     | 125             | 0.34    | Cloudy, o, g, p, d.            |
| 23rd  | 153.8           | 0.2                                 | 29.637                               | 82.3         | 86.5     | 9.6    | 76.9     | 79.1           | 0.996           | 79.1       | 86        | S and SSW ...           | 153             | 0.27    | Chiefly cloudy, o, g, p.       |
| 24th  | 153.4           | 4.6                                 | 29.682                               | 82.8         | 87.0     | 9.3    | 77.7     | 80.1           | 0.993           | 79.0       | 88        | SSW ...                 | 99              | 0.09    | Partially cloudy, g, d, p.     |
| 25th  | 152.4           | 9.3                                 | 29.679                               | 84.6         | 89.7     | 9.8    | 79.9     | 81.2           | 1.020           | 79.8       | 86        | SSW ...                 | 117             | Nil     | Chiefly cloudy, o.             |
| 26th  | 155.6           | 3.8                                 | 29.633                               | 84.5         | 89.8     | 9.1    | 80.7     | 80.5           | 0.989           | 78.9       | 84        | SSW, calm and variable. | 85              | "       | Cloudy, o, g, t.               |
| 27th  | 156.7           | 3.5                                 | 29.597                               | 81.6         | 87.5     | 10.6   | 76.9     | 78.4           | 0.933           | 77.1       | 87        | SSW, SSE and variable.  | 91              | 1.00    | Chiefly cloudy, p, t.          |

The mean pressure of the seven days ... 29.617  
The average pressure of the corresponding period for 24 years, S. G.'s Office ... 29.610

The total number of hours of bright sunshine ... 33.9  
The maximum possible number of hours of sunshine ... 89.0

The mean temperature of the seven days ... 82.6  
The average temperature of the corresponding period for 24 years, S. G.'s Office ... 83.0  
The extreme variation of temperature ... 13.1  
The maximum temperature ... 89.8

The highest velocity of the wind in one hour ... 11  
lbs.

The highest pressure of wind on one square foot ... Not measureable.

The mean relative humidity ... 87  
The average relative humidity of the corresponding period for 24 years, S. G.'s Office ... 87

The total fall of rain from 21st to 27th August 1887 ... 3.09  
The average fall of the corresponding period for 24 years, S. G.'s Office ... 3.11  
The total fall from 1st January to 27th August 1887 ... 45.29  
The average fall of the corresponding period for 24 years, S. G.'s Office ... 47.13

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Alipore Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, p passing temporary showers, t thunder, d drizzling rain.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

Results of the Thermometrical Observations taken at the Meteorological Office,  
Chowringhee, from 21st to 27th August 1887.

| MONTH. | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|--------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|        |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.  |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| August | 21st  | 80.1         | 88.5     | 9.7    | 78.8     | 78.8           | .965            | 78.1       | 83        | 0.31    |
| "      | 22nd  | 80.9         | 87.2     | 10.4   | 76.8     | 78.4           | .940            | 77.3       | 89        | 1.13    |
| "      | 23rd  | 81.9         | 89.0     | 11.7   | 77.3     | 78.8           | .945            | 77.5       | 87        | 0.45    |
| "      | 24th  | 82.3         | 90.0     | 12.2   | 77.8     | 80.2           | 1.004           | 79.4       | 91        | 0.31    |
| "      | 25th  | 84.8         | 92.0     | 12.2   | 79.8     | 80.8           | .998            | 79.2       | 83        | .....   |
| "      | 26th  | 83.4         | 92.0     | 11.2   | 80.8     | 80.3           | .994            | 79.1       | 87        | 0.20    |
| "      | 27th  | 81.0         | 89.0     | 12.0   | 77.0     | 79.0           | .966            | 78.2       | 91        | 1.06    |

The mean temperature of the seven days ... 82.1

The extreme variation of temperature ... 15.2

The maximum temperature ... 92.0

The mean relative humidity ... 89%

The total fall of rain from 21st to 27th August 1887 ... 3.46

The mean temperature and humidity are obtained by applying to the mean of the 10a, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ;  
The 29th August 1887. A. PEDLER,  
for Offg. Meteorological Reporter to the Govt of India.



## MEMORANDUM.

THE mortuary returns from the districts in Bengal for June 1887 disclose—

1. That 112,612 deaths were registered, or at the rate of 20·40 per 1,000 of the population, amounting to 66,163,884, against 25·41 per 1,000 in the preceding month, and 15·96 per 1,000 in the corresponding month of the past year, indicating, as compared with the last-named period, a considerable improvement in the number of deaths recorded.

2. That the highest casualty-rates were returned from the following districts:—

| <i>Districts.</i> |     |                  | <i>Districts.</i> |     |                  |
|-------------------|-----|------------------|-------------------|-----|------------------|
|                   |     | Ratio per mille. |                   |     | Ratio per mille. |
| Chumparun         | ... | 45·12            | Shahabad          | ... | 34·80            |
| Gya               | ... | 40·68            | Jalpaiguri        | ... | 34·56            |
| Puri              | ... | 38·16            | Bhagulpore        | ... | 27·48            |
| Darjiling         | ... | 36·60            | Lohardugga        | ... | 27·24            |
| Monghyr           | ... | 36·60            |                   |     |                  |

3. That referring to the incidence of the diseases specified below, it is seen that cholera prevailed with much greater severity during the month under notice than during the corresponding month of the preceding year, but that the death-rates from the rest of the diseases, excepting that from injury which remained stationary, exhibited only fractional variations:—

|                  |     |     | Ratio per mille during— |            |
|------------------|-----|-----|-------------------------|------------|
|                  |     |     | June 1887.              | June 1886. |
| Cholera          | ... | ... | 3·84                    | ·60        |
| Small-pox        | ... | ... | ·07                     | ·08        |
| Fever            | ... | ... | 12·60                   | 11·76      |
| Bowel-complaints | ... | ... | ·72                     | ·60        |
| Injury           | ... | ... | ·60                     | ·60        |
| Other causes     | ... | ... | 2·40                    | 2·16       |

4. That while the following districts returned conspicuously high mortality from cholera and fever, the rest of the districts did not exhibit any noticeable severity from the other diseases indicated above, excepting Darjiling, where 11·16 per 1,000 of the population died from bowel-complaints, and Puri, where 10·56 per 1,000 were carried off by the maladies classed under head of "Other causes":—

| <i>Cholera.</i> |     |                  | <i>Fever.</i> |     |                  |
|-----------------|-----|------------------|---------------|-----|------------------|
|                 |     | Ratio per mille. |               |     | Ratio per mille. |
| Chumparun       | ... | 26·76            | Jalpaiguri    | ... | 28·20            |
| Puri            | ... | 20·40            | Monghyr       | ... | 23·64            |
| Gya             | ... | 16·32            | Rajshahye     | ... | 20·88            |
| Shahabad        | ... | 12·84            | Darjiling     | ... | 20·88            |
| Lohardugga      | ... | 7·92             | Dinajpur      | ... | 20·76            |
| Monghyr         | ... | 7·80             |               |     |                  |
| Mozufferpore    | ... | 6·96             |               |     |                  |
| Durblanga       | ... | 6·84             |               |     |                  |
| Saran           | ... | 5·88             |               |     |                  |
| Balasore        | ... | 5·52             |               |     |                  |
| Jalpaiguri      | ... | 4·92             |               |     |                  |
| Patna           | ... | 4·20             |               |     |                  |
| Bhagulpore      | ... | 3·36             |               |     |                  |
| Hazaribagh      | ... | 2·88             |               |     |                  |

5. That with regard to mortality referable to *Sex*, *Class* and *Age*, the rates stood as follows:—

| <i>According to Sex.</i>                        |     |                  | <i>According to Class.</i> |     |                  | <i>According to Age.</i> |     |                  |
|---|-----|------------------|----------------------------|-----|------------------|--------------------------|-----|------------------|
|   |     | Ratio per mille. |                            |     | Ratio per mille. |                          |     | Ratio per mille. |
| Males   | ... | 22·32            | Christians                 | ... | 10·92            | Under 1 year             | ... | 118·32           |
| Females   | ... | 18·48            | Hindus                     | ... | 21·84            | 1 and under              | ... | 26·52            |
| Ratio of male deaths to every 100 female deaths | ... | 118              | Mahomedans                 | ... | 17·40            | 5 " " 10 "               | ... | 12·12            |
|   |     |                  | Budhists                   | ... | 13·80            | 10 " " 15 "              | ... | 10·20            |
|   |     |                  | Other classes              | ... | 21·72            | 15 " " 20 "              | ... | 14·16            |
|   |     |                  |                            |     |                  | 20 " " 30 "              | ... | 14·52            |
|   |     |                  |                            |     |                  | 30 " " 40 "              | ... | 15·84            |
|   |     |                  |                            |     |                  | 40 " " 50 "              | ... | 18·72            |
|   |     |                  |                            |     |                  | 50 " " 60 "              | ... | 25·80            |
|   |     |                  |                            |     |                  | 60 years and upwards     | ... | 37·44            |

R. LIDDERDALE, M.D., *Deputy Surgeon-General,*  
*Sanitary Commissioner for Bengal.*

The 29th August 1887.





## MEMORANDUM.

From the annexed table, exhibiting the vital statistics of the principal Municipalities in Bengal, for the week ending 13th August 1887, it appears—

1. That the birth-rate in these Municipalities amounted to 16·7 per 1,000 of population against the same ratio in the preceding week ending 6th August, and the death-rate to 28·6 per 1,000 against very nearly the same proportion, viz., 28·4 per 1,000.

2. That births and deaths were reported to have been recorded at the highest rates in the following Municipalities :—

| Births.   |     |     |                  | Deaths.             |     |     |                  |
|-----------|-----|-----|------------------|---------------------|-----|-----|------------------|
|           |     |     | Ratio per mille. |                     |     |     | Ratio per mille. |
| Comillah  | ... | ... | 46·2             | Arrah               | ... | ... | 89·7             |
| Arrah     | ... | ... | 39·5             | Gya                 | ... | ... | 58·7             |
| Durbhanga | ... | ... | 32·3             | Puri                | ... | ... | 54·6             |
| Gya       | ... | ... | 29·4             | Beaulah             | ... | ... | 39·4             |
|           |     |     |                  | Serampore           | ... | ... | 37·3             |
|           |     |     |                  | Burdwan             | ... | ... | 35·1             |
|           |     |     |                  | Purneah             | ... | ... | 34·6             |
|           |     |     |                  | Suburbs of Calcutta | ... | ... | 33·5             |
|           |     |     |                  | Patna               | ... | ... | 31·1             |
|           |     |     |                  | Comillah            | ... | ... | 30·8             |
|           |     |     |                  | Bhagulpore          | ... | ... | 29·9             |

3. That, as compared with the outcome of the preceding week, bowel-complaints alone exhibited noticeable enhancement of mortality, the fatal results from the other diseases exhibiting only fractional differences, and small-pox presenting no death; *vide* figures given below :—

|                  |     |     |     | Ratio per mille during the weeks ending— |                  |
|------------------|-----|-----|-----|--|------------------|
|                  |     |     |     | 13th August 1887.                        | 6th August 1887. |
| Cholera          | ... | ... | ... | 5·4                                      | 6·0              |
| Small-pox        | ... | ... | ... | ...                                      | 1                |
| Fever            | ... | ... | ... | 10·4                                     | 10·2             |
| Bowel-complaints | ... | ... | ... | 5·5                                      | 3·6              |
| Injury           | ... | ... | ... | 3  | 6                |
| Other causes     | ... | ... | ... | 7·0                                      | 7·9              |

4. That the following Municipalities appear to have suffered the most from the diseases specified in the above table (excepting small-pox, from which, as before stated, no death was reported to have occurred, and injury, the casualties from which were nowhere above normal) :—

| Cholera.   |                  | Fever.   |                  | Bowel-complaints. |                  | Other Causes.       |                  |
|------------|------------------|----------|------------------|-------------------|------------------|---------------------|------------------|
|            | Ratio per mille. |          | Ratio per mille. |                   | Ratio per mille. |                     | Ratio per mille. |
| Arrah      | 39·5             | Comillah | 27·0             | Arrah             | 16·7             | Gya                 | 17·1             |
| Puri       | 21·0             | Arrah    | 25·1             | Serampore         | 13·7             | Puri                | 12·6             |
| Gya        | 18·4             | Purneah  | 24·2             | Hughli            | 13·4             | Suburbs of Calcutta | 12·0             |
| Burdwan    | 18·3             | Beaulah  | 23·6             | Puri              | 12·6             | Serampore           | 11·8             |
| Patna      | 7·1              |          |                  |                   |                  | Monghyr             | 10·8             |
| Bhagulpore | 4·5              |          |                  |                   |                  |                     |                  |

5. That the mortality of the week classified under the heads of *Sex*, *Class* and *Age*, stood as follows :—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |     |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |     | Ratio per mille. |
| Males   | ... | 28·2             | Christians          | ... | 17·4             | Under 1 year         | ... | 229·8            |
| Females   | ... | 29·3             | Hindus              | ... | 30·5             | 1 and-under 5 years  | ... | 57·8             |
| Ratio of male deaths to every 100 female deaths | 108 |                  | Mahomedans          | ... | 24·8             | 5 " " 10 "           | ... | 23·8             |
|   |     |                  |                     |     |                  | 10 " " 15 "          | ... | 16·3             |
|   |     |                  |                     |     |                  | 15 " " 20 "          | ... | 15·7             |
|   |     |                  |                     |     |                  | 20 " " 30 "          | ... | 15·2             |
|   |     |                  |                     |     |                  | 30 " " 40 "          | ... | 15·9             |
|   |     |                  |                     |     |                  | 40 " " 50 "          | ... | 18·5             |
|   |     |                  |                     |     |                  | 50 " " 60 "          | ... | 32·2             |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 52·3             |

R. LIDDERDALE, M.D., *Deputy Surgeon-General*,

*The 29th August 1887.*

*Sanitary Commissioner for Bengal.*

Mortality in the Principal Municipalities in Bengal during the week ending 13th August 1887.

| 1          |  | 2                        |  | 3           |  | 4       |  | 5            |  | 6  |  | 7   |  | 8   |  | 9  |  | 10   |  | 11 |  |
|------------|--|--------------------------|--|-------------|--|---------|--|--------------|--|--|--|---|--|---|--|--|--|------|--|----|--|
| DISTRICTS. |  | NAMES OF MUNICIPALITIES. |  | POPULATION. |  | BIRTHS. |  | DEATHS FROM— |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO OF MORTALITY PER 1,000 OF POPULATION PER ANNUM. |  | DEATHS PER 1,000 OF POPULATION PER ANNUM. |  | RATIO OF DEATHS PER 1,000 OF POPULATION PER ANNUM. |  | SEX. |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
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|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
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|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
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|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
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|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
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|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |
|            |  |                          |  |             |  |         |  |              |  |  |  |   |  |   |  |  |  |      |  |    |  |

A special census of the Europeans in the Darjiling Municipality was recently taken, as the census of this section of the community, taken in February 1881, was not reliable owing to the Europeans being at a minimum in that month. The number of the natives remains as before, as it was not necessary to re-census them. The ratios have consequently been calculated on the basis of the census under this head not having been recorded under the authorized form of an classification.



## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

## CALCUTTA AND EASTERN CANALS.

Statement showing Quantities of Goods carried during the month of July 1867.

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |               |                      |           | PRIVATE.             |             | REMARKS.                    |
|---------------------------|-----------------------------------|-------------------------------|---------------|----------------------|-----------|----------------------|-------------|-----------------------------|
|                           |                                   | Quantity—Tons.                |               |                      | Value.    | Quantity.            | Value.      |                             |
|                           |                                   | Up.                           | Down.         | Total.               | Rupees.   | Tons.                | Rupees.     |                             |
| 502                       | 1. Grain ...                      | 7,477                         | .....         | 7,477                | 5,23,307  | 7,477                | 5,23,307    | * For detail see next page. |
| 1                         | 2. Cotton ...                     | 3                             | .....         | 3                    | 2,000     | 3                    | 2,000       |                             |
| 101                       | 3. Oilseeds ...                   | 1,235                         | 36            | 1,271                | 1,34,388  | 1,271                | 1,34,388    |                             |
| 283                       | 4. Salt ...                       | 411                           | 3,996         | 4,407                | 3,70,200  | 4,407                | 3,70,200    |                             |
| .....                     | 5. Piece-goods ...                | .....                         | .....         | .....                | .....     | .....                | .....       |                             |
| 12                        | 6. Metal ...                      | 28                            | .....         | 28                   | 23,220    | 28                   | 23,220      |                             |
| 81                        | 7. Building materials ...         | 2,128                         | 78            | 2,206                | 33,398    | 2,206                | 33,398      |                             |
| 1,194                     | 8. Miscellaneous* ...             | 5,545                         | 421           | 5,966                | 7,87,951  | 5,966                | 7,87,951    |                             |
| 580                       | 9. Fuel ...                       | 10,620                        | 1,021         | 11,641               | 94,796    | 11,641               | 94,796      |                             |
| 1 raft                    | 10. Timber ...                    | .....                         | 2 No.         | 2 No.                | 80        | 2 No.                | 80          |                             |
| .....                     | 11. Bamboos ...                   | .....                         | .....         | .....                | .....     | .....                | .....       |                             |
| 2,754 & 1 raft            | 12. Total ...                     | 27,447 {                      | 5,552 & 2 No. | 32,999 & 2 No.       | 19,69,340 | { 32,999 & 2 No.     | { 19,69,340 |                             |
| 1,849 & 8 rafts           | 13. Total of same month last year | 19,129 & 2,920 No.            | { 5,103 {     | { 24,232 & 2,920 No. | 21,75,926 | { 24,232 & 2,920 No. | { 21,75,926 |                             |

|  | Up.        | Down.     | Total.     |  | Rs. A. P.  |
|--|------------|-----------|------------|--|------------|
| 14. Total number of boats plying cargo ... No.     | 2,395      | 359       | 2,754      | Total tollage of month—<br>24 + 25 + 26 ...          | 20,438 0 6 |
| 14a. Ditto empty ...                               | 1,684      | 291       | 1,975      | Total tollage of same month last year ...            | 15,972 3 3 |
| 15. Total number of boats plying passenger ... No. | 168        | .....     | 168        |  |            |
| 16. Total registered tonnago, cargo ...            | 84,755     | 13,706    | 98,461     | <i>Memorandum of Tollage.</i>                        |            |
| 17. Total registered tonnago, passenger ...        | 14,250     | ... ..    | 14,250     |  |            |
| 18. Ton-mileage ...                                | .....      | .....     | .....      |  | Rs. A. P.  |
| 19. Estimated value of cargo Rs.                   | 15,60,506  | 4,08,754  | 19,69,260  | 1. Balance not recovered on the 1st of the month ... | 438 8 6    |
| 20. Number of passengers ...                       | 877        | .....     | 877        | 2. Tollage per month ...                             | 20,438 0 6 |
| 21. Rafts, bamboos c. ft.                          | .....      | .....     | .....      |  |            |
| 22. Do., bullahs ..                                | .....      | .....     | .....      |  |            |
| 23. Estimated value of rafts ...                   | .....      | 80        | 80         | 3. Total ...   | 20,876 9 0 |
| 24. Tollage on boats Rs.                           | 17,077-1-0 | 3,360-3-6 | 20,437-4-6 |  |            |
| 25. Compounded tollage on boats Rs.                | .....      | .....     | .....      | 4. Amount paid into treasury during the month ...    | 19,610 1 6 |
| 26. Tollage on rafts ..                            | .....      | 0-12-0    | 0-12-0     |  |            |
| 27. Total tollage on boats per ton-mile ...        | .....      | .....     | .....      |  |            |
| 28. Total tollage on rafts per 100 cubic feet ...  | .....      | .....     | .....      | 5. Balance due at the end of the month ...           | 1,266 7 6  |

ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).

CALCUTTA AND EASTERN CANALS.

| Number of<br>boats or<br>rafts. | DESCRIPTION.            | TOTAL GOVERNMENT AND PRIVATE. |       |        | PRIVATE. |           | REMARKS. |
|---------------------------------|-------------------------|-------------------------------|-------|--------|----------|-----------|----------|
|                                 |                         | Quantity—Tons.                |       |        | Value.   | Quantity. |          |
|                                 |                         | Up.                           | Down. | Total. | Rupces.  | Tons.     |          |
| 69                              | (a) Jute ...            | 1,149                         | ..... | 1,149  | 1,44,742 | 1,149     | 1,44,742 |
| 51                              | (b) Jaggery ...         | 457                           | ..... | 457    | 51,200   | 457       | 51,200   |
| 9                               | (c) Sugar ...           | 29                            | ..... | 29     | 6,456    | 29        | 6,456    |
| 2                               | (d) Tobacco ...         | .....                         | 6     | 6      | 1,750    | 6         | 1,750    |
| 171                             | (e) Fish ...            | 58                            | ..... | 58     | 16,295   | 58        | 16,295   |
| 7                               | (f) Hides ...           | 10                            | ..... | 10     | 2,348    | 10        | 2,348    |
| 92                              | (g) Poultry ...         | 18                            | ..... | 18     | 15,595   | 18        | 15,595   |
| 51                              | (h) Hay and straw ...   | 309                           | ..... | 309    | 6,498    | 309       | 6,498    |
| 46                              | (j) Oil ...             | 21                            | 376   | 397    | 55,725   | 397       | 55,725   |
| 30                              | (k) Earthenware ...     | 124                           | ..... | 124    | 1,778    | 124       | 1,778    |
| 666                             | (m) Other miscellaneous | 3,370                         | 39    | 3,409  | 4,85,564 | 3,409     | 4,85,564 |
| 1,194                           | Total Miscellaneous...  | 5,545                         | 421   | 5,966  | 7,87,951 | 5,966     | 7,87,951 |



**PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.**  
**SOUTH-WESTERN CIRCLE.**

**TOLLY'S NULLAH.**

*Statement showing Quantities of Goods carried during the month of July 1887.*

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |              |                  | PRIVATE. |                  | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|--------------|------------------|----------|------------------|----------|
|                           |                                   | Quantity—Tons.                |              |                  | Value.   | Quantity.        |          |
|                           |                                   | Up.                           | Down.        | Total.           | Rupers.  | Tons.            |          |
| 1,965                     | 1. Grain ...                      | 5,994                         | .....        | 5,994            | 3,79,755 | 5,994            | 3,79,755 |
| 19                        | 2. Cotton ...                     | 53                            | .....        | 53               | 29,700   | 53               | 29,700   |
| 10                        | 3. Oilseeds ...                   | 99                            | .....        | 99               | 10,656   | 99               | 10,656   |
| 97                        | 4. Salt ...                       | 443                           | 624          | 1,067            | 89,625   | 1,067            | 89,625   |
| .....                     | 5. Piece-goods ...                | .....                         | .....        | .....            | .....    | .....            | .....    |
| .....                     | 6. Metal ...                      | .....                         | .....        | .....            | .....    | .....            | .....    |
| 362                       | 7. Building materials ...         | 2,554                         | 19           | 2,573            | 9,828    | 2,573            | 9,828    |
| 764                       | 8. Miscellaneous* ...             | 2,905                         | 84           | 2,989            | 3,61,761 | 2,989            | 3,61,761 |
| 229                       | 9. Fuel ...                       | 2,822                         | .....        | 2,822            | 23,593   | 2,822            | 23,593   |
| 1 raft                    | 10. Timber ...                    | .....                         | 12 No.       | 12 No.           | 480      | 12 No.           | 480      |
| 6 rafts                   | 11. Bamboos . ...                 | 400 No.                       | .....        | 400 "            | 50       | 400 "            | 50       |
| 3,446 & 7 rafts           | 12. Total ...                     | 14,870 & 400 No.              | 727 & 12 No. | 15,597 & 412 No. | 9,05,448 | 15,597 & 412 No. | 9,05,448 |
| 2,060 & 4 rafts           | 13. Total of same month last year | 10,270 & 67 No.               | 529 & 40 No. | 10,799 & 107 No. | 6,23,161 | 10,799 & 107 No. | 6,23,161 |

\* For detail see next page.

|   | Up.       | Down.   | Total.    | Total tollage of month—<br>24 + 25 + 26 ...          | Rs. A. P.  |
|---|-----------|---------|-----------|--|------------|
| 1. Total number of boats plying cargo No.     | 3,353     | 93      | 3,446     |  | 8,477 4 9  |
| 2. Ditto empty ..                             | 736       | 95      | 831       |  |            |
| 3. Total number of boats plying passenger No. | 264       | 14      | 278       | Total tollage of same month last year ...            | 5,374 8 9  |
| 4. Total registered tonnage, cargo ...        | 48,145    | 2,436   | 50,581    | <i>Memorandum of Tollage.</i>                        |            |
| 5. Total registered tonnage, passenger ...    | 18,525    | 1,050   | 19,575    |  |            |
| Ton-mileage ...                               | .....     | .....   | .....     |  | Rs. A. P.  |
| Estimated value of cargo Rs.                  | 8,38,341  | 66,577  | 9,04,918  | 1. Balance not recovered on the 1st of the month ... | 216 5 6    |
| Number of passengers ...                      | 1,711     | 62      | 1,773     | 2. Tollage per month ...                             | 8,477 4 9  |
| Rafts, bamboos c. ft.                         | 400       | .....   | 400       |  |            |
| Do., bullahs "                                | .....     | .....   | .....     | 3. Total ...   | 8,693 10 3 |
| Estimated value of rafts Rs.                  | 50        | 480     | 530       |  |            |
| Tollage on boats "                            | 7,874-2-9 | 597-2-0 | 8,471-4-9 | 4. Amount paid into treasury during the month ...    | 8,215 2 9  |
| Compounded tollage on boats Rs.               | .....     | .....   | .....     |  |            |
| Tollage on rafts "                            | 1-8-0     | 4-8-0   | 6-0-0     |  |            |
| Total tollage on boats per ton-mile ...       | .....     | .....   | .....     |  |            |
| Total tollage on rafts per 100 cubic feet "   | .....     | .....   | .....     | 5. Balance due at the end of the month ...           | 478 7 6    |

## ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).

## TOLLY'S NULLAH.

| Number of<br>boats or<br>rafts. | DESCRIPTION.                  | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE.  |          | REMARKS. |
|---------------------------------|-------------------------------|-------------------------------|-------|--------|----------|-----------|----------|----------|
|                                 |                               | Quantity—Tons.                |       |        | Value.   | Quantity. | Value.   |          |
|                                 |                               | Up.                           | Down. | Total. | Rupees.  | Tons.     | Rupees.  |          |
| 4                               | (a) Jute ...                  | 46                            | ..... | 46     | 5,850    | 46        | 5,850    |          |
| 122                             | (b) Jaggery ...               | 761                           | 9     | 770    | 86,248   | 770       | 86,248   |          |
| 2                               | (c) Sugar ...                 | 10                            | ..... | 10     | 2,200    | 10        | 2,200    |          |
| 34                              | (d) Tobacco ...               | 209                           | 17    | 226    | 63,200   | 226       | 63,200   |          |
| 137                             | (e) Fish ...                  | 36                            | 6     | 42     | 11,634   | 42        | 11,634   |          |
| 1                               | (f) Hides ...                 | .....                         | 4     | 4      | 1,000    | 4         | 1,000    |          |
| .....                           | (g) Poultry ...               | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| 103                             | (h) Hay and straw             | 351                           | ..... | 351    | 7,368    | 351       | 7,368    |          |
| 67                              | (i) Oil ...                   | 673                           | 24    | 697    | 87,894   | 697       | 87,894   |          |
| 131                             | (k) Earthenware ...           | 45                            | 1     | 46     | 2,565    | 46        | 2,565    |          |
| 163                             | (m) Other miscella-<br>neous. | 774                           | 23    | 797    | 93,802   | 797       | 93,802   |          |
| 764                             | Total Miscellaneous ...       | 2,905                         | 84    | 2,989  | 3,61,761 | 2,989     | 3,61,761 |          |

**ABSTRACT FOR THE MONTH OF JULY 1887, AS COMPARED WITH THE  
CORRESPONDING MONTH OF THE PREVIOUS YEAR.**

|                                 | TRAFFIC, 1887-88. |       |                      | TRAFFIC, 1886-87. |              |                      |
|---------------------------------|-------------------|-------|----------------------|-------------------|--------------|----------------------|
|                                 | During the month. |       | To end of the month. | During the month. |              | To end of the month. |
|                                 | Rs.               | A. P. | Rs. A. P.            | Rs. A. P.         | Rs. A. P.    | Rs. A. P.            |
| Calcutta and Eastern Canals ... | 20,438            | 0 6   | 83,674 15 3          | 15,972 3 3        | 75,268 2 9   |                      |
| Tolly's Nullah ...              | 8,477             | 4 9   | 32,536 9 0           | 5,374 8 9         | 25,574 4 3   |                      |
| Total ...                       | 28,915            | 5 3   | 1,16,211 8 3         | 21,346 12 0       | 1,00,842 7 0 |                      |

Calcutta, }  
The 30th August 1887.

A. D. McARTHUR, Major, R.E.,  
Under-Secretary to the Government of Bengal.

**CIRCULAR AND EASTERN CANALS.**

*Approximate Return of Traffic for the week ending Saturday, the 27th August 1887, compared  
with the corresponding week of the previous year.*

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>27TH AUGUST 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>27TH AUGUST 1886. |                     |          |
|--------------------|--|---------------------|----------|--|---------------------|----------|
|                    | Number of<br>boats.                            | Weight of<br>cargo. | Tollage. | Number of<br>boats.                            | Weight of<br>cargo. | Tollage. |
|                    | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... | 549  | 87,715              | 1,450    | 341  | 47,485              | 799      |
| Jute ...           | 46   | 21,025              | 371      | 17   | 7,475               | 134      |
| Firewood ...       | 128  | 56,350              | 849      | 112  | 66,025              | 988      |
| Other articles ... | 813  | 2,00,840            | 3,084    | 672  | 1,52,815            | 2,393    |
| Total ...          | 1,536  | 3,65,970            | 5,754    | 1,142  | 2,73,830            | 4,314    |

## Eastern Bengal State Railway.

*Abstract of principal commodities carried over the Eastern Bengal State Railway during the month of May 1887 as compared with the same month of the previous year.*

| STAPLES.  | 1887.  |        | 1886.  |        | TOTAL. |        | Increase. | Decrease. |
|---|--------|--------|--------|--------|--------|--------|-----------|-----------|
|   | Up.    | Down.  | Up.    | Down.  | 1887.  | 1886.  |           |           |
|   | Tons.  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.     | Tons.     |
| Betelnuts ... ..                                    | 45     | 547    | 53     | 86     | 502    | 130    | 453       | ...       |
| Coal and coke ... ..                                | 1,104  | 443    | 3,018  | 1,326  | 1,657  | 5,244  | ...       | 3,587     |
| Cotton, raw ... ..                                  | 2      | 254    | 52     | 210    | 256    | 242    | 14        | ...       |
| Cotton, manufactured—                               |        |        |        |        |        |        |           |           |
| 1.—Twist and yarn (European) ... ..                 | 1,704  | 5      | 1,650  | 65     | 1,700  | 1,715  | 15        | ...       |
| 2.—Ditto do. (Indian) ... ..                        |        |        |        |        |        |        |           |           |
| 3.—Piece-goods (European) ... ..                    |        |        |        |        |        |        |           |           |
| 4.—Ditto do. (Indian) ... ..                        |        |        |        |        |        |        |           |           |
| Fibrous Products—                                   |        |        |        |        |        |        |           |           |
| 1.—Jute (screwed) ... ..                            | ...    | 242    | ...    | 90     | 242    | 90     | 152       | ...       |
| (unscrowed) ... ..                                  | ...    | 2,071  | ...    | 2,138  | 2,071  | 2,102  | ...       | 121       |
| 2.—Jute manu(atured) (gunny-bags and cloths) ... .. | 188    | 915    | 187    | 831    | 1,103  | 1,019  | 85        | ...       |
| Grain and Pulse—                                    |        |        |        |        |        |        |           |           |
| 1.—Grain and pulse ... ..                           | 906    | 11,648 | 311    | 5,277  | 12,534 | 5,586  | 6,966     | ...       |
| 2.—Rice, husked ... ..                              | 1,401  | 2,129  | 1,110  | 4,705  | 3,530  | 5,875  | ...       | 2,345     |
| Hides and Skins—                                    |        |        |        |        |        |        |           |           |
| 1.—Hides of cattle ... ..                           | 7      | 614    | 7      | 486    | 621    | 495    | 126       | ...       |
| 2.—Skins of sheep, goats and small animals          |        |        |        |        |        |        |           |           |
| Metals and manufactures of—                         |        |        |        |        |        |        |           |           |
| 1.—Brass and copper ... ..                          | 551    | 134    | 806    | 71     | 685    | 877    | ...       | 192       |
| 2.—Iron ... ..                                      |        |        |        |        |        |        |           |           |
| 3.—Other metals ... ..                              |        |        |        |        |        |        |           |           |
| Oils ... ..   | 233    | 50     | 427    | 31     | 280    | 458    | ...       | 169       |
| Kerosine oil ... ..                                 | 310    | ...    | ...    | ...    | 346    | ...    | 340       | ...       |
| Provisions—   |        |        |        |        |        |        |           |           |
| 1.—Ghee ... ..                                      | 184    | 521    | 220    | 517    | 705    | 746    | ...       | 41        |
| 2.—Other kinds ... ..                               |        |        |        |        |        |        |           |           |
| Railway materials ... ..                            | 1,906  | 900    | 1,534  | 672    | 2,915  | 2,206  | 609       | ...       |
| Salt ... ..   | 4,639  | 9      | 4,105  | 18     | 4,096  | 4,123  | 575       | ...       |
| Seeds—  |        |        |        |        |        |        |           |           |
| 1.—Oilseeds—  |        |        |        |        |        |        |           |           |
| a.—Linseed ... ..                                   | 422    | 2,272  | 381    | 1,874  | 2,604  | 2,255  | 430       | ...       |
| b.—Mustard and rape ... ..                          |        |        |        |        |        |        |           |           |
| c.—Til or singelly ... ..                           |        |        |        |        |        |        |           |           |
| d.—Other oilseeds ... ..                            |        |        |        |        |        |        |           |           |
| Sugar—  |        |        |        |        |        |        |           |           |
| 1.—Refined ... ..                                   | 256    | 770    | 194    | 1,151  | 1,026  | 1,645  | ...       | 619       |
| 2.—Unrefined ... ..                                 |        |        |        |        |        |        |           |           |
| Tea—  |        |        |        |        |        |        |           |           |
| 1.—Indian ... ..                                    | ...    | 797    | ...    | 671    | 797    | 671    | 126       | ...       |
| 2.—Foreign ... ..                                   |        |        |        |        |        |        |           |           |
| Tobacco ... ..                                      | 70     | 2,219  | 55     | 1,311  | 2,239  | 1,306  | 923       | ...       |
| Wood—   |        |        |        |        |        |        |           |           |
| 1.—Timber ... ..                                    | 70     | 97     | ...    | ...    | 167    | ...    | 167       | ...       |
| 2.—Firewood ... ..                                  | 1,426  | 12     | 1,166  | 13     | 1,438  | 1,179  | 259       | ...       |
| All other articles of merchandise—                  |        |        |        |        |        |        |           |           |
| 1.—Unmanufactured ... ..                            | 1,645  | 2,038  | 2,013  | 2,473  | 3,943  | 4,496  | ...       | 503       |
| 2.—Manufactured ... ..                              |        |        |        |        |        |        |           |           |
| Hay, straw, and wooloo (C. & S. E. Section) ... ..  | 631    | ...    | 291    | ...    | 631    | 291    | 340       | ...       |
| Total ... ..  | 18,266 | 28,722 | 19,473 | 24,420 | 46,068 | 42,800 | 11,066    | 7,577     |

## INCREASES.

|   |             |
|---|-------------|
| Betelnuts ... ..  | 453 tons.   |
| More than half the increase under this head was contributed by Khulna and the Bengal Central Flotilla, and the remainder by Naryangunge and Serajgunge. |             |
| Jute ... ..   | 137 tons.   |
| The increase is comparatively trifling.   |             |
| Grain and Pulse ... ..  | 6,966 tons. |
| All stations north of Bagoola show large increases in despatches to the port when favourable prices prevailed.  |             |
| Kerosine oil ... ..   | 346 tons.   |
| Increase in demand for up country consumption.  |             |
| Railway Materials ... ..  | 609 tons.   |
| Repairs and renewals.   |             |
| Salt ... ..   | 575 tons.   |
| Despatches to upper Bengal and Steamer stations.  |             |
| Seeds ... ..  | 439 tons.   |
| Improved market.  |             |
| Tobacco ... ..  | 923 tons.   |
| From the Northern Bengal State Railway.   |             |
| Hay, Straw and Wooloo ... ..  | 340 tons.   |
| From the Southern section exclusively.  |             |

## DECREASES.

|  |             |
|--|-------------|
| Coal and Coke ... ..   | 3,587 tons. |
| This traffic is now carried into Calcutta and Chitpore via Naihatti by East Indian Railway local trains, and does not appear in Eastern Bengal State Railway statistics. |             |
| Rice ... ..  | 2,345 tons. |
| Continued depression in prices for this staple.  |             |
| Sugar ... ..   | 619 tons.   |
| Falling off in despatches from Musshiganj, Alamdanga, Koochta and Kumarkhali.  |             |

**CALCUTTA, the 30th July 1887.**

## Bengal Central Railway.

*Abstract of principal commodities carried over the Bengal Central Railway during the month of May 1887, as compared with the same month of the previous year.*

| STAPLES.  | 1887. |       | 1886. |       | Total. |       | Increase. | Decrease. |
|---|-------|-------|-------|-------|--------|-------|-----------|-----------|
|   | Up.   | Down. | Up.   | Down. | 1887.  | 1886. |           |           |
|   | Tons. | Tons. | Tons. | Tons. | Tons.  | Tons. | Tons.     | Tons.     |
| Betelnuts ... ..                                    | ...   | 329   | 3     | 59    | 329    | 62    | 267       | ...       |
| Coal and coke ... ..                                | 1,070 | ...   | 560   | 11    | 1,070  | 561   | 1,109     | ...       |
| Cotton, raw ... ..                                  | ...   | 5     | ...   | 13    | 5      | 13    | ...       | 8         |
| Cotton, manufactured—                               |       |       |       |       |        |       |           |           |
| 1.—Twist and yarn (European) ... ..                 | 181   | ...   | 131   | ...   | 181    | 131   | 50        | ...       |
| 2.—Ditto do. (Indian) ... ..                        |       |       |       |       |        |       |           |           |
| 3.—Piece-goods (European) ... ..                    |       |       |       |       |        |       |           |           |
| 4.—Ditto do. (Indian) ... ..                        |       |       |       |       |        |       |           |           |
| Fibrous products—                                   |       |       |       |       |        |       |           |           |
| 1.—Jute (unscrewed) ... ..                          | ...   | 47    | ...   | 106   | 47     | 106   | ...       | 59        |
| 2.—Jute manufactured (gunny-bags and cloths) ... .. | 10    | 6     | 9     | 1     | 16     | 10    | 6         | ...       |
| Grain and Pulse—                                    |       |       |       |       |        |       |           |           |
| 2.—Grain and pulse ... ..                           | 20    | 1,071 | 22    | 358   | 1,091  | 390   | 711       | ...       |
| 4.—Rice, husked ... ..                              | 7     | 20    | 13    | 29    | 27     | 42    | ...       | 15        |
| Hides and Skins—                                    |       |       |       |       |        |       |           |           |
| 1.—Hides of cattle ... ..                           | ...   | 42    | ...   | 28    | 42     | 28    | 14        | ...       |
| 2.—Skins of sheep, goats, and small animals         |       |       |       |       |        |       |           |           |
| Metals and manufactures of—                         |       |       |       |       |        |       |           |           |
| 1.—Brass and copper ... ..                          | 63    | 16    | 27    | 23    | 78     | 50    | 28        | ...       |
| 2.—Iron ... ..                                      |       |       |       |       |        |       |           |           |
| 3.—Other metals ... ..                              |       |       |       |       |        |       |           |           |
| Oil ... ..  | 151   | ...   | 154   | ...   | 151    | 154   | ...       | 3         |
| Kerosine oil ... ..                                 | 72    | ...   | ...   | ...   | 72     | ...   | 72        | ...       |
| Provisions—   |       |       |       |       |        |       |           |           |
| 1.—Ghee ... ..                                      | 49    | 84    | 47    | 47    | 133    | 94    | 39        | ...       |
| 2.—Other kinds ... ..                               |       |       |       |       |        |       |           |           |
| Railway materials ... ..                            | 317   | 113   | 706   | 29    | 430    | 793   | ...       | 365       |
| Salt ... ..   | 365   | ...   | 197   | ...   | 365    | 197   | 169       | ...       |
| Seeds—  |       |       |       |       |        |       |           |           |
| 1.—Oilseeds—  |       |       |       |       |        |       |           |           |
| a.—Linseed ... ..                                   | 231   | 193   | 231   | 95    | 424    | 376   | 48        | ...       |
| b.—Mustard and rape ... ..                          |       |       |       |       |        |       |           |           |
| c.—Til or groundnut ... ..                          |       |       |       |       |        |       |           |           |
| d.—Other oilseeds ... ..                            |       |       |       |       |        |       |           |           |
| Sugar—  |       |       |       |       |        |       |           |           |
| 1.—Refined ... ..                                   | 27    | 608   | 67    | 1,092 | 605    | 1,159 | ...       | 464       |
| 2.—Unrefined ... ..                                 |       |       |       |       |        |       |           |           |
| Tobacco ... ..                                      | 30    | 10    | 41    | 23    | 46     | 64    | ...       | 18        |
| Wood—   |       |       |       |       |        |       |           |           |
| 1.—Timber ... ..                                    | 29    | 9     | 10    | 8     | 39     | 18    | 20        | ...       |
| 2.—Firewood ... ..                                  |       |       |       |       |        |       |           |           |
| All other articles of merchandise—                  |       |       |       |       |        |       |           |           |
| 1.—Unmanufactured ... ..                            | 315   | 390   | 200   | 149   | 605    | 340   | 265       | ...       |
| 2.—Manufactured ... ..                              |       |       |       |       |        |       |           |           |
| Total ... ..  | 3,542 | 2,903 | 2,514 | 2,071 | 6,535  | 4,530 | 2,879     | 933       |

F. P. QUINLAND, *Examiner of Accounts.*

CALCUTTA, the 8th July 1887.

## INCREASES.

|  |     |     |     |     |     |             |
|--|-----|-----|-----|-----|-----|-------------|
| Betelnuts ... ..   | ... | ... | ... | ... | ... | 267 tons.   |
| The traffic in this commodity, which is principally exported to British Burmah is confined almost exclusively to Khoolna and the Bengal Central Flotilla Stations. |     |     |     |     |     |             |
| Coal and coke ... ..   | ... | ... | ... | ... | ... | 1,109 tons. |
| For Railway and Flotilla requirements.   |     |     |     |     |     |             |
| Grain and Pulse ... ..   | ... | ... | ... | ... | ... | 711 tons.   |
| Favourable season and advantageous rates in the Calcutta market.   |     |     |     |     |     |             |
| Salt ... ..  | ... | ... | ... | ... | ... | 167 tons.   |
| From Chitpore and Calcutta for Gopalsagar, Rupdia, &c.   |     |     |     |     |     |             |

## DECREASES.

|   |     |     |     |     |     |               |
|---|-----|-----|-----|-----|-----|---------------|
| Railway materials ... ..  | ... | ... | ... | ... | ... | 365 tons.     |
| Completion of works generally.  |     |     |     |     |     |               |
| Sugar ... ..  | ... | ... | ... | ... | ... | 464 tons.     |
| Depression in trade. The falling off in despatches from Jhikergache above being |     |     |     |     |     |               |
|   | ... | ... | ... | ... | ... | 4,521 maunds. |

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 20th August 1887, on 1,519 miles open.

|  | COACHING TRAFFIC.     |                | MERCHANDISE AND MINERAL TRAFFIC. |                | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |           |
|--|-----------------------|----------------|----------------------------------|----------------|-----------------------------|-----------------|--------------------------|--------------|-----------|
|  | Number of passengers. | Receipts.      | Weight carried.                  | Receipts.      |                             |                 | Coaching.                | Merchandise. | Total.    |
|  |                       | Rs. A. P.      | Mds. S.                          | Rs. A. P.      | Rs. A. P.                   | Rs. A. P.       |                          |              |           |
| Total traffic for the week ...                                 | 258,630               | 2,35,790 1 0   | 18,58,193 0                      | 3,62,788 7 0   | 17,370 15 0                 | 6,15,958 7 0    | 65,166½                  | 73,503       | 138,669½  |
| Or per mile of railway ...                                     | 155 3 9               |                |                                  | 238 13 4       | 11 0 11                     | 405 8 0         | .....                    | .....        | .....     |
| For previous 6 weeks of half-year ...                          | 1,500,110             | 15,00,502 12 0 | 1,32,81,513 10                   | 28,37,000 5 6  | 1,25,901 2 9                | 44,63,503 4 3   | 409,172½                 | 620,117½     | 938,290½  |
| Total for 7 weeks ...  | 1,753,740             | 17,36,301 13 0 | 1,51,30,706 10                   | 31,99,797 12 6 | 1,43,272 1 9                | 50,79,401 11 3  | 474,277½                 | 692,710½     | 1,076,988 |
| COMPARISON.  |                       |                |                                  |                |                             |                 |                          |              |           |
| Total for corresponding week of previous year ...              | 219,916½              | 2,09,640 6 4   | 22,98,357 20                     | 5,38,116 6 11  | 16,811 7 5                  | 7,04,571 4 8    | 65,215                   | 97,483       | 162,698   |
| Or per mile of railway corresponding week of previous year ... | .....                 | 138 6 0        | .....                            | 355 3 1        | 11 1 7                      | 604 10 8        | .....                    | .....        | .....     |
| Total to corresponding date of previous year ...               | 1,697,786½            | 16,53,713 9 5  | 1,61,19,538 30                   | 38,03,371 1 11 | 1,50,934 6 9                | 55,88,019 2 1   | 402,640                  | 688,183      | 1,100,823 |

\* The increase in coaching traffic is due to the eclipse of the sun.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 21ST AUGUST 1886. |              |                  | RECEIPTS FOR WEEK ENDING 20TH AUGUST 1887. |              |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 21ST AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 20TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|--------------|------------------|--|--------------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts.    | Per mile worked. | Mean mileage worked.                       | Receipts.    | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
| 1,516                                      | Rs. 7,04,571 | Rs. 505          | 1,519                                      | Rs. 6,15,958 | Rs. 406          | 1,515   | Rs. 1,83,71,602 | Rs. 12,120       | 1,519   | Rs. 1,75,51,192 | Rs. 11,566       | .....                   | Rs. 8,17,410            |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 20th August 1887, on 57½ miles open.

|  | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                 | 10,673                | 4,019 10 0  | 28,896 0                         | 2,067 15 0  | 28 11 0                     | 7,036 4 0       | 1,736                    | 658          | 2,394  |
| Or per mile of railway ...                                     | 187                   | 86 0 1      | 505 10                           | 36 8 1      | 0 4 0                       | 123 0 2         | .....                    | .....        | .....  |
| For previous 6 weeks of half-year ...                          | 67,328                | 82,618 4 0  | 2,46,344 20                      | 15,634 13 0 | 178 0 0                     | 48,449 1 0      | 10,164½                  | 5,228½       | 15,393 |
| Total for 7 weeks ...  | 78,001                | 37,535 14 0 | 2,75,240 20                      | 17,702 12 0 | 206 11 0                    | 55,495 5 0      | 11,900½                  | 5,886½       | 17,787 |
| COMPARISON.  |                       |             |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...              | 10,243½               | 5,018 8 5   | 41,728 10                        | 2,330 5 9   | 16 8 9                      | 7,395 6 2       | 1,731                    | 663          | 2,394  |
| Or per mile of railway corresponding week of previous year ... | 179                   | 88 4 2      | 729 20                           | 40 11 10    | 0 4 8                       | 129 4 8         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...               | 80,204½               | 40,356 13 0 | 3,26,100 20                      | 19,603 3 0  | 235 5 9                     | 60,196 5 9      | 12,165                   | 6,384        | 18,549 |

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 21ST AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 21ST AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 20TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
| 57½  | Rs. 7,395 | Rs. 129          | 57½  | Rs. 5,018 | Rs. 123          | 57½   | Rs. 1,96,893    | Rs. 3,267        | 57½   | Rs. 1,74,229    | Rs. 3,040        | .....                   | Rs. 12,66               |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

*Approximate Return of Traffic for week ended 20th August 1887, on 12 miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 3,853                 | 630 0 0     | 6,932 30                         | 174 4 0   | 10 10 0                     | 815 7 0         | 4104                     | 83           | 4934   |
| Or per mile of railway ...                                  | ...                   | 52 8 9      | ...                              | 14 8 4    | 0 14 2                      | 67 15 3         | ...                      | ...          | ...    |
| For previous 6 weeks of half-year                           | 19,554                | 3,231 11 0  | 50,925 30                        | 1,467 3 0 | 64 13 0                     | 4,753 11 0      | 2,277                    | 825          | 3,102  |
| Total for 7 weeks ...                                       | 23,407                | 3,863 4 0   | 63,644 20                        | 1,641 7 0 | 65 7 0                      | 5,569 2 0       | 2,6874                   | 908          | 3,5954 |
| COMPARISON.   |                       |             |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,5374                | 446 4 0     | 7,254 10                         | 161 0 0   | 7 4 3                       | 614 8 3         | 417                      | 76           | 493    |
| Per mile of railway corresponding week of previous year ... | ...                   | 37 3 0      | ...                              | 13 6 8    | 0 9 8                       | 51 3 4          | ...                      | ...          | ...    |
| Total to corresponding date of previous year ...            | 19,7184               | 3,312 11 11 | 55,011 30                        | 1,696 5 0 | 77 2 3                      | 5,676 3 2       | 2,815                    | 1,118        | 3,933  |

*Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 21st AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20th AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1st APRIL 1886 to 21st AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1st APRIL 1887 to 20th AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 12   | 615       | 51               | 12   | 815       | 68               | 12  | 22,349          | 1,862            | 12  | 20,163          | 1,681            | .....                   | 2,180                   |

## SINDIA STATE RAILWAY.

*Approximate Return of Traffic for week ended 20th August 1887, on 744 miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 4,494                 | 3,003 1 0   | 59,918 0                         | 2,000 12 0  | 51 13 0                     | 5,964 10 0      | 690                      | 8004         | 1,4904  |
| Or per mile of railway ...                                  | ...                   | 40 2 4      | ...                              | 28 14 5     | 0 11 1                      | 79 11 10        | ...                      | ...          | ...     |
| For previous 6 weeks of half-year                           | 31,658                | 21,043 14 0 | 5,38,491 0                       | 14,730 0 0  | 369 14 0                    | 39,175 12 0     | 4,3104                   | 7,142        | 11,4514 |
| Total for 7 weeks ...                                       | 36,152                | 27,046 15 0 | 6,38,369 0                       | 17,648 12 0 | 421 11 0                    | 46,117 6 0      | 5,0004                   | 7,9414       | 12,9424 |
| COMPARISON.   |                       |             |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 4,3064                | 3,101 5 2   | 1,12,457 30                      | 3,072 13 0  | 54 15 0                     | 6,239 1 2       | 684                      | 1,700        | 2,384   |
| Per mile of railway corresponding week of previous year ... | ...                   | 41 7 5      | ...                              | 41 1 3      | 1 2 2                       | 83 10 70        | ...                      | ...          | ...     |
| Total to corresponding date of previous year ...            | 36,638                | 27,053 13 0 | 1,76,564 30                      | 19,711 12 0 | 750 6 0                     | 47,518 13 6     | 5,354                    | 7,237        | 12,591  |

*Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 21st AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20th AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1st APRIL 1886 to 21st AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1st APRIL 1887 to 20th AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 744  | 6,239     | 84               | 744  | 5,005     | 80               | 744   | 1,43,894        | 1,924            | 744   | 1,50,318        | 2,130            | 15,419                  | .....                   |

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 20th August 1887, on 22½ miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 14,250                | 3,148 1 0   | 2,745 10                         | 84 8 0    | 5 7 0                       | 4,088 0 0       | 971                      | 41           | 1,012  |
| Or per mile of railway ...                                  | .....                 | 177 7 1     | .....                            | 3 12 0    | 0 3 11                      | 181 7 9         | .....                    | .....        | .....  |
| For previous 6 weeks of half-year ...                       | 96,800                | 20,766 4 0  | 21,274 0                         | 762 7 0   | 38 9 0                      | 27,567 4 0      | 5,792½                   | 433½         | 6,226  |
| Total for 7 weeks ...                                       | 111,125               | 30,714 5 0  | 24,719 10                        | 846 15 0  | 44 0 0                      | 31,605 4 0      | 6,763½                   | 474½         | 7,238  |
| COMPARISON.   |                       |             |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 13,307                | 3,289 2 10  | 3,845 2½                         | 187 12 0  | 2 2 3                       | 3,429 1 1       | 1,418                    | 20           | 968    |
| Per mile of railway corresponding week of previous year ... | .....                 | 147 13 3    | .....                            | 6 3 1     | 0 1 6                       | 154 1 10        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 121,880               | 30,911 12 3 | 22,514 20                        | 844 1 0   | 44 12 5                     | 30,890 0 0      | 7,140                    | 143          | 7,282  |

*Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1885.*

| RECEIPTS FOR WEEK ENDING 21ST AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 21ST AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 20TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½  | 3,429     | 154              | 22½  | 4,088     | 181              | 22½   | 1,03,223        | 4,657            | 22½   | 1,08,663        | 4,884            | 5,039                   | .....                   |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 20th August 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,316                 | 961 14 0   | 6,476 30                         | 487 15 0   | 28 0 0                      | 1,480 13 0      | 351                      | 237          | 588    |
| Or per mile of railway ...                                  | .....                 | 22 15 7    | .....                            | 11 9 10    | 0 10 8                      | 35 4 1          | .....                    | .....        | .....  |
| For previous 6 weeks of half-year ...                       | 12,917                | 5,752 5 6  | 50,528 0                         | 4,802 13 0 | 161 11 0                    | 10,716 13 6     | 1,645                    | 2,031        | 3,606  |
| Total for 7 weeks ...                                       | 15,433                | 6,717 3 6  | 57,004 30                        | 5,290 12 0 | 189 11 0                    | 12,197 10 6     | 1,996                    | 2,268        | 4,264  |
| COMPARISON.   |                       |            |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,304½                | 965 2 11   | 7,963 10                         | 1,311 4 0  | 24 12 6                     | 2,335 3 5       | 300                      | 288          | 588    |
| Per mile of railway corresponding week of previous year ... | .....                 | 22 15 8    | .....                            | 31 14 11   | 0 11 0                      | 55 9 7          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 18,705½               | 7,903 13 8 | 38,904 10                        | 3,677 8 0  | 112 1 3                     | 11,723 6 11     | 2,802                    | 1,470        | 4,308  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1885.*

| RECEIPTS FOR WEEK ENDING 21ST AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 21ST AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 20TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
|  | 2,335     | 56               | 42   | 1,481     | 35               | 42  | 37,836          | 901              | 42  | 61,912          | 1,474            | 24,076                  | .....                   |



## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 13th August 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |          |
|---|-----------------------|--------------------|----------------------------------|--------------|---|-----------------|--------------------------|--------------|----------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |   |                 | Coaching.                | Merchandise. | Total.   |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.    | Rs. A. P.   | Rs. A. P.       |                          |              |          |
| Total traffic for the week ...                                | 112,524               | 42,330 0 0         | 6,55,397 0                       | 1,03,000 0 0 | 12,190 0 0  | 1,58,140 0 0    | 19,442                   | 20,157       | 39,599   |
| Or per mile of railway ...                                    | 174                   | 66 0 0             | 1,016 0                          | 160 0 0      | 1 0 0   | 247 0 0         | .....                    | .....        | .....    |
| For previous 5 weeks of half-year ...                         | 610,370               | 2,73,580 0 0       | 28,28,030 0                      | 4,32,050 0 0 | 89,880 0 0  | 7,98,510 0 0*   | 102,823                  | 101,170      | 2,03,993 |
| Total for 6 weeks ...   | 722,954               | 3,15,930 0 0       | 34,83,427 0                      | 5,35,650 0 0 | 95,070 0 0  | 9,46,960 0 0    | 122,264                  | 121,327      | 243,591  |
| COMPARISON.   |                       |                    |                                  |              |   |                 |                          |              |          |
| Total for corresponding week of previous year ...             | 703,802               | 42,254 0 0         | 3,91,238 0                       | 79,761 0 0   | 8,590 0 0   | 1,30,408 0 0    | 17,440                   | 18,126       | 35,572   |
| Per mile of railway corresponding period of previous year ... | 171                   | 70 0 0             | 616 0                            | 131 0 0      | .....   | .....           | .....                    | .....        | .....    |
| Total to corresponding date of previous year ...              | 718,054               | 2,99,020 0 0       | 24,42,613 0                      | 4,03,805 0 0 | 59,270 0 0  | 7,62,095 0 0    | 119,112                  | 106,793      | 216,905  |

\* Audited up to week ending 1887.  
 + Steam-boat earnings, Rs. 11,609, have been excluded from the calculation.  
 NOTE.—Dacca and Assam-Bihar sections are also published separately.

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 14TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 600  | 1,30,609  | 216              | 615  | 1,58,110  | 257              | 606   | 26,05,336       | 220              | 645   | 27,22,688       | 222              | 1,17,152                | .....                   |

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 20th August 1887, on 125 miles open.

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                 | 22,351                | 6,800 0 0          | 53,500 0                         | 2,480 0 0  | 620 0 0*                    | 9,900 0 0       | 3,501                    | 2,024        | 5,525  |
| Or per mile of railway ...                                     | 179                   | 55 0 0             | 428 0                            | 20 0 0     | 5 0 0                       | 80 0 0          | .....                    | .....        | .....  |
| For previous 6 weeks of half-year ...                          | 149,536               | 49,060 0 0         | 2,36,114 0                       | 15,950 0 0 | 420 0 0                     | 65,430 0 0      | 22,044                   | 10,756       | 32,800 |
| Total for 7 weeks ...  | 171,887               | 55,950 0 0         | 2,90,674 0                       | 18,430 0 0 | 1,040 0 0                   | 75,420 0 0      | 26,548                   | 12,790       | 39,325 |
| COMPARISON.  |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...              | 28,363†               | 7,250 0 0          | 15,619 0                         | 1,211 0 0  | 14 0 0                      | 8,475 0 0       | 4,014                    | 1,867        | 5,881  |
| Per mile of railway, corresponding period of previous year ... | 227                   | 58 0 0             | 126 0                            | 10 0 0     | .....                       | 68 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...               | 178,358               | 57,256 0 0         | 1,13,676 0                       | 8,651 0 0  | 192 0 0                     | 65,478 0 0      | 29,126                   | 11,490       | 40,615 |

\* Includes Rs. 591 rent of land realized during the week.  
 † Ditto .. 6,610 monthly tickets.

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 21st AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20th AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 21st AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 20th AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125  | 8,475     | 68               | 125  | 9,900     | 80               | 125   | 2,41,036        | 96               | 125   | 2,44,000*       | 98               | 3,504                   | .....                   |

\* Audited up to week ending 11th June 1887.

## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 13th August 1887, on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 8,977                 | 3,500 0 0          | 10,642 c                         | 840 0 0   | 30 0 0                      | 4,430 0 0       | 2,171                    | 803          | 2,974  |
| Or per mile of railway ...                                    | 116                   | 42 0 0             | 124 0                            | 10 0 0    | .....                       | 52 0 0          | .....                    | .....        | .....  |
| For previous 5 weeks of half-year ...                         | 55,500                | 18,230 0 0         | 50,530 0                         | 4,450 0 0 | 700 0 0                     | 23,470 0 0      | 11,432                   | 5,512        | 16,944 |
| Total for 6 weeks ...   | 65,477                | 21,730 0 0         | 61,172 0                         | 5,290 0 0 | 820 0 0                     | 27,900 0 0      | 13,003                   | 6,315        | 19,318 |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 8,653                 | 1,958 0 0          | 2,554 0                          | 334 0 0   | 39 0 0                      | 2,331 0 0       | 1,261                    | 459          | 1,720  |
| Per mile of railway corresponding period of previous year ... | 101                   | 23 0 0             | 30 0                             | 4 0 0     | .....                       | 27 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 58,730                | 17,514 0 0         | 46,854 0                         | 2,313 0 0 | 1,093 0 0                   | 20,925 0 0      | 7,517                    | 5,516        | 13,033 |

## FINANCIAL YEAR.

*Approximate Statement of Gross Receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 14TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 86   | 2,331     | 27               | 86   | 4,430     | 52               | 86  | 87,325          | 53               | 56  | 89,083          | 55               | 2,400                   | .....                   |

## ASSAM-BEHAR STATE RAILWAY.

## PURNEAH SECTION.

*Approximate Return of Traffic for week ended 13th August 1887, on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 23,98                 | 820 0 0            | 7,777 0                          | 630 0 0    | 20 0 0                      | 1,470 0 0       | 088                      | 410          | 1,078  |
| Or per mile of railway ...                                    | 61                    | 21 0 0             | 199 0                            | 16 0 0     | 1 0 0                       | 39 0 0          | .....                    | .....        | .....  |
| For previous 5 weeks of half-year ...                         | 16,930                | 5,500 0 0          | 92,700 0                         | 10,550 0 0 | 190 0 0                     | 16,240 0 0      | 3,538                    | 2,160        | 5,698  |
| Total for 6 weeks ...   | 19,325                | 6,320 0 0          | 100,477 0                        | 11,180 0 0 | 210 0 0                     | 17,710 0 0      | 4,206                    | 2,570        | 6,776  |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | Nil.               | Nil.                             | Nil.       | Nil.                        | Nil.            | Nil.                     | Nil.         | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 14TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 13TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 14TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 13TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| .....                                      | Nil.      | .....            | 39   | 1,470     | 38               | .....   | Nil.            | .....            | 39  | 58,226          | 79               | 38,226                  | .....                   |

## TIRHOOT STATE RAILWAY.

*Approximate Return of Traffic for the week ending 20th August 1887, on 249 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week on 240 miles open ...                | 60,128                | (a) 22,093 5 7     | 70,182 30                        | 6,083 1 0   | 2,010 12 5                  | 30,703 3 0      | 7,048                    | 3,700        | 11,406 |
| Or per mile of railway ...                                      | 241                   | 88 12 0            | 283 0                            | 25 13 0     | 2 14 0                      | 119 7 0*        | .....                    | .....        | .....  |
| For previous 6 weeks of half-year ...                           | 223,172               | 73,922 10 5        | 8,25,553 10                      | 70,631 15 0 | 15,358 3 7                  | 1,59,012 13 0   | 30,993                   | 33,155       | 72,958 |
| Total for 7 weeks ...   | 283,300               | 96,016 0 0         | 8,95,736 0                       | 77,315 0 0  | 17,375 0 0                  | 1,90,705 0 0    | 47,451                   | 36,915       | 84,366 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year on 240 miles open | 31,524                | 9,630 10 6         | 93,309 30                        | 10,002 10 0 | 3,052 7 8                   | 22,685 12 2     | 5,166                    | 4,221        | 9,387  |
| Per mile of railway corresponding week of previous year ...     | 128                   | 39 2 0             | 379 0                            | 40 11 0     | 5 0 0                       | 84 13 0*        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...                | 238,024               | 77,006 5 7         | 8,49,788 30                      | 90,740 5 0  | 23,341 5 4                  | 1,91,090 15 11  | 36,640                   | 32,084       | 68,724 |

(a) Increase is due to rush of passengers for bathing *mela* on account of Solar Eclipse.  
 \* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tirhoot State Railway.*

| RECEIPTS FOR WEEK ENDING 21st AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20th AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1st APRIL 1886 TO 21st AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1st APRIL 1887 TO 20th AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 246  | 22,686    | 92               | 249  | 30,703    | 124              | 216   | 6,39,218        | 2,598            | 248 20  | 6,72,670        | 2,707            | 33,452                  | .....                   |

## NALHATI STATE RAILWAY.

*Approximate Return of Traffic for the week ending 20th August 1887, on 27½ miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated), including steam boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|---|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |   |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P. | Rs. A. P.   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,775½                | 1,028 8 7          | 17,335 20                        | 1,093 8 0 | 6 4 0   | 2,101 4 7       | 509                      | 254          | 763    |
| Or per mile of railway ...                                  | 102                   | 37 12 0            | 614 0                            | 39 2 0    | 0 4 0   | 77 2 0          | .....                    | .....        | .....  |
| For previous 6 weeks of half-year ...                       | 23,227½               | 7,558 7 5          | 59,114 20                        | 3,378 8   | 80 12 0   | 11,017 11 5     | 3,236                    | 2,050½       | 5,286½ |
| Total for 7 week ...  | 26,003                | 8,587 0 0          | 67,650 0                         | 4,445 0 0 | 87 0 0  | 13,119 0 0      | 3,745                    | 2,304½       | 6,049½ |
| COMPARISON.   |                       |                    |                                  |           |   |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,261½                | 863 8 3            | 4,221 30                         | 317 9 0   | 28 1 6  | 1,200 2 9       | 509                      | 254          | 763    |
| Per mile of railway corresponding week of previous year ... | 81                    | 31 11 0            | 155 0                            | 11 10 0   | 1 1 0   | 44 6 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 17,616                | 6,727 5 11         | 46,489 30                        | 3,465 1 0 | 104 5 9   | 10,296 12 8     | 3,781                    | 1,941½       | 5,722½ |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Nalhati State Railway.*

| RECEIPTS FOR WEEK ENDING 21st AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20th AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1st APRIL 1886 TO 21st AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1st APRIL 1887 TO 20th AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 27½  | 1,200     | 44               | 27½  | 2,101     | 77               | 27½   | 34,632          | 1,271            | 27½   | 38,456          | 1,411            | 3,824                   | .....                   |





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, SEPTEMBER 7, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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The following is published for general information.

W. C. MACPHERSON,

*Offg. Secretary to the Government of Bengal.*

### CURTALMENT OF ANNUAL REPORTS.

\* No. 4417, dated Simla, the 23rd August 1887.

RESOLUTION—By the Government of India, Dept. of Finance and Commerce.

Read the undermentioned papers:—

From the Government of the Punjab, No. 3948., dated the 22nd June 1885, and enclosures.

Resolution in the Home Department, No. <sup>37A.</sup> 1392-1001, dated the 12th August 1885.

Circular letter to all Local Governments (except the Punjab), No. 2650, dated the 28th August 1885.

From the Chief Commissioner of Assam, No. 5603, dated the 25th September 1885, and enclosure.

From the Chief Commissioner of Coorg, No. <sup>1150</sup> 132, dated the 29th September 1885, and enclosures.

From the Chief Commissioner of British Burma, No. 687-145N., dated the 30th September 1885, and enclosures.

From the Chief Commissioner of the Central Provinces, No. <sup>3683A.</sup> 161, dated the 19th September 1885, and enclosures.

From the Resident at Hyderabad, No. 21G., dated the 28th January 1886, and enclosures.

From the Government of the North-Western Provinces and Oudh, No. <sup>160</sup> 111-783, dated the 13th February 1886, and enclosures.

From the Government of Bombay, No. 992, dated the 13th March 1886.

From the Government of Madras, No. 482B., dated the 14th June 1886, and enclosures.

From the Government of Madras, No. 1456, dated the 12th July 1886, and enclosures.

From the Government of Bengal, No. 1534T.—R., dated the 3rd November 1886, and enclosures.

From the Government of Bengal, No. 2798, dated the 30th December 1886.

Resolution in the Home Department, No. <sup>28</sup> 1570-95, dated the 15th July 1887.

**RESOLUTION.**—The remarks and orders contained in the Resolution of the Home Department of 15th July above quoted, which are confined to reports furnished to that Department,

Opium.  
Salt.  
Stamps.  
Excise.  
Assessed taxes.

Customs.  
Mints.  
Trade.  
Joint-Stock Companies.  
Post Office.

seem to apply equally to the annual\* reports upon subjects administered in this Department. The general opinion of the Local Governments who were consulted on the subject is opposed to any considerable curtailment of reports bearing on revenue matters.

The administration of Provincial revenues is left so much in the hands of Local Governments, and they are also financially so greatly interested therein, that it is not, in the opinion of the Government of India, expedient to restrict the Provincial authorities with respect to the information they may consider it desirable to collect and to place on record regarding them.

2. In the case of Opium and Salt Administration Reports, the fiscal interests involved are of such great importance that, even if the fullest information were not necessary for the purposes of the Local Governments, annual reports would be required by the Government of India in order to enable it to watch the administration of the revenue. These reports should therefore be as full as possible without being prolix, and should be furnished to the Government of India annually, as at present.

3. As regards the reports on Stamps, the Governor-General in Council has no objection to their being prepared and submitted triennially by any Local Government which considers this sufficient. Statistical information only would in this case be submitted in the intermediate years. The reports on the External Land Trade may also be submitted triennially in the same way, the monthly statistics of the trade being transmitted to this Department as at present.

4. The remarks contained in paragraph 5 of the Home Department's Resolution on the necessity of methodical arrangement are specially applicable to the reports submitted to this Department. In reports bearing on revenue matters and trade, comparisons with past years are of special value; but these are rendered difficult unless a systematic arrangement is observed in the subjects dealt with.

5. The Excise reports should in all cases be prefixed by a concise description (which may be repeated from year to year) of the various systems on which the excise is administered in the province concerned, and the extent to which each system applies. There is necessarily in such matters much diversity of practice, and the value of the reports is occasionally diminished by the use of technical terms, whose precise signification is little known beyond the limits of the province, and is often different in different provinces.

**ORDER.**—Ordered that a copy of this Resolution be forwarded to all Local Governments and Administrations, and to the Heads of Departments under the Department of Finance and Commerce, for information.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 3rd September 1887.

| No.                      | District and date of return. | Rainfall at Sudder station in inches.   | Character of the weather, state and prospects of the crops, and state of health at date.  |   |
|--------------------------|------------------------------|---|---|---|
| BENGAL.                  |                              |   |   |   |
| Western Districts        |                              |   |   |   |
| BURDWAN DIV.             | 1 Hardwan, Sept. 3, '87      | 4.60  | Weather—disturbed. Crop prospects continue fair, but more rain much wanted in parts of Culna and Cutwa. <i>Aus</i> and jute being cut. Price of rice somewhat lower. Cholera and fever continue in Sudder; public health elsewhere good.  |   |
|                          | Culna ..                     | 0.90  |   |   |
|                          | Cutwa ..                     | Nil   | Weather—rather dry for the season. Transplantation of <i>amun</i> rice finished, but rain wanted everywhere, and the plants in thana Bishenpur are reported to be damaged for want of sufficient moisture. Indigo is being manufactured. Prices have slightly fallen. Public health good.   |   |
|                          | Raneegunge .. 3, '87         | 0.50  |   |   |
|                          | Bishenpur ..                 | 0.40  | A prolonged break in the rains ended on the 2nd instant. Weather now cool and showery. Young transplanted paddy has suffered severely from the prolonged drought, but it is hoped that no permanent mischief has been done to the crop. Jute is being cut. Sugarcane looks very well. Cholera reported from several villages; otherwise public health good. |   |
|                          | Bishenpur .. 3, "            | 0.77  |   |   |
|                          | 3 Beerbhoom .. 3, "          | 2.12  | Weather—muggy. State and prospects of crops good.   |   |
|                          | Rampur Haut ..               | 0.85  |   |   |
|                          | 4 Midnapore .. 3, '87        | 2.13  | Weather—rather dry and sultry. Transplanting of winter rice complete. <i>Aus</i> paddy nearly ripe. More rain wanted, especially to the west. A little fever reported.  |   |
|                          | 5 Hooghly .. 3, "            | 1.34  |   |   |
| Serampur ..              | 0.57                         | Weather—cloudy and sultry. Reaping of <i>aus</i> and jute in progress. Transplanting of <i>amun</i> rice nearly complete. More rain required. Some fever in the south of the district.  |   |   |
| Jehanabad ..             | 2.22                         |   |   |   |
| Howrah .. 3, "           | 0.79                         |   |   |   |
| Oolooberiah ..           | 1.32                         |   |   |   |
| Central Districts        |                              |   |   |   |
| PRESIDENCY DIV.          | 6 24-Perghs., Sept. 3, '87   | 1.10  | Weather—hot with occasional showers. Rainfall insufficient. Prospects of <i>aus</i> , jute and sugarcane good. Prospects of <i>amun</i> not so favourable for want of sufficient rain, particularly in Bassirhat sub-division. Harvesting of <i>aus</i> continues. Health of people fairly good.  |   |
|                          | 7 Nuddea .. 3, "             | 2.53  | Weather—generally warm and sunny; occasional light showers. <i>Aus</i> rice nearly harvested; outturn fair. <i>Amun</i> has suffered from want of water for transplanting. Jute and sugarcane doing well. Public health fair. Flood level slightly risen.   |   |
|                          | Knahtea ..                   | 0.74  |   |   |
|                          | Meherpur ..                  | 1.13  | Weather—seasonable. <i>Aus</i> paddy is being harvested. Transplantation of <i>amun</i> getting on rapidly on high lands. Public health generally good.   |   |
|                          | Chundanga ..                 | 0.91  |   |   |
|                          | Ranaghat ..                  | 0.98  | Weather—hot with occasional showers. <i>Amun</i> wants rain. Reaping of <i>aus</i> , jute, and indigo going on. Prospects good. Rivers rising. Public health generally good.  |   |
|                          | 8 Khoolna .. 3, '87          | 2.33  |   |   |
|                          | Jessore .. 3, "              | 1.51  | Weather—hot; rain at intervals. Harvesting of <i>bhadoi</i> paddy almost over. <i>Amun</i> paddy growing well. Sowing of <i>til</i> commenced in some places. Sugarcane and jute promising. Public health good.   |   |
|                          | Jhenidah ..                  | 0.2   |   |   |
|                          | Magurah ..                   | 1.64  | Weather—cloudy. Standing crops good. <i>Bhadoi</i> and jute being harvested. Transplantation of <i>amun</i> still progressing. Rice 20 to 26 seers per rupee.   |   |
|                          | Narail ..                    | 0.42  |   |   |
|                          | Bongong ..                   | 2.92  | Weather—cloudy with occasional showers. Cutting of <i>aus</i> paddy continues. Prospects of crops continue good. Transplanting of <i>ganja</i> seedlings has commenced. Fever rather prevalent.   |   |
|                          | 10 Mooreshedabad .. 3, '87   | 1.95  |   |   |
|                          | Lalbach ..                   | 2.55  | Prospects of crops fair. Prices rising. Fever prevalent.  |   |
|                          | Kandi ..                     | 0.11  |   |   |
|                          | Jungipur ..                  | 2.33  | Weather—cloudy. Rain on the 2nd has been very beneficial to <i>amun</i> , the state and prospects of which are now good. Public health fair. A few cases of cow-pox reported from Sherpur.  |   |
|                          | 11 Binnaguri .. 3, '87       | 2.76  |   |   |
| Thakurgaon ..            | 1.79                         | Weather—seasonable. General health and prospect of crops good. Rivers risen very high.  |   |   |
| 12 Rajshahi .. 3, '87    | 4.21                         |   |   |   |
| Natore ..                | 1.85                         | Weather—seasonable. State and prospects of crops good.  |   |   |
| Nowgong ..               | 1.55                         |   |   |   |
| 13 Rangpur .. 3, "       | 2.09                         | Weather—cloudy with rain. Transplantation of winter rice continues. The heavy rain that has fallen this week has done much good. Harvesting of <i>bhadoi</i> not finished yet. Cattle-disease reported from Mynagoree and Rajgunge. Public health good. |   |   |
| Kurigram ..              | 1.12                         |   |   |   |
| Nilphamari ..            | 1.82                         |   |   |   |
| Gaibanda ..              | 0.71                         |   |   |   |
| RAJSHAHY DIV.            | 14 Hogra .. 3, '87           | 1.32  | Weather—cloudy. Rain on the 2nd has been very beneficial to <i>amun</i> , the state and prospects of which are now good. Public health fair. A few cases of cow-pox reported from Sherpur.  |   |
|                          | Sherpur ..                   | 0.47  |   |   |
|                          | Nowkhilla ..                 | 2.12  | Weather—seasonable. General health and prospect of crops good. Rivers risen very high.  |   |
|                          | 15 Pabna .. 3, '8            | 1.00  |   |   |
|                          | Serajgunj ..                 | 0.21  | Weather—seasonable. State and prospects of crops good.  |   |
|                          | 16 Darjeeling .. 3, '87      | 4.31  |   |   |
|                          | Jalpigoree .. 3, "           | 16.82   | Weather—cloudy with rain. Transplantation of winter rice continues. The heavy rain that has fallen this week has done much good. Harvesting of <i>bhadoi</i> not finished yet. Cattle-disease reported from Mynagoree and Rajgunge. Public health good.   |   |
|                          |                              |   |   |   |
|                          | Eastern Districts.           |   |   |   |
|                          | Dacca Division.              | 18 Dacca, Sept. 3, '87  | 1.04  | Weather—seasonable. Harvesting of jute continues. <i>Aus</i> paddy nearly reaped. Transplantation of winter crops still going on. <i>Amun</i> thriving. Rivers subsiding. Prospect of crops and public health good. |
| Manickgunge ..           |                              | 0.41  |   |   |
| Munshigunge ..           |                              | 1.11  | Weather—cloudy and rainy. Harvesting of <i>aus</i> nearly completed. Prospects of <i>amun</i> good. Jute-steeping in progress. General health good.   |   |
| Naraingunge ..           |                              | 0.9   |   |   |
| 19 Furreedpur .. 3, '87  |                              | 1.01  | Weather—seasonable. Cultivation of <i>amun</i> crop still going on. Prospects of crops good. More rain wanted. General health good.   |   |
| Goalundo ..              |                              | 0.19  |   |   |
| Madaripur ..             |                              | 0.77  | Weather—cool with occasional showers. Transplanting of rice continues. Prospects good.  |   |
| 20 Backergunge .. 1, '87 |                              | 1.53  |   |   |
| 21 Mymensingh .. 2, '87  |                              | 0.21  |   |   |
| Kishoregunge ..          |                              | 0.31  |   |   |
| Attea ..                 |                              | 1.12  |   |   |
| Netrokona ..             | 1.53                         |   |   |   |

| No.                                | District and date of return.            | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|------------------------------------|---|---------------------------------------|--|
| <b>BFNGAL—contd.</b>               |   |                                       |  |
| <i>Eastern Districts—contd.</i>    |   |                                       |  |
| CHITTAGONG DIV.                    | 22 Chittagong, Sept. 6, '87             | 0.94                                  | Weather—hot. <i>Amra</i> harvested; outturn good. <i>Amra</i> still being transplanted. Prices high. Cholera reported; public health otherwise good.   |
|                                    | 23 Noakholly                            | .....                                 | Report not received.   |
|                                    | 24 Tipperah " 1, '87                    | 3.05                                  | Weather—seasonable; but hotter than it ought to be owing to scanty rainfall. Some rain has fallen, but a great deal more is much wanted.   |
|                                    | Brahmanbariah " "                       | 1.52                                  |  |
|                                    | Chandpur " "                            | 1.50                                  |  |
| CHITTAGONG DIV.                    | 25 Chittagong Hill Tracts, Aug. 30, '87 | 1.84                                  | Weather—cloudy and sunny throughout the week. A shower of rain on the 29th. Early <i>joom</i> paddy ripening. Cotton doing well. Transplanting in low lands still continues, but nearly complete.  |
|                                    | Hill Tipperah " 31, "                   | 3.19                                  | Weather—rainy. Transplantation of <i>amun</i> paddy yet continues. Sugarcane and <i>jum</i> crops doing well. Public health good.  |
| <b>BEHAR.</b>                      |   |                                       |  |
| PATNA DIV.                         | 26 Patna, Sept. 3, '87                  | 0.67                                  | Weather—hot and cloudy. Rain urgently wanted in many parts for trans-plantation of rice seedlings; those already transplanted are suffering. Har-vesting of <i>bhadoi</i> crops going on. Cholera still reported from Behar and Dinapore, but is decreasing.   |
|                                    | Behar " "                               | 2.00                                  |  |
|                                    | 27 Gaya                                 | .....                                 | Report not received.   |
|                                    | 28 Shahabad " 3 "                       | 1.95                                  | Weather—fair in the beginning of the week, but rainy in the latter part. Paddy transplantation going on actively, and with the recent rain the opera-tion will be more vigorously pushed on. <i>Bhadoi</i> crops are being harvested, and prospects are satisfactory except in Bhabua. Cholera is fast abating, but still lingers here and there. Fever reported from Buxar and Sasseram. Prices stationary. |
|                                    | Buxar " "                               | 0.52                                  |  |
| PATNA DIV.                         | Sasaram " "                             | Nil                                   |  |
|                                    | Bhabua " "                              | 0.40                                  |  |
|                                    | 29 Darbhanga " 3 "                      | 2.66                                  | Weather—cloudy. Prospects of <i>bhadoi</i> continue very favourable. Harvesting of <i>makai</i> and <i>marua</i> in progress. Transplantation of rice still going on. Indigo manufacture not yet over. Price of common rice averages 18 seers per rupee. Public health generally good.   |
|                                    | 30 Mozafferpur " 3, '87                 | 1.18                                  | Weather—mostly hot and rainless; now cloudy and rainy. Harvesting of <i>bhadoi</i> crops commenced. Cholera still occurs in places.  |
|                                    | Hajipur " "                             | 0.49                                  |  |
| BEAUFORT DIV.                      | 31 Saran " 3 "                          | 1.39                                  | Weather—bright and close. A smart shower this morning (3rd). Prospects of crops continue good. Cholera abating.  |
|                                    | Sewan " "                               | 0.08                                  |  |
|                                    | Gopalgunge " "                          | 0.51                                  |  |
|                                    | 32 Chumra " 3 "                         | 0.60                                  | Weather—rainy with heavy showers. Prospects of crops much improved by the rainfall of the week. Transplantation of <i>aghani</i> still going on in some parts of the district, where there had been lack of rain. Harvesting of early <i>bhadoi</i> has begun. Public health fair. Prices stationary.  |
|                                    | Bettiah " "                             | 7.35                                  |  |
| BEAUFORT DIV.                      | 33 Monghyr, Sept. 3, '87                | 0.46                                  | Weather—very hot and sultry. Reaping of <i>bhadoi</i> crops going on briskly. Winter rice growing well, but rain much wanted. The Ganges rising again. A little cholera in the Monghyr town, Kharakpore and Beguserai; otherwise general health good.  |
|                                    | Beguserai " "                           | 0.30                                  |  |
|                                    | Jamui " "                               | 1.19                                  |  |
|                                    | 34 Bhagalpur " 3 "                      | 0.82                                  | Weather—sultry in south, seasonable in north. <i>Bhadoi</i> harvest yielding fairly in the north of the Ganges, and late rice there also doing well. In the centre of the district want of rain felt, but good rain falling at the time of report.   |
|                                    | Scoopool " "                            | 5.56                                  |  |
| BEAUFORT DIV.                      | Banks " "                               | 2.89                                  |  |
|                                    | 35 Purneah " 3 "                        | 4.58                                  | Weather—early in the week clear and hot; latterly cool, rainy and cloudy. All crops doing well. <i>Bhadoi</i> giving fair outturn. Transplantation of <i>aghani</i> nearly completed.  |
|                                    | Kishengunge " "                         | 4.42                                  |  |
|                                    | 36 Maldah " 3 "                         | 0.42                                  | Weather—fine, and too dry up to 1st instant; since then heavy rain. Upwards of 7 inches fallen to-day (3rd), not accounted in this return. <i>Bhadoi</i> harvest going on with good outturn. Rain has done good to winter paddy, the prospects of which are favourable. Common rice 21 seers per rupee. Public health generally good.  |
|                                    | Chanchal " "                            | 1.45                                  |  |
| BEAUFORT DIV.                      | Sitgunge " "                            | 2.05                                  |  |
|                                    | Gujole " "                              | 0.40                                  |  |
|                                    | 37 Sonthal Pergah, " 3 "                | 2.32                                  | Weather—hot and dry. More rain wanted for transplanting paddy crops. Rain on 2nd has done much good. General health good.  |
|                                    | Deoghur " "                             | 0.75                                  |  |
|                                    | Godda " "                               | 2.48                                  |  |
| BEAUFORT DIV.                      | Jamtara " "                             | 0.82                                  |  |
|                                    | Pakour " "                              | 5.07                                  |  |
|                                    | Rajmehal " "                            | 1.02                                  |  |
| <b>ORISSA.</b>                     |   |                                       |  |
| ORISSA DIV.                        | 38 Cuttack                              | .....                                 | Report not received.   |
|                                    | 39 Pooner, Sept. 1, '87                 | 2.25                                  | Weather—cloudy with very little rain. Weeding and transplanting of <i>sarad</i> crop going on except in the Chilka Tracts. Common rice 23 seers 8 chit-tacks per rupee in the Sudder sub-division and 20 seers 8 chittacks in the Khorda sub-division. Cases of cholera still reported.  |
|                                    | Khorda " "                              | 1.76                                  |  |
| ORISSA DIV.                        | 40 Balasore " 2, "                      | 2.67                                  | Weather—cloudy and seasonable. <i>Beati</i> crop ripening. Weeding of <i>sarad</i> crop advancing. Prospects of crops good. Rain wanted in parts of Balaipal thana. Public health generally good.  |
|                                    |   |                                       |  |
| <b>CHOTA NAGPORE.</b>              |   |                                       |  |
| <i>South-West Frontier Agency.</i> |   |                                       |  |
| CHOTA NAGPORE DIV.                 | 41 Hazaribagh, Sept. 2, '87             | 0.77                                  | Weather—bright; occasionally cloudy. Rain very much wanted over most of the district. Indian-corn, <i>goondli</i> and <i>marua</i> being harvested. Other crops doing well. General health fair.   |
|                                    | 42 Lohardugga " 3 "                     | 2.83                                  | Weather—hot. More rain wanted. Prospects of crops continue good. No change in prices. Cholera abating.   |
|                                    | Palamow " "                             | 0.51                                  |  |
|                                    | 43 Singbhum " 2 "                       | 2.09                                  | Weather—fairly cool. Prospects of crops fair, but in many parts more rain required. Lands for <i>rubber</i> crops being prepared. Indian-corn being cut. General health good.  |
| CHOTA NAGPORE DIV.                 | 44 Manbhum " 3 "                        | 1.75                                  | Weather—close and cloudy. More rain much wanted in almost all parts of the district. Autumn crops being harvested; outturn about 12 annas. Fever prevalent in Baumundi.  |
|                                    | Govindpur " "                           | 0.28                                  |  |



## STATEMENT SHOWING THE STOCKS OF RICE IN AND AROUND CALCUTTA.

| NAMES OF MARKS.   | STOCK IN HAND AS COMPILED ON—           |                                       |                                    |                                    |                                      |  |   |                                       |                                     |                                      |                                      |  |   |
|---|---|---------------------------------------|------------------------------------|------------------------------------|--------------------------------------|--|---|---------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|--|---|
|   | 1st week<br>of Sept. 1886.              | 1st week<br>of Oct. 1886.             | 1st week<br>of Nov. 1886.          | 1st week<br>of Dec. 1886.          | 1st week<br>of Jan. 1887.            | 1st week<br>of Feb. 1887.              | 1st week<br>of Mar. 1887.               | 1st week<br>of April 1887.            | 1st week<br>of May 1887.            | 1st week<br>of June 1887.            | 1st week<br>of July 1887.            | 1st week<br>of August 1887.            | 1st week<br>of Sept. 18                 |
| Balinghatta   | Mds.<br>5,06,500                        | Mds.<br>5,00,000                      | Mds.<br>3,31,900                   | Mds.<br>3,11,000                   | Mds.<br>2,89,000                     | Mds.<br>4,13,500                       | Mds.<br>4,73,000                        | Mds.<br>11,01,000                     | Mds.<br>12,67,000                   | Mds.<br>10,36,700                    | Mds.<br>7,61,000                     | Mds.<br>6,72,000                       | Mds.<br>5,51,000                        |
| Daitadanga  | 50,500                                  | 54,900                                | 56,500                             | 59,000                             | 47,700                               | 53,900                                 | 61,300                                  | 72,400                                | 66,900                              | 42,800                               | 73,900                               | 53,600                                 | 67,000                                  |
| Chitnore, Golabare, Conner,<br>toke, Hathkhol, and Culo-<br>Ghat. | 5,60,800                                | 6,37,400                              | 6,26,100                           | 8,48,100                           | 7,75,900                             | 7,63,700                               | 5,52,700                                | 7,47,100                              | 6,58,200                            | 6,15,600                             | 5,83,000                             | 6,17,200                               | 5,39,500                                |
| Pathurichattia, Posta, and<br>Jorabaran.                          | 3,000                                   | 4,000                                 | 5,000                              | 4,000                              | 6,000                                | 5,000                                  | 4,000                                   | 5,200                                 | 5,000                               | 8,000                                | 3,000                                | 2,000                                  | 2,500                                   |
| Tallyganee, Chittah, Kidderpore,<br>and Moonsikunee.              | 1,28,000                                | 1,20,300                              | 1,13,300                           | 1,46,400                           | 1,23,900                             | 1,55,600                               | 1,39,500                                | 1,79,900                              | 1,56,000                            | 1,26,800                             | 1,11,700                             | 1,07,900                               | 1,07,100                                |
| 11 Minor Razars (estimated) ...                                   | 2,40,000                                | 2,40,000                              | 2,40,000                           | 2,40,000                           | 2,40,000                             | 2,40,000                               | 2,40,000                                | 2,40,000                              | 2,40,000                            | 2,40,000                             | 2,40,000                             | 2,40,000                               | 2,40,000                                |
| Other retail shops, 3,120 in<br>number (estimated).               | 2,50,000                                | 2,50,000                              | 2,50,000                           | 2,50,000                           | 2,50,000                             | 2,50,000                               | 2,50,000                                | 2,50,000                              | 2,50,000                            | 2,50,000                             | 2,50,000                             | 2,50,000                               | 2,50,000                                |
| Boidyabatty, Sowabganee,<br>Shuddresur, and Chander-<br>nagore    | 33,722                                  | 30,450                                | 23,114                             | 7,200                              | 5,080                                | 5,139                                  | 5,243                                   | 6,112                                 | 6,848                               | 8,775                                | 6,480                                | 34,740                                 | 51,203                                  |
| Total   | 17,74,552                               | 19,02,450                             | 17,02,914                          | 18,38,090                          | 17,37,450                            | 18,03,039                              | 17,55,743                               | 20,01,712                             | 26,40,618                           | 23,29,475                            | 20,40,130                            | 19,77,340                              | 17,98,302                               |
| On Railway premises on both<br>sides of the river.                | 11,011<br>(on 4th<br>September 86.)     | 6,629<br>(on 2nd<br>Oct. 1886.)       | 11,604<br>(on 4th<br>Nov. 86.)     | 7,218<br>(on 4th<br>Dec. 86.)      | 21,020<br>(on 4th<br>Jan. 87.)       | 16,838<br>(on 31st<br>Feb. 1887.)      | 17,999<br>(on 4th<br>Mar. 1887.)        | 9,883<br>(on 4th<br>April 1887.)      | 12,914<br>(on 4th<br>May 1887.)     | 9,494<br>(on 4th<br>June 87.)        | 6,186<br>(on 4th<br>July 87.)        | 4,244<br>(on 4th<br>August 87.)        | 19,930<br>(on 3rd<br>September 87.)     |
| On boats ...<br>loaded ...  | 85,147<br>(1st to 3rd<br>September 86.) | 22,144<br>(1st to 3rd<br>Oct. 1886.)  | 23,219<br>(1st to 3rd<br>Nov. 86.) | 30,278<br>(3rd to 5th<br>Dec. 86.) | 76,383<br>(2nd to 4th<br>Jan. 1887.) | 81,461<br>(1st to 3rd<br>Feb. 1887.)   | 78,908<br>(1st to 3rd<br>Mar. 1887.)    | 51,477<br>(1st to 3rd<br>April 1887.) | 15,510<br>(1st to 3rd<br>May 1887.) | 13,852<br>(1st to 3rd<br>June 1887.) | 2,570<br>(1st to 3rd<br>July 1887.)  | 79,990<br>(1st to 3rd<br>August 1887.) | 50,919<br>(1st to 3rd<br>September 87.) |
| By Canal returns  | 50,980<br>(1st to 3rd<br>September 86.) | 44,919<br>(1st to 3rd<br>October 86.) | 24,291<br>(1st to 3rd<br>Nov. 86.) | 21,411<br>(3rd to 5th<br>Dec. 86.) | 78,253<br>(2nd to 4th<br>Jan. 1887.) | 1,51,101<br>(1st to 3rd<br>Feb. 1887.) | 1,77,040<br>(1st to 3rd<br>March 1887.) | 81,375<br>(1st to 3rd<br>April 1887.) | 30,255<br>(1st to 3rd<br>May 1887.) | 17,539<br>(1st to 3rd<br>June 1887.) | 24,701<br>(1st to 3rd<br>July 1887.) | 28,344<br>(1st to 3rd<br>August 1887.) | 53,107<br>(1st to 3rd<br>September 87.) |
| Grand Total of Stocks   | 18,57,903                               | 19,76,641                             | 17,64,013                          | 19,97,507                          | 19,16,945                            | 21,42,659                              | 20,29,619                               | 30,47,387                             | 27,17,307                           | 23,75,350                            | 20,88,287                            | 20,89,908                              | 19,31,319                               |
| Probable stock available for<br>exportation by sea.               | 8 lakhs                                 | 9½ lakhs                              | 7½ lakhs                           | 6½ lakhs                           | 8½ lakhs                             | 11 lakhs                               | 9½ lakhs                                | 20 lakhs                              | 16½ lakhs                           | 18½ lakhs                            | 10½ lakhs                            | 10½ lakhs                              | 8½ lakhs                                |

STATISTICAL DEPARTMENT.

The 5th September 1887.

W. C. MACPHERSON,  
Offg. Secretary to the Govt. of Bengal.

**PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the**

| Number.            | DISTRICTS     | QUANTITIES PER RUPEE IN |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
|--------------------|---------------|-------------------------|------------------------|------------------------------------|--------------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|                    |               | WHEAT.                  |                        |                                    | BARLEY.            |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLU (Sorghum Vulgare). |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
|                    |               | Present return.         | Next preceding return. | Corresponding return of last year. | Present return.    | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                   | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|                    |               |                         |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| BENGAL.            |               |                         |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| Western Districts. |               |                         |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 1                  | Burdwan       | 15 0                    | 15 0                   | 14 0                               | Not in the market. |                        |                                    | 17 0             | 15 0                   | 15 8                               | 23 4            | 22 8                   | 23 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 2                  | Bankura       | 15 0                    | 13 8                   | 17 4                               | 20 0               | 20 0                   | 23 0                               | 17 6             | 17 0                   | 19 8                               | 22 8            | 22 0                   | 25 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 3                  | Beerbhoom     | 16 8                    | 16 8                   | 20 0                               |                    |                        |                                    | 10 8             | 17 4                   | 16 0                               | 22 8            | 22 8                   | 20 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 4                  | Midnapore     | 15 0                    | 13 0                   | 18 0                               |                    |                        |                                    | 19 0             | 18 0                   | 15 0                               | 23 0            | 23 0                   | 21 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 5                  | Hooghly       | 14 0                    | 14 0                   | 16 0                               |                    |                        |                                    | 10 0             | 19 0                   | 10 0                               | 16 0            | 17 0                   | 15 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
|                    | Howrah        | Not available.          |                        |                                    |                    |                        |                                    | 13 4             | 13 4                   | 12 0                               | 18 8            | 18 8                   | 16 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| Central Districts. |               |                         |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
|                    | Calcutta      | 14 4                    | 14 4                   | 14 4                               | 19 14              | 20 0                   | 21 8                               | 8 12             | 8 12                   | 9 8                                | 16 4            | 16 4                   | 15 10                              | 10 12                             | 10 12                  | 10 12                              |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 6                  | 24-Pargunnahs | 14 0                    | 14 0                   | 14 0                               | 23 8               | 26 8                   | 20 0                               | 8 0              | 8 0                    | 8 0                                | 16 13           | 16 13                  | 11 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 7                  | Nudda         | 16 0                    | 16 0                   | 16 0                               | 36 0               | 32 0                   | 26 5                               | 15 4             | 15 4                   | 14 0                               | 17 10           | 20 4                   | 15 4                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 8                  | Khoolna       |                         |                        |                                    |                    |                        |                                    | 7 0              | 17 0                   | 15 0                               | 20 0            | 20 0                   | 17 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 9                  | Jessore       | 15 4                    | 16 0                   | 16 0                               |                    |                        |                                    | 16 0             | 16 0                   | 13 4                               | 22 0            | 21 4                   | 19 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 10                 | Moorshedabad  | 15 0                    | 15 0                   | 17 0                               |                    |                        |                                    | 15 0             | 15 0                   | 13 4                               | 20 0            | 20 0                   | 20 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 11                 | Dinapore      | 12 8                    | 12 8                   | 16 0                               | 22 8               | 22 8                   | 19 8                               | 15 8             | 15 8                   | 16 12                              | 19 8            | 19 8                   | 21 12                              |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 12                 | Raishahye     | 18 0                    | 16 8                   | 20 0                               | 45 0               | 45 0                   | 33 0                               | 16 8             | 15 12                  | 15 12                              | 19 14           | 18 12                  | 18 8                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 13                 | Rungpore      | 19 12                   | 18 12                  | 17 8                               |                    |                        |                                    | 14 8             | 11 8                   | 14 0                               | 20 0            | 17 12                  | 18 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 14                 | Bogra         | 17 4                    | 17 4                   | 18 12                              |                    |                        |                                    | 15 12            | 15 0                   | 13 8                               | 22 8            | 22 8                   | 21 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 15                 | Pabna         | 18 6                    | 18 0                   | 20 0                               |                    |                        |                                    | 8 0              | 8 0                    | 8 4                                | 22 8            | 21 0                   | 19 8                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 16                 | Darjeeling    | 9 0                     | 9 0                    | 10 0                               | 13 0               | 13 0                   | 10 0                               | 5 0              | 5 0                    | 5 0                                | 13 0            | 13 0                   | 12 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 17                 | Julpigoree    | 12 0                    | 12 0                   | 13 0                               | 20 0               | 20 0                   | 20 0                               | 13 0             | 13 0                   | 13 0                               | 20 0            | 20 0                   | 22 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| Eastern Districts. |               |                         |                        |                                    |                    |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 18                 | Dacca         | 14 8                    | 14 8                   | 14 0                               | 26 0               | 26 0                   | 26 0                               | 17 0             | 17 0                   | 14 8                               | 20 0            | 20 0                   | 16 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 19                 | Farrakpore    | 14 0                    | 20 0                   | 20 0                               | 24 0               | 26 0                   | 25 0                               | 19 0             | 18 0                   | 16 8                               | 22 0            | 22 0                   | 17 8                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 20                 | Raichergunge  |                         |                        |                                    |                    |                        |                                    | 16 0             | 16 0                   | 14 0                               | 19 0            | 18 0                   | 16 0                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |
| 21                 | Sylhet        | 11 12                   | 12 8                   | 13 0                               |                    |                        |                                    | 12 8             | 13 5                   | 13 0                               | 16 12           | 17 0                   | 18 8                               |                                   |                        |                                    |                 |                        |                                    |                 |                        |                                    |                 |                        |                                    |

A In sub-divisions retail prices of salt per rupee were:—Culina 12 seers, Cutwa 13 seers, and Raichergunge 12½ seers.

B In Bishnupore sub-division retail price of salt 13 seers per rupee.

C In Rampore Haut retail price of salt 13½ seers per rupee.

D In Tumlook retail price of salt 11 seers per rupee.

E In sub-divisions retail prices of salt per rupee were:—Solanpore 12 seers and Jehanabad 13½ seers.

F In sub-divisions retail prices of salt per rupee were:—Barasat 12 seers, Barishat 13 seers, Diamond Harbour (at Kulpahat) 10½ seers, Barrackpore 12½ seers and Dum-dum 11 seers.

G In sub-divisions retail prices of salt per rupee were:—Koochta 13½ seers, Meherpore and Choudanga 12 seers, and Ranaghat 10½ seers.

H In Saikhir and Bagirhat sub-divisions retail price of salt 11 seers per rupee.

I In sub-divisions retail prices of salt per rupee were:—Jhaidia and Narail 12 seers, Magoura 10½ seers, and Bonrom 13 seers.



## PRICES-CURRENT (retail) of Food-grain

| Number. | DISTRICTS. |                 |                       |                                    |                 |                        |                                    |                  |                        |                                    |
|---------|------------|-----------------|-----------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|
|         |            | WHEAT.          |                       |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    |
|         |            | Present return. | Next preceding return | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. |

## Eastern Districts.—Continued.

|    |                         | N. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. |
|----|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 22 | Chittagong              | ...    | 10 0   | 10 0   | 16 0   | ...    | ...    | ...    | 13 0   | 12 0   | 9      |
| 23 | Noakholly*              | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    |
| 24 | Tipperah                | ...    | 12 4   | 12 0   | 13 10  | ...    | ...    | ...    | 16 7½  | 18 7   | 12 1   |
| 25 | Chittagong Hill Tracts. | ...    | ...    | ...    | ...    | ...    | ...    | ...    | 13 5   | 13 5   | 10     |
|    | Hill Tipperah.*         | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    |

## BEHAR.

|    |                  | N. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. |
|----|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 26 | Patna            | ...    | 19 0   | 19 0   | 21 0   | 28 0   | 28 0   | 30 0   | 11 8   | 11 8   | 11     |
| 27 | Gya              | ...    | 16 0   | 16 0   | 17 0   | 32 0   | 29 0   | 31 0   | 9 8    | 9 8    | 9      |
| 28 | Shahabad         | ...    | 16 0   | 16 0   | 17 0   | 27 0   | 26 0   | 26 0   | 8 0    | 9 0    | 8      |
| 29 | Durbhanga        | ...    | 17 9   | 19 12  | 17 0   | 38 7   | 30 12  | 24 0   | 13 0   | 12 0   | 11     |
| 30 | Mounseerpore     | ...    | 20 0   | 20 0   | 19 0   | 30 0   | 30 0   | 25 0   | 12 0   | 12 0   | 12     |
| 31 | Sarna            | ...    | 16 0   | 15 0   | 18 8   | 29 0   | 27 0   | 27 8   | 8 8    | 8 4    | 8      |
| 32 | Chumparun        | ...    | 22 0   | 20 0   | 20 0   | 38 0   | 36 0   | 29 0   | 7 8    | 7 8    | 10     |
| 33 | Monghyr          | ...    | 22 0   | 18 15  | 18 15  | 31 8   | 33 8   | 38 10  | 12 9   | 13 10  | 12     |
| 34 | Bhagulpore       | ...    | 20 13  | 19 4   | 18 4   | 35 5   | 32 12  | 31 9   | 16 6   | 16 6   | 14     |
| 35 | Purneah          | ...    | 16 0   | 16 0   | 20 0   | ...    | ...    | ...    | 16 0   | 16 0   | 17     |
| 36 | Maidah           | ...    | 16 0   | 17 0   | 17 0   | ...    | ...    | ...    | 13 0   | 13 0   | 12     |
| 37 | Sonthal Pargahs. | ...    | 15 0   | 13 4   | 14 8   | ...    | ...    | ...    | 16 0   | 16 0   | 16     |

## ORISSA.

|    |          | N. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. |
|----|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 38 | Cuttack  | ...    | 13 2   | 15 12  | 17 1   | ...    | ...    | ...    | 10 8   | 11 13  | 10     |
| 39 | Pooree   | ...    | 10 8   | 10 8   | 15 12  | ...    | ...    | ...    | 13 2   | 13 2   | 13     |
| 40 | Balasore | ...    | 13 0   | 15 0   | 14 0   | 13 0   | 13 0   | 13 0   | 15 0   | 16 0   | 13     |

CHOTA NAGPORE  
South-Western Frontier Agency.

|    |            | N. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. |
|----|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 41 | Hasarobagh | ...    | 16 8   | 17 0   | 16 8   | 20 0   | 17 0   | 18 0   | 10 0   | 9 0    | 10     |
| 42 | Lohardugga | ...    | 20 0   | 20 0   | 22 0   | 24 0   | 24 0   | 20 0   | 16 0   | 16 0   | 16     |
| 43 | Singbhoom  | ...    | 20 0   | 20 0   | 24 0   | 32 0   | 32 0   | 24 0   | 20 0   | 20 0   | 28     |
| 44 | Manbhoom   | ...    | 16 0   | 17 0   | 17 0   | 32 0   | ...    | ...    | 19 0   | 18 0   | 17     |

\* Returns not received.

- S In Cox's Bazar retail price of salt 8 seers per rupee.  
T In Chaudpore sub-division retail price of salt 11½ seers per rupee.  
U In sub-divisions retail prices of salt per rupee were:—Buxar 12½ seer, Sasseram 12 seers, Bhadooh 1½ seers.  
V In sub-divisions retail prices of salt per rupee were:—Madhubani 11 seers and Tajpore 12 seers.  
W In sub-divisions retail prices of salt per rupee were:—Hajepore 12 seers and Santamurhee 11 seers.  
X In sub-divisions retail prices of salt per rupee were:—Sewan 11½ seers and Gopalgunge 12 seers.  
Y In Bettiah retail price of salt 11½ seers per rupee.

Published for general information.

CALCUTTA,  
The 6th September 1887.

| KANGHI OR KAKU.<br>ITALIAN WHEAT.<br>(Setaria italica.) |                        |                                    | GRAM, (CHANA),<br>CHHOLA, KADALAY<br>OR SUNAGA.<br>(Cicer arietinum.) |                        |                                    |
|---|------------------------|------------------------------------|---|------------------------|------------------------------------|
| Present return.   | Next preceding return. | Corresponding return of last year. | Present return.   | Next preceding return. | Corresponding return of last year. |

| N. Ch. | S. Ch. | N. Ch. | S. Ch. | S. Ch. | S. Ch. |
|--------|--------|--------|--------|--------|--------|
| ...    | ...    | ...    | 16 0   | 16 0   | 14 0   |
| ...    | ...    | ...    | ...    | ...    | ...    |
| ...    | ...    | ...    | 17 14  | 18 4   | 17 0   |
| ...    | ...    | ...    | ...    | ...    | ...    |
| ...    | ...    | ...    | ...    | ...    | ...    |

| N. Ch. | S. Ch. | N. Ch. | S. Ch. | S. Ch. | S. Ch. |
|--------|--------|--------|--------|--------|--------|
| 24 0   | 24 0   | 20 0   | 30 0   | 30 0   | 30 0   |
| 17 0   | 17 0   | 16 0   | 27 8   | 28 0   | 23 8   |
| ...    | ...    | ...    | 27 0   | 27 0   | 27 0   |
| ...    | ...    | ...    | 29 10  | 30 9   | 23 0   |
| ...    | ...    | ...    | 30 0   | 30 0   | 25 0   |
| 16 0   | 15 0   | 14 0   | 26 0   | 26 0   | 26 0   |
| ...    | ...    | ...    | 31 0   | 31 0   | 27 0   |
| 21 0   | 33 9   | 33 10  | 30 7   | 30 8   | 27 13  |
| ...    | ...    | ...    | 30 5   | 29 0   | 25 4   |
| 25 0   | 25 0   | ...    | 20 0   | 20 0   | 22 0   |
| ...    | ...    | ...    | 28 0   | 28 0   | 26 10  |
| ...    | ...    | ...    | 22 0   | 21 0   | 20 0   |

(Kakai)

| N. Ch. | S. Ch. | N. Ch. | S. Ch. | S. Ch. | S. Ch. |
|--------|--------|--------|--------|--------|--------|
| ...    | ...    | ...    | 17 1   | 17 1   | 16 6   |
| ...    | ...    | ...    | 18 2   | 13 2   | 15 12  |
| ...    | ...    | ...    | 16 0   | 16 0   | 14 0   |

(Kakai.)

| Not procurable. |     |     | 23 8 | 22 0 | 18 0 |
|-----------------|-----|-----|------|------|------|
| ...             | ... | ... | 20 0 | 19 0 | 20 0 |
| ...             | ... | ... | 16 0 | 16 0 | 16 0 |
| ...             | ... | ... | 16 0 | 16 0 | 17 0 |

Districts of Bengal during the Fortnight ending 31st August 1887—(Concluded.)

|   |                       |                                       |  |                        |                                       |                 |                        |                                       |                |                       |                                       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |                        |                                       | DISTRICTS. |
|---|-----------------------|---------------------------------------|--|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|----------------|-----------------------|---------------------------------------|---|------------------------|---------------------------------------|------------|
| INDIAN-CORN OR<br>MAIZE.<br>(Zea Mays.) |                       |                                       | ARRAR OR THUR.<br>CANDIAN PEA.<br>(Cajanus indicus.) |                        |                                       | FIREWOOD.       |                        |                                       | SALT.          |                       |                                       | SALT.   |                        |                                       |            |
| Present return.                         | Next preceding return | Corresponding return<br>of last year. | Present return.                                      | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return | Next preceding return | Corresponding return<br>of last year. | Present return.                               | Next preceding return. | Corresponding return<br>of last year. |            |

Eastern Districts.—Concluded.

| S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | Rs. A. P. | Rs. A. P. | Rs. A. P. |   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|-----------|---|
| ...    | ...    | ...    | 10 8   | 8 0    | 9 0    | 80 0   | 80 0   | 75 0   | 8 0    | 8 0    | 12 0   | 4 8 0  | 4 4 0  | 3 2 0  |           |           |           | Chittagong.   |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | T1     | ...    | ...    | ...    | ...    | ...    |           |           |           | Noakholly.  |
| ...    | ...    | ...    | 10 10  | 9 14   | 9 14   | ...    | ...    | ...    | T      | 12 0   | 11 8   | 11 0   | 3 5 0  | 3 6 0  | 3 9 0     |           |           | Tipperah.   |
| ...    | ...    | ...    | ...    | ...    | ...    | 320 0  | 320 0  | 320 0  | 8 0    | 8 0    | 8 0    | 4 8 0  | 4 8 0  | 4 8 0  |           |           |           | Chittagong Hill<br>Tracts.<br>Hill Tipperah.<br>ORISSA. |

BEHAR.

|       |       |       |      |      |       |       |       |       |       |       |      |       |        |       |  |  |  |                 |
|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|------|-------|--------|-------|--|--|--|-----------------|
| 40 0  | 32 0  | 36 0  | 26 0 | 26 0 | 26 0  | 120 0 | 120 0 | 110 0 | 11 12 | 11 12 | 11 8 | 3 1 6 | 3 1 6  | 3 1 6 |  |  |  | Patna.          |
| ...   | ...   | ...   | 21 0 | 22 0 | 23 8  | 160 0 | 160 0 | 220 0 | 11 0  | 11 0  | 11 0 | 3 5 0 | 3 5 0  | 3 5 0 |  |  |  | Gya.            |
| ...   | ...   | ...   | 15 0 | 16 0 | 16 0  | 120 0 | 120 0 | 160 0 | 12 8  | 12 8  | 12 0 | 3 3 0 | 3 3 0  | 3 5 0 |  |  |  | Shahabad.       |
| 38 7  | 33 0  | 32 0  | 22 0 | 22 0 | 21 0  | 176 0 | 176 0 | 160 0 | 12 0  | 11 8  | 11 8 | 3 0 0 | 3 0 0  | 3 4 0 |  |  |  | Durbhunga.      |
| 28 0  | 27 0  | 26 0  | 20 0 | 21 0 | 24 0  | 120 0 | 120 0 | 140 0 | 12 0  | 12 0  | 12 0 | 3 4 0 | 3 4 0  | 3 4 0 |  |  |  | Mozufferpore.   |
| 29 0  | 29 0  | ...   | 25 0 | 26 8 | 26 0  | 140 0 | 160 0 | 140 0 | 12 0  | 12 0  | 11 8 | 3 2 0 | 3 2 0  | 3 4 0 |  |  |  | Saran.          |
| 32 0  | 32 0  | 28 0  | ...  | ...  | 26 0  | 160 0 | ...   | ...   | 12 0  | 12 0  | 11 8 | 3 4 0 | 3 4 0  | 3 7 0 |  |  |  | Chumpanan.      |
| 36 12 | 35 10 | 33 10 | 22 0 | 24 2 | 22 0  | 105 0 | 126 0 | 126 0 | 12 9  | 13 2  | 12 1 | 3 0 0 | 2 14 6 | 3 4 0 |  |  |  | Monghyr.        |
| 35 5  | 33 5  | 32 13 | 21 7 | 21 7 | 20 13 | 151 8 | 151 8 | 125 4 | 12 10 | 12 10 | 12 0 | 3 0 0 | 3 2 0  | 3 2 6 |  |  |  | Bhagulpore.     |
| ...   | ...   | ...   | 18 0 | 18 0 | 18 0  | 160 0 | 160 0 | 128 6 | 10 8  | 10 8  | ...  | 3 8 0 | 3 8 0  | 3 9 0 |  |  |  | Furneah.        |
| ...   | ...   | ...   | ...  | ...  | ...   | 120 0 | 120 0 | 160 0 | 12 0  | 11 8  | 11 0 | 3 4 0 | 3 5 0  | 3 6 0 |  |  |  | Maldah.         |
| 38 0  | 38 0  | 30 0  | 26 0 | 26 0 | 22 0  | 200 0 | 200 0 | 200 0 | 11 0  | 11 8  | 12 0 | 3 4 6 | 3 4 6  | 3 1 6 |  |  |  | Southal Pergua. |

|     |     |     |      |       |       |       |       |       |      |      |      |        |        |        |  |  |  |           |
|-----|-----|-----|------|-------|-------|-------|-------|-------|------|------|------|--------|--------|--------|--|--|--|-----------|
| ... | ... | ... | 17 1 | 15 12 | ...   | 80 0  | 80 0  | 80 0  | 14 0 | 14 0 | 14 0 | 2 12 0 | 2 12 0 | 2 12 0 |  |  |  | Cuttack.  |
| ... | ... | ... | 14 7 | 14 7  | 15 12 | 70 0  | 70 0  | 80 0  | 14 7 | 14 7 | 14 7 | 2 10 0 | 2 10 0 | 2 10 0 |  |  |  | Pooroe.   |
| ... | ... | ... | 13 0 | 10 0  | 13 0  | 160 0 | 160 0 | 130 0 | 10 8 | 10 8 | 10 0 | 3 5 0  | 3 5 0  | 3 12 0 |  |  |  | Balasore. |

CHOTA NAGPORE.  
South-Western Frontier Agency.

|      |      |      |      |      |      |       |       |       |       |       |       |       |        |       |  |  |  |             |
|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|--------|-------|--|--|--|-------------|
| 25 0 | 28 0 | 24 0 | 21 8 | 21 0 | 19 0 | 320 0 | 240 0 | 220 0 | 10 8  | 10 0  | 9 0   | 3 4 0 | 3 10 0 | 4 2 0 |  |  |  | Hazarebagn. |
| ...  | ...  | ...  | 28 0 | 28 0 | 20 0 | 120 0 | 120 0 | 130 0 | 9 13  | 9 12  | 9 0   | 4 0 0 | 4 0 0  | 4 4 0 |  |  |  | Lohardugga. |
| ...  | ...  | ...  | 20 0 | 20 0 | 21 0 | 320 0 | 320 0 | 360 0 | 9 0   | 9 0   | 9 0   | 4 0 0 | 4 0 0  | 4 0 0 |  |  |  | Singbhoom.  |
| ...  | ...  | ...  | 22 0 | 21 0 | 17 0 | 240 0 | 240 0 | 240 0 | 10 10 | 10 10 | 10 10 | 3 8 0 | 3 8 0  | 3 6 0 |  |  |  | Manbhoom.   |

- Z In sub-divisions retail prices of salt per rupee were :—Begusarai 11 seers and Jamui 11½ seers.  
 Z1 In Banka, Madhupore, and Noapole sub-divisions retail price of salt 11 seers per rupee.  
 Z2 In Arrareah and Kishengungo sub-divisions retail price of salt 10 seers per rupee.  
 Z3 In sub-divisions retail prices of salt per rupee were :—Deoghur, Pakour and Rajmehal 12 seers, and Godda 11 seers.  
 Z4 In Khoorda sub-division retail price of salt 14 seers per rupee.  
 Z5 In Bhuddruck retail price of salt 9½ seers per rupee.  
 Z6 In Giridih sub-division (at Kharagdiha) retail price of salt 11 seers per rupee.  
 Z7 In Govindpore retail price of salt 12 seers per rupee.

W. C. MACPHERSON,  
Offg. Secy. to the Govt. of Bengal.

PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt in the

| Number. | MARTS.          | WHEAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    |
|---------|-----------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|         |                 | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|         |                 | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.         | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |
| 1       | Calcutta ...    | 2 10 0          | 2 10 3                 | 2 11 0                             | 1 8 0           | 1 8 6                  | 1 9 6                              | 3 12 0           | 3 12 0                 | 3 11 0                             | 2 1 6           | 2 1 6                  | 2 4 3                              |
| 2       | Serajgunge ...  | 1 14 0          | 2 1 0                  | 1 10 0                             | ...             | ...                    | ...                                | 3 10 0           | 3 12 0                 | 4 0 0                              | 1 10 0          | 1 11 6                 | 1 13 6                             |
| 3       | Dacca ...       | 2 7 0           | 2 7 0                  | 2 9 0                              | 1 6 0           | 1 6 0                  | 1 8 0                              | 2 6 0            | 2 6 0                  | 2 9 0                              | 1 14 6          | 1 14 6                 | 2 7 0                              |
| 4       | Naraingunge ... | ...             | ...                    | ...                                | ...             | ...                    | ...                                | 2 8 0            | ...                    | 2 8 0                              | 2 6 0           | ...                    | 2 6 0                              |
| 5       | Chittagong ...  | 3 7 0           | 3 7 0                  | 2 6 0                              | ...             | ...                    | ...                                | 3 0 0            | 3 0 0                  | 4 2 0                              | 2 4 0           | 2 6 0                  | 3 6 0                              |
| 6       | Patna ...       | 2 0 0           | 2 0 0                  | 1 13 9                             | 1 5 3           | 1 5 3                  | 1 4 0                              | 3 0 0            | 3 0 0                  | 3 0 0                              | 1 14 0          | 1 14 0                 | 3 0 0                              |
| 7       | Balasore ...    | 3 0 0           | 3 0 0                  | 2 8 0                              | 3 0 0           | 3 0 0                  | 3 0 0                              | 2 8 0            | 2 8 0                  | 3 0 0                              | 2 7 0           | 1 7 0                  | 1 10 0                             |
| 8       | Pooree ...      | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | 1 14 0          | 1 11 0                 | 2 2 6                              |
| 9       | Cuttack ...     | 3 0 0           | 2 5 0                  | 2 2 0                              | ...             | ...                    | ...                                | 3 10 0           | 3 4 0                  | 3 10 0                             | 2 2 0           | 2 2 0                  | 2 6 0                              |

CALCUTTA,  
The 6th September 1887.

during the Fortnight ending 31st August 1887.

## PRICES PER MAUND

| JOWAR OR CHOLUR.<br>( <i>Sorghum Vulgare</i> .) |                        |                                    | BAJRA OR CUMBU<br>( <i>Pennisetum typhoides</i> .) |                        |                                    |
|---|------------------------|------------------------------------|--|------------------------|------------------------------------|
| Present return.                                 | Next preceding return. | Corresponding return of last year. | Present return.                                    | Next preceding return. | Corresponding return of last year. |
| R. A. P.  | R. A. P.               | R. A. P.                           | R. A. P.   | R. A. P.               | R. A. P.                           |
| 1 14 0  | 1 14 0                 | 1 14 0                             | 8 0 2  | 8 0 8                  | 0 0                                |
| ...   | ...                    | ...                                | ...  | ...                    | ...                                |
| ...   | ...                    | ...                                | ...  | ...                    | ...                                |
| ...   | ...                    | ...                                | ...  | ...                    | ...                                |
| ...   | ...                    | ...                                | ...  | ...                    | ...                                |
| 1 6 0   | 1 6 0                  | 1 6 0                              | 1 6 0  | 1 6 0                  | 1 6 0                              |
| ...   | ...                    | ...                                | ...  | ...                    | ...                                |
| ...   | ...                    | ...                                | ...  | ...                    | ...                                |
| ...   | ...                    | ...                                | ...  | ...                    | ...                                |

1574a

| ARHAR OR THUR<br>CADJAN PEA.<br>( <i>Cajanus indicus</i> .) |                        |                                    | FIREWOOD.       |                        |                                    | SALT.           |                        |                                    | MARTH.       |
|---|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--------------|
| Present return.   | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |              |
| R. A. P.  | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |              |
| 0 2 0   | 0 2 0                  | 0 2 0                              | 0 6 9           | 0 6 9                  | 0 6 9                              | 3 0 0           | 3 0 0                  | 3 0 0                              | Calcutta.    |
| ...   | ...                    | ...                                | ...             | ...                    | ...                                | 2 10 0          | 2 13 0                 | 0 8 0                              | Serajgunge.  |
| 2 0 0   | 2 0 0                  | ...                                | 0 5 0           | 0 5 0                  | 0 5 0                              | 3 3 0           | 3 3 0                  | 3 3 0                              | Dacca.       |
| 2 10 0  | ...                    | 1 15 0                             | 0 8 0           | ...                    | 0 7 0                              | 2 15 0          | ...                    | 3 4 0                              | Naraingunge. |
| 3 12 0  | 4 8 0                  | 4 2 0                              | 0 8 0           | 0 8 0                  | 0 8 0                              | 4 8 0           | 4 4 0                  | 3 3 0                              | Chittagong.  |
| 0 1 7 0   | 1 7 0                  | 1 6 0                              | 0 5 0           | 0 5 0                  | 0 5 3                              | 3 1 6           | 3 1 6                  | 3 1 6                              | Patna.       |
| 3 0 0   | 3 5 0                  | 3 0 0                              | 0 4 6           | 0 4 6                  | 0 5 0                              | 3 5 0           | 3 5 0                  | 3 12 0                             | Balasore.    |
| ...   | ...                    | ...                                | ...             | ...                    | ...                                | 2 10 0          | 2 10 0                 | 2 10 0                             | Pooree.      |
| 2 0 0   | 2 5 0                  | ...                                | 0 8 0           | 0 8 0                  | 0 8 0                              | 2 12 0          | 2 12 0                 | 2 12 0                             | Cuttack.     |

blished for general information.

W. C. MACPHERSON,  
Offg. Secy. to the Govt. of Bengal.

## Meteorological Report of the Province of Bengal

| DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                      |                            |                     |                       |                           |                                   |                                 |                                     |                           |
|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------|----------------------------|---------------------|-----------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|---------------------------|
|                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.         |                            |                     |                       |                           |                                   |                                 |                                     |                           |
|                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week. | Date.                      | Lowest during week. | Date.                 | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean 10 A.M. temperature. |
| Pooree                 | Gopalpore               | 29.687                          | 29.737                     | -.002                | Calm, SSW             | 141.0               | 80.7                 | 27th Aug.                  | 78.8                | 30th Aug.             | 87.1                      | 80.1                              | 83.6                            | +0.5                                | 84.4                      |
|                        | Falm Point              | 29.730                          | 29.749                     | -.007                | South-westerly, SSW   | 264.0               | 91.0                 | 27th "                     | 74.6                | 8th "                 | 87.1                      | 78.7                              | 82.9                            | -0.2                                | 81.4                      |
| Cuttack                | Cuttack                 | 29.667                          | 29.747                     | +0.024               | SSW                   | 41.0                | 92.4                 | 27th "                     | 75.8                | 30th, 31st Aug.       | 80.8                      | 78.0                              | 83.9                            | -0.2                                | 85.7                      |
| Balasore               | Balasore                | 29.687                          | 29.746                     | +0.028               | SSE                   | 119.7               | 90.4                 | 27, 28 "                   | 75.7                | 28th "                | 88.3                      | 77.6                              | 83.0                            | +1.1                                | 83.7                      |
| South-West Midnapore   | Saugor Island           | 29.742                          | 29.768                     | +0.027               | SSE                   | 322.0               | 90.3                 | 30th "                     | 78.0                | 27th "                | 88.0                      | 70.3                              | 85.7                            | +0.3                                | 84.0                      |
| South-East Pergunnahs  | Midnapore               | 29.622                          | 29.772                     | +0.050               | S                     | 94.5                | 91.3                 | 27th "                     | 75.3                | 27th "                | 89.0                      | 77.3                              | 83.1                            | +0.2                                | 84.2                      |
| North-East Pergunnahs  | Calcutta                | 29.734                          | 29.756                     | +0.016               | ESE                   | 98.0                | 90.0                 | 27th "                     | 76.2                | 28th "                | 87.2                      | 77.8                              | 82.5                            | -0.4                                | 83.8                      |
| Howrah                 | Burdwan                 | 29.655                          | 29.755                     | +0.017               | S                     | 60.0                | 91.6                 | 1st Sept.                  | 76.4                | 27th "                | 90.4                      | 78.4                              | 84.4                            | +0.1                                | 84.8                      |
| Bankura                | Bankura                 | 29.436                          | —                          | —                    | SE                    | 55.0                | 91.1                 | 27th Aug., 2nd Sept.       | 75.6                | 27th "                | 89.2                      | 77.5                              | 83.4                            | —                                   | 85.0                      |
| Barbhum                | Ranecungeo              | 29.407                          | 29.716                     | +0.029               | SE                    | 105.1               | 91.3                 | 27th Aug., 2nd Sept.       | 75.9                | 27th "                | 89.0                      | 77.7                              | 83.7                            | +0.3                                | 83.0                      |
| East Burdwan           | Berhampore              | 29.606                          | 29.764                     | +0.028               | S & SE                | 86.3                | 90.6                 | 1, 2 "                     | 77.3                | 28th "                | 89.5                      | 70.0                              | 84.3                            | 0                                   | 81.1                      |
| Medinipur              | Krishnagur              | 29.699                          | 29.765                     | —                    | S                     | 85.0                | 90.3                 | 27, 28 & 30 Aug.           | 76.8                | 27th, 28th Aug.       | 89.4                      | 77.5                              | 83.4                            | —                                   | 85.2                      |
| Jessore                | Jessore                 | 29.742                          | 29.775                     | +0.013               | SSE                   | 67.1                | 91.8                 | 27th "                     | 77.4                | 28th "                | 90.2                      | 78.7                              | 84.5                            | +0.4                                | 86.2                      |
| Chittagong             | Chittagong              | 29.750                          | 29.820                     | +0.023               | SE                    | 75.0                | 88.6                 | 30th "                     | 74.5                | 2nd Sept.             | 86.2                      | 76.1                              | 81.3                            | -0.0                                | 83.2                      |
| Chittagong Hill Tracts | Dumagiri                | —                               | —                          | —                    | —                     | —                   | —                    | Observations not received. | —                   | —                     | —                         | —                                 | —                               | —                                   | —                         |
| Chargunge              | Barrisal                | 29.781                          | 29.793                     | +0.007               | SE                    | 76.0                | 88.3                 | 30th "                     | 75.9                | 2nd "                 | 86.4                      | 78.0                              | 82.2                            | +1.1                                | 83.0                      |
| Khokhly                | Nonkholy                | 29.744                          | 29.788                     | —                    | Calm                  | 20.1                | 88.0                 | 30th "                     | 75.9                | 2nd "                 | 85.9                      | 77.8                              | 81.9                            | —                                   | 83.0                      |
| Furriedpore            | Furriedpore             | 29.764                          | 29.803                     | +0.071               | SSE                   | 109.0               | 89.5                 | 2nd Sept.                  | 77.0                | 28th Aug.             | 87.1                      | 79.4                              | 83.3                            | -0.8                                | 84.7                      |
| Dacca                  | Dacca                   | 29.707                          | 29.784                     | +0.030               | SE                    | 120.0               | 89.1                 | 27 to 30 Aug.              | 77.2                | 29th "                | 88.5                      | 78.8                              | 83.6                            | +0.1                                | 84.9                      |
| Comillah               | Comillah                | 29.757                          | 29.793                     | +0.036               | SE                    | 84.3                | 90.4                 | 30th "                     | 74.8                | 29th "                | 89.1                      | 76.0                              | 82.5                            | +1.2                                | 83.1                      |
| Mymensingh             | Mymensingh              | 29.737                          | 29.795                     | +0.050               | SE, Calm              | 84.0                | 90.3                 | 30th "                     | 77.0                | 2nd Sept.             | 87.0                      | 78.4                              | 83.2                            | +0.7                                | 84.2                      |
| Bogra                  | Bogra                   | 29.686                          | 29.740                     | —                    | Calm                  | 72.3                | 89.8                 | 30th "                     | 76.8                | 1st, 2nd Sept.        | 88.6                      | 77.7                              | 83.2                            | —                                   | 83.2                      |
| Serajunge              | Serajunge               | 29.720                          | 29.776                     | +0.030               | S, SE                 | 76.2                | 89.0                 | 27, 30 Aug., 2nd Sept.     | 76.7                | 2nd "                 | 89.7                      | 78.0                              | 83.7                            | +1.2                                | 83.4                      |
| Rampore Beaulah        | Rampore Beaulah         | 29.684                          | 29.754                     | +0.034               | S                     | 95.9                | 91.3                 | 1, 2 "                     | 74.0                | 27th Aug.             | 89.0                      | 76.2                              | 82.9                            | +0.4                                | 86.5                      |
| Maldah                 | Maldah                  | 29.688                          | —                          | —                    | Calm                  | ?                   | 90.3                 | 29, 31 Aug.                | 77.9                | 29th "                | 89.7                      | 79.2                              | 84.4                            | —                                   | 85.8                      |
| Dinagore               | Dinagore                | 29.659                          | 29.759                     | +0.021               | North-westerly, S     | 94.0                | 90.6                 | 30th "                     | 76.6                | 2nd Sept.             | 88.5                      | 78.2                              | 83.4                            | 0                                   | 83.6                      |
| Rangpore               | Rangpore                | 29.643                          | 29.768                     | +0.042               | S                     | 48.0                | 90.8                 | 29th "                     | 77.7                | 31st, Aug., 2nd Sept. | 88.0                      | 70.1                              | 83.6                            | +0.6                                | 83.7                      |
| Julpigoree             | Julpigoree              | 29.568                          | 29.798                     | +0.059               | E, NE                 | 71.7                | 90.0                 | 30th "                     | 71.8                | 2nd "                 | 86.8                      | 75.2                              | 81.0                            | -0.9                                | 79.4                      |
| Jeelung Hill Districts | Darjeeling              | 22.080                          | —                          | +0.003               | W                     | 64.0                | 67.6                 | 30th "                     | 54.1                | 2nd "                 | 64.0                      | 55.0                              | 60.3                            | -0.6                                | 59.8                      |
| Purneah                | Purneah                 | 29.648                          | 29.776                     | +0.044               | Calm                  | 14.7                | 90.2                 | 29th "                     | 73.6                | 2nd "                 | 87.3                      | 77.3                              | 82.3                            | -1.6                                | 83.0                      |
| Mozufferpore           | Mozufferpore            | —                               | —                          | —                    | —                     | —                   | —                    | Observations suspended.    | —                   | —                     | —                         | —                                 | —                               | —                                   | —                         |
| Durbhunga              | Durbhunga               | 29.376                          | 29.715                     | +0.035               | ESE                   | 103.0               | 90.4                 | 31st "                     | 76.5                | 27th Aug.             | 88.9                      | 79.2                              | 84.1                            | +0.7                                | 83.0                      |
| Motihari               | Motihari                | 29.407                          | 29.725                     | +0.027               | SE, ENE               | 172.2               | 92.2                 | 31st "                     | 74.3                | 2nd Sept.             | 89.8                      | 77.4                              | 83.6                            | +0.6                                | 84.5                      |
| Chupra                 | Chupra                  | 29.510                          | 29.714                     | +0.011               | ENE                   | 8.3                 | 92.3                 | 1, 2 Sept.                 | 77.1                | 2nd "                 | 91.2                      | 78.0                              | 85.1                            | +1.2                                | 86.3                      |
| Dehree                 | Dehree                  | 29.383                          | 29.735                     | +0.044               | S                     | 158.2               | 91.9                 | 1st "                      | 77.0                | 28th Aug.             | 89.3                      | 79.0                              | 84.6                            | +1.5                                | 87.5                      |
| Buxar                  | Buxar                   | 29.405                          | 29.709                     | +0.010               | E                     | 153.4               | 93.0                 | 31st Aug.                  | 77.2                | 28th "                | 89.8                      | 79.2                              | 84.5                            | +0.6                                | 87.0                      |
| Arrah                  | Arrah                   | 29.502                          | 29.698                     | -0.006               | SE                    | 89.4                | 93.4                 | 31st "                     | 77.6                | 28th, Aug., 2nd Sept. | 91.2                      | 79.1                              | 85.2                            | +0.8                                | 86.0                      |
| Gya                    | Gya                     | 29.464                          | 29.697                     | +0.026               | Northwesterly         | 62.0                | 93.9                 | 30th "                     | 77.8                | 28th Aug., 2nd Sept.  | 90.0                      | 78.9                              | 84.9                            | +0.4                                | 87.8                      |
| Bankipore              | Bankipore               | 29.544                          | 29.727                     | +0.002               | ESE                   | 79.0                | 91.9                 | 31st "                     | 78.2                | 27th Aug.             | 89.8                      | 80.1                              | 85.0                            | +0.4                                | 86.7                      |
| Bhagulpore             | Bhagulpore              | 29.564                          | 29.726                     | +0.013               | S                     | 71.0                | 90.4                 | 31st "                     | 76.5                | 2nd Sept.             | 88.8                      | 78.5                              | 83.7                            | +0.2                                | 84.6                      |
| Doonaka                | Doonaka                 | 29.287                          | —                          | —                    | SE, Calm              | 21.0                | 89.8                 | 27th Aug., 1st Sept.       | 73.3                | 27th Aug.             | 88.6                      | 70.8                              | 82.7                            | —                                   | 83.7                      |
| Hazuribagh             | Hazuribagh              | 27.738                          | 29.734                     | +0.017               | SE                    | 213.0               | 86.4                 | 1st "                      | 71.1                | 28th "                | 89.0                      | 72.5                              | 78.8                            | +0.3                                | 79.4                      |
| Ranchee                | Ranchee                 | 27.009                          | 29.724                     | +0.005               | S                     | 135.6               | 86.3                 | 2nd "                      | 70.9                | 27th "                | 84.7                      | 71.7                              | 78.2                            | +0.6                                | 78.5                      |
| Ohyenassan             | Ohyenassan              | 28.764                          | —                          | —                    | South-easterly, NE    | 35.0                | 91.6                 | 2nd "                      | 75.0                | 28th "                | 89.6                      | 76.4                              | 83.0                            | —                                   | 84.5                      |
| Sitabgar               | Sitabgar                | 29.473                          | 29.708                     | +0.016               | SE                    | 62.0                | 91.9                 | 28th Aug.                  | 73.3                | 28th Aug., 2nd Sept.  | 88.2                      | 76.8                              | 82.5                            | -1.1                                | 82.4                      |
| Dhmr                   | Dhmr                    | 29.671                          | 29.788                     | +0.030               | Calm                  | 93.0                | 90.2                 | 29th "                     | 75.8                | 1st "                 | 87.4                      | 78.0                              | 82.7                            | +0.3                                | 83.2                      |
| Silchar                | Silchar                 | 29.724                          | 29.830                     | +0.023               | SE, Calm              | 55.0                | 90.5                 | 28, 29 "                   | 74.8                | 31st Aug.             | 87.9                      | 76.9                              | 81.9                            | -0.9                                | 80.3                      |

Summary.—The normal means of air pressure and temperature are the arithmetical average of means of the readings taken during the month of the atmosphere is expressed in the temperature column.



for the week ending Friday, the 2nd September 1887.

| DISTRICT OBSERVATIONS.      |   |  |                    |              |                      |              |            |                      |              |            |                               |                              |   |                     | Representative station.      | DISTRICT.          | METEOROLOGICAL DIVISION. |
|-----------------------------|---|--|--------------------|--------------|----------------------|--------------|------------|----------------------|--------------|------------|-------------------------------|------------------------------|---|---------------------|------------------------------|--------------------|--------------------------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | RAINFALL.          |              |                      |              |            |                      |              |            |                               |                              |   |                     |                              |                    |                          |
|                             |   |  | Of week.           |              | Since 1st of August. |              |            | Since 15th May 1887. |              |            | Average number of rainy days. | Normal number of rainy days. |   |                     |                              |                    |                          |
|                             |   |  | Mean for district. | Normal mean. | Mean for district.   | Normal mean. | Variation. | Mean for district.   | Normal mean. | Variation. |                               |                              |   |                     |                              |                    |                          |
| 80                          | 5.6                                       | 4.70                                   | —                  | —            | —                    | —            | —          | —                    | —            | —          | —                             | —                            | — | Gopalpore ...       | Pooree ...                   | ORISSA.            |                          |
| 80                          | 6.9                                       | 1.78                                   | —                  | 2.31         | —                    | 12.57        | —          | —                    | 35.13        | —          | 4.1                           | —                            | — | Falso Point ...     | ...                          |                    |                          |
| 78                          | 6.1                                       | 1.67                                   | —                  | 1.63         | —                    | 11.14        | —          | —                    | 35.18        | —          | 3.8                           | —                            | — | Cuttack ...         | Cuttack ...                  |                    |                          |
| 82                          | 5.4                                       | 2.06                                   | —                  | 1.75         | —                    | 12.18        | —          | —                    | 35.15        | —          | 3.3                           | —                            | — | Balasore ...        | Balasore ...                 |                    |                          |
| 84                          | 8.1                                       | 3.1                                    | 3.04               | 2.52         | 11.47                | 15.20        | -3.82      | 40.03                | 42.73        | -2.70      | 5.7                           | 4.0                          | — | Saugor Island ...   | South-West Midnapore ...     | SOUTH-WEST BENGAL. |                          |
| 79                          | 4.6                                       | 1.06                                   | 2.27               | 2.36         | 11.62                | 14.80        | -3.24      | 41.03                | 38.72        | +3.21      | 4.7                           | 3.3                          | — | Midnapore ...       | Midnapore ...                |                    |                          |
| 82                          | 8.4                                       | 2.13                                   | 1.71               | 2.11         | 9.25                 | 13.83        | -4.58      | 31.84                | 38.02        | -7.08      | 3.7                           | 4.2                          | — | Caldcutta ...       | 24-Pargunnahs ...            |                    |                          |
| 75                          | 8.6                                       | 4.40                                   | 2.23               | 2.18         | 9.26                 | 13.83        | -3.67      | 37.07                | 34.67        | +2.40      | 2.7                           | 3.5                          | — | Burdwan ...         | Burdwan ...                  |                    |                          |
| 81                          | 6.0                                       | 0.31                                   | 0.85               | 2.62         | 16.56                | 16.00        | +1.56      | 43.15                | 39.78        | +3.37      | 3.0                           | 4.1                          | — | Bankoora ...        | Bankoora ...                 | SOUTH-WEST BENGAL. |                          |
| 83                          | 7.6                                       | 0.55                                   | 1.73               | 2.74         | 11.32                | 14.24        | -2.92      | 38.34                | 38.00        | -0.65      | 2.5                           | 4.1                          | — | Raneegunge ...      | Beerbhoom ...                |                    |                          |
| 84                          | 8.9                                       | 1.64                                   | 1.63               | 2.58         | 10.93                | 12.70        | -1.77      | 41.72                | 35.15        | +6.57      | 3.5                           | 3.4                          | — | Berhampore ...      | Moorshedabad ...             |                    |                          |
| 77                          | 7.9                                       | 2.06                                   | 1.32               | 2.10         | 8.02                 | 12.70        | -3.67      | 30.28                | 36.41        | -6.13      | 4.0                           | 3.6                          | — | Krishnagpur ...     | Naddea ...                   |                    |                          |
| 74                          | 7.5                                       | 1.51                                   | 1.64               | 1.82         | 8.87                 | 12.03        | -3.16      | 28.83                | 40.14        | -11.31     | 3.4                           | 3.5                          | — | Jessore ...         | Jessore ...                  | SOUTH-WEST BENGAL. |                          |
| 80                          | 8.7                                       | 1.81                                   | —                  | 3.12         | —                    | 21.70        | —          | —                    | 91.69        | —          | —                             | —                            | — | Chittagong ...      | Chittagong ...               |                    |                          |
| 85                          | 7.0                                       | 3.24                                   | 2.15               | 2.81         | 11.58                | 16.82        | -5.24      | 40.40                | 68.66        | -18.17     | 1.5                           | 4.0                          | — | Demagiri ...        | Chittagong Hill Tracts ...   |                    |                          |
| 83                          | 3.0                                       | 2.35                                   | —                  | 4.18         | —                    | 26.33        | —          | —                    | 83.42        | —          | —                             | —                            | — | Barrisal ...        | Backergunge ...              |                    |                          |
| 78                          | 2.9                                       | 0.74                                   | 0.83               | 2.27         | 7.50                 | 12.07        | -4.57      | 2.61                 | 41.93        | -14.32     | 3.0                           | 4.0                          | — | Furcedpore ...      | Furcedpore ...               | SOUTH-WEST BENGAL. |                          |
| 81                          | 6.6                                       | 1.07                                   | —                  | 2.77         | —                    | 14.04        | —          | —                    | 45.63        | —          | —                             | —                            | — | Dacca ...           | Dacca ...                    |                    |                          |
| 80                          | 5.4                                       | 1.72                                   | —                  | 3.01         | —                    | 17.37        | —          | —                    | 53.75        | —          | —                             | —                            | — | Commillah ...       | Tipperah ...                 |                    |                          |
| 82                          | 7.1                                       | 0.37                                   | 2.00               | 3.54         | 10.35                | 15.17        | -4.82      | 47.45                | 49.05        | -1.60      | 3.2                           | 4.1                          | — | Mymensingh ...      | Mymensingh ...               |                    |                          |
| 83                          | 8.6                                       | 2.44                                   | 2.84               | 2.76         | 9.63                 | 12.45        | -2.82      | 47.19                | 41.95        | +5.24      | 3.3                           | 3.0                          | — | Bogra ...           | Bogra ...                    | SOUTH-WEST BENGAL. |                          |
| 83                          | 7.9                                       | 0.81                                   | 1.35               | 2.56         | 7.58                 | 12.08        | -4.50      | 31.91                | 38.66        | -6.75      | 2.5                           | 4.0                          | — | Serajunge ...       | Pubna ...                    |                    |                          |
| 77                          | 4.7                                       | 1.20                                   | 3.14               | 2.94         | 12.50                | 13.01        | -0.51      | 37.22                | 38.12        | -0.90      | 3.5                           | 4.1                          | — | Rampore Beaulah ... | Rajshahye ...                |                    |                          |
| 78                          | 4.3                                       | 0.07                                   | 1.09               | 2.93         | 6.43                 | 12.94        | -6.51      | 35.36                | 39.53        | -4.17      | 3.0                           | 4.2                          | — | Maldah ...          | Maldah ...                   |                    |                          |
| 84                          | 6.3                                       | 2.93                                   | 1.87               | 2.87         | 13.89                | 12.74        | +1.15      | 46.15                | 41.67        | +4.48      | 3.6                           | 3.8                          | — | Dinapore ...        | Dinapore ...                 | SOUTH-WEST BENGAL. |                          |
| 82                          | 5.8                                       | 3.86                                   | 2.28               | 3.42         | 13.57                | 13.27        | +0.30      | 65.16                | 55.20        | +10.96     | 4.3                           | 3.4                          | — | Bangore ...         | Bangore ...                  |                    |                          |
| 90                          | 8.0                                       | 14.10                                  | 10.66              | 6.83         | 31.73                | 24.87        | +6.86      | 98.25                | 84.35        | +13.90     | 5.4                           | 4.3                          | — | Jalpigoree ...      | Jalpigoree ...               |                    |                          |
| 96                          | 9.6                                       | 4.23                                   | 7.57               | 5.15         | 33.13                | 29.49        | +3.64      | 98.21                | 93.21        | +5.00      | 6.5                           | 4.6                          | — | Darjeeling ...      | Darjeeling Hill District ... |                    |                          |
| 87                          | 6.9                                       | 3.80                                   | 5.76               | 2.90         | 19.48                | 14.03        | +5.45      | 51.08                | 41.09        | +10.09     | 4.6                           | 3.7                          | — | Purneah ...         | Purneah ...                  | SOUTH-WEST BENGAL. |                          |
| 86                          | 6.7                                       | 2.66                                   | 2.08               | 3.21         | 15.11                | 11.63        | +3.48      | 42.27                | 32.12        | +10.15     | 3.8                           | 3.2                          | — | Mozufferpore ...    | Mozufferpore ...             |                    |                          |
| 80                          | 8.4                                       | 4.89                                   | 5.21               | 3.10         | 14.53                | 13.21        | +1.33      | 36.09                | 34.20        | +1.89      | 5.3                           | 3.3                          | — | Durbhanga ...       | Durbhanga ...                |                    |                          |
| 70                          | 7.0                                       | 0.11                                   | 0.50               | 2.65         | 9.41                 | 10.83        | -1.42      | 28.11                | 30.82        | -2.71      | 2.3                           | 3.2                          | — | Chupra ...          | Chumpran ...                 |                    |                          |
| 73                          | 3.1                                       | 0.15                                   | —                  | —            | —                    | —            | —          | —                    | —            | —          | —                             | —                            | — | Delree ...          | Saran ...                    | SOUTH-WEST BENGAL. |                          |
| 75                          | 6.1                                       | 0.46                                   | 0.91               | 1.83         | 11.57                | 11.54        | +0.03      | 28.33                | 20.10        | +8.23      | 1.8                           | 3.0                          | — | Buxar ...           | Shahabad ...                 |                    |                          |
| 78                          | 5.6                                       | 0.49                                   | —                  | —            | —                    | —            | —          | —                    | —            | —          | —                             | —                            | — | Arrah ...           | —                            |                    |                          |
| 69                          | 5.9                                       | 0.05                                   | 1.30               | 1.02         | 10.56                | 13.26        | -2.70      | 30.67                | 31.20        | -0.53      | 1.0                           | 3.0                          | — | Gya ...             | Gya ...                      |                    |                          |
| 78                          | 9.4                                       | 0.07                                   | 1.17               | 1.89         | 7.47                 | 11.21        | -3.74      | 28.09                | 30.85        | -2.76      | 2.5                           | 2.0                          | — | Bankipore ...       | Patna ...                    | SOUTH-WEST BENGAL. |                          |
| 82                          | 3.7                                       | 0.34                                   | 0.92               | 2.12         | 9.00                 | 11.74        | -2.74      | 33.60                | 31.06        | +2.54      | 1.4                           | 3.3                          | — | Bhagulpore ...      | South Bhagulpore ...         |                    |                          |
| 78                          | 5.4                                       | 0.68                                   | 1.02               | 2.45         | 11.09                | 12.76        | -1.67      | 41.62                | 30.60        | +11.02     | 2.5                           | 4.0                          | — | Dotmka ...          | Monghyr ...                  |                    |                          |
| 83                          | 9.1                                       | 1.56                                   | —                  | 2.23         | —                    | 13.67        | —          | —                    | 37.18        | —          | —                             | —                            | — | Hazaribagh ...      | Sonthal Pargunnahs ...       |                    |                          |
| 84                          | 9.3                                       | 2.83                                   | 2.01               | 2.16         | 12.17                | 13.79        | -1.62      | 36.44                | 35.48        | +0.96      | 2.8                           | 4.0                          | — | Ranchee ...         | Lohardugga ...               | SOUTH-WEST BENGAL. |                          |
| 75                          | 6.9                                       | 1.07                                   | 1.85               | 2.24         | 14.25                | 14.59        | -0.34      | 43.23                | 39.50        | +3.73      | 5.0                           | 4.2                          | — | Chyabansa ...       | Manbhoom ...                 |                    |                          |
| 88                          | 9.1                                       | 1.74                                   | —                  | —            | —                    | —            | —          | —                    | —            | —          | —                             | —                            | — | Sihagur ...         | Singbhoom ...                |                    |                          |
| 83                          | 6.3                                       | 0.71                                   | —                  | —            | —                    | —            | —          | —                    | —            | —          | —                             | —                            | — | Dhubri ...          | Assam ...                    |                    |                          |
| 89                          | 8.6                                       | 8.01                                   | —                  | —            | —                    | —            | —          | —                    | —            | —          | —                             | —                            | — | Silchar ...         | Assam ...                    | ASSAM.             |                          |

The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater. denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall, the normal mean of the district are the numerical averages of the rainfall return received in the district, i.e., from the total rainfall at the sub-divisional





Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 2nd of September 1887—*conold.*

| Met-oro-nical<br>Division. | District.                | Station.           | RAINFALL                  |                         |                         |                          |                            |                             |                           | TOTAL                          |                         | Total rain-<br>fall since<br>1st of<br>August. | Average<br>total rain-<br>fall from<br>1st of<br>August. | Total rain-<br>fall since<br>15th May<br>1887. | Average<br>rainfall<br>from 15th<br>May<br>to date. |
|----------------------------|--------------------------|--------------------|---------------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|---------------------------|--------------------------------|-------------------------|--|--|--|---|
|                            |                          |                    | Saturday, 27th<br>August. | Sunday, 28th<br>August. | Monday, 29th<br>August. | Tuesday, 30th<br>August. | Wednesday,<br>31st August. | Thursday, 1st<br>September. | Friday, 2nd<br>September. | Number<br>of<br>rainy<br>days. | of<br>rainfall<br>week. |  |  |  |   |
| NORTH BEHAR<br>—concluded. | Narur.                   | Gopalgunge ...     | 0'35                      | 0'00                    | .....                   | .....                    | .....                      | 0'10                        | .....                     | 3                              | 0'60                    | 10'01  | 10'71  | 27'48  | 31'80   |
|                            |                          | Sawan ...          | .....                     | 0'58                    | .....                   | .....                    | .....                      | 0'31                        | 0'21                      | 3                              | 1'10                    | 11'30  | 11'37  | 27'44  | 31'17   |
|                            |                          | Chaurah ...        | .....                     | 0'08                    | .....                   | .....                    | .....                      | .....                       | .....                     | 1                              | 0'08                    | 6'85   | 10'43  | 20'30  | 19'40   |
| SOUTH BEHAR                | Shahabad                 | Buxar ...          | .....                     | .....                   | .....                   | .....                    | .....                      | 0'24                        | 0'10                      | 2                              | 0'34                    | 7'84   | 10'95  | 23'85  | 27'07   |
|                            |                          | Denree ...         | .....                     | .....                   | 0'10                    | 0'05                     | .....                      | .....                       | 0'75                      | 3                              | 0'90                    | 8'59   | ?  | 30'28  | ?   |
|                            |                          | Mhubooah ...       | .....                     | 0'40                    | .....                   | .....                    | .....                      | .....                       | 0'65                      | 2                              | 1'05                    | 15'05  | 11'55  | 31'07  | 29'76   |
|                            |                          | Sumerain ...       | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | 0'40                      | 1                              | 0'40                    | 15'04  | 12'00  | 27'59  | 29'50   |
|                            |                          | Arrah ...          | .....                     | .....                   | .....                   | .....                    | .....                      | 0'80                        | 1'05                      | 2                              | 1'85                    | 7'78   | 11'37  | 30'53  | 29'47   |
|                            |                          | Mohania ...        | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | Nil                            | Nil                     | 12'50  | ?  | ?  | ?   |
|                            | Gya                      | Aurungabad ..      | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | Nil                            | Nil                     | 7'10   | 13'42  | 23'02  | 32'21   |
|                            |                          |                    | Gya ...                   | .....                   | .....                   | .....                    | .....                      | .....                       | 0'31                      | 1                              | 0'31                    | 11'20  | 11'80  | 32'44  | 32'25   |
|                            |                          | Nowadah ...        | .....                     | .....                   | .....                   | .....                    | .....                      | 0'55                        | 0'70                      | 2                              | 1'25                    | 11'90  | 11'14  | 31'19  | 29'75   |
|                            |                          | Shahabad ...       | 0'45                      | .....                   | 0'04                    | .....                    | .....                      | 0'80                        | 1'57                      | 4                              | 2'92                    | 11'04  | 12'57  | 33'00  | 30'71   |
|                            |                          | Arwal ...          | .....                     | .....                   | .....                   | 0'32                     | .....                      | .....                       | .....                     | 1                              | 0'32                    | 8'00   | ?  | 30'30  | ?   |
|                            |                          | Madanagar ...      | .....                     | .....                   | .....                   | 0'35                     | .....                      | .....                       | .....                     | 1                              | 0'35                    | 6'38   | ?  | 22'54  | ?   |
|                            |                          | Sherrghati ...     | .....                     | .....                   | .....                   | .....                    | .....                      | 0'70                        | .....                     | 1                              | 0'70                    | 10'13  | ?  | 29'34  | ?   |
|                            |                          | Kajauli ...        | .....                     | .....                   | .....                   | .....                    | 0'40                       | 0'80                        | 0'90                      | 3                              | 2'00                    | 12'47  | ?  | 25'03  | ?   |
|                            |                          | Pakri Barawan ...  | .....                     | .....                   | .....                   | .....                    | .....                      | 0'50                        | 0'90                      | 2                              | 1'40                    | 7'08   | ?  | 10'25  | ?   |
|                            | Patna                    | Patna ...          | 0'08                      | 0'14                    | .....                   | .....                    | .....                      | 0'05                        | 0'40                      | 4                              | 0'67                    | 5'70   | 11'53  | 30'10  | 31'41   |
|                            |                          |                    | Disapor ...               | .....                   | .....                   | .....                    | .....                      | .....                       | 1'74                      | 0'05                           | 2                       | 1'70   | 7'90   | 12'17  | 32'50   |
|                            |                          | Behar ...          | 0'00                      | .....                   | .....                   | .....                    | .....                      | .....                       | 0'04                      | 2                              | 0'04                    | 10'07  | 10'99  | 29'11  | 31'02   |
|                            |                          | Barri ...          | 2'00                      | .....                   | .....                   | .....                    | .....                      | .....                       | 0'10                      | 2                              | 0'10                    | 6'20   | 10'14  | 25'16  | 28'25   |
|                            |                          | Bikram ...         | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | 1'00                      | 1                              | 1'00                    | 8'25   | ?  | 24'70  | ?   |
|                            |                          | Ilisa ...          | 0'00                      | 0'05                    | .....                   | .....                    | .....                      | .....                       | 0'10                      | 3                              | 0'81                    | 5'40   | ?  | 27'19  | ?   |
|                            | Monsthyr                 | Bogooon ...        | 0'30                      | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | 1                              | 0'30                    | 12'01  | 10'50  | 30'74  | 28'06   |
|                            |                          |                    | Monsthyr ...              | 0'32                    | .....                   | .....                    | .....                      | .....                       | .....                     | 0'14                           | 2                       | 0'46   | 7'11   | 13'78  | 38'17   |
|                            |                          | Jamui ...          | 0'19                      | .....                   | .....                   | .....                    | .....                      | .....                       | 0'45                      | 2                              | 0'64                    | 11'04  | 11'99  | 30'04  | 33'00   |
|                            |                          | Gopri ...          | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | 2'20                      | 1                              | 2'20                    | 3'15   | ?  | 33'17  | ?   |
|                            |                          | Sheikpura ...      | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | 0'37                      | 1                              | 0'37                    | 5'08   | ?  | 10'48  | ?   |
|                            | South Bhagul-<br>pore.   | Bhagulpore ...     | 0'32                      | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | 1                              | 0'32                    | 6'72   | 10'01  | 31'17  | 30'11   |
|                            |                          |                    | Baria ...                 | 2'50                    | .....                   | .....                    | .....                      | .....                       | .....                     | 1                              | 2'50                    | 8'41   | 11'81  | 29'07  | 33'01   |
|                            |                          | Kolpung ...        | 0'02                      | .....                   | .....                   | .....                    | .....                      | .....                       | 0'08                      | 2                              | 1'30                    | 7'44   | ?  | 57'03  | ?   |
|                            | Sonthal Per-<br>gunnabs. | Rajmehal ...       | 0'28                      | 0'40                    | 0'28                    | .....                    | .....                      | .....                       | .....                     | 3                              | 1'02                    | 8'37   | 10'57  | 47'08  | 36'12   |
|                            |                          |                    | Godda ...                 | 0'25                    | .....                   | .....                    | .....                      | .....                       | .....                     | 0'25                           | 2                       | 0'50   | 6'02   | 12'25  | 42'88   |
|                            |                          | Parour ...         | 1'21                      | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | 2                              | 1'45                    | 18'78  | 13'84  | 51'09  | 37'06   |
|                            |                          | Aya Duomka ...     | 0'50                      | 0'00                    | .....                   | .....                    | .....                      | .....                       | 1'52                      | 3                              | 2'40                    | 1'10   | 14'10  | 35'80  | 30'10   |
|                            |                          | Deognur ...        | 0'04                      | 0'07                    | .....                   | .....                    | .....                      | .....                       | 0'15                      | 3                              | 0'85                    | 10'64  | 12'97  | 31'27  | 36'07   |
|                            |                          | Jamwara ...        | 0'14                      | 0'12                    | .....                   | .....                    | .....                      | .....                       | .....                     | 2                              | 0'26                    | 10'03  | 13'15  | 30'60  | 38'40   |
|                            |                          | Simra ...          | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | .....                          | .....                   | ?  | ?  | ?  | ?   |
|                            |                          | Namthal ...        | 3'00                      | .....                   | .....                   | .....                    | .....                      | .....                       | 1'40                      | 2                              | 4'40                    | 9'64   | ?  | 24'11  | ?   |
| CHITTA NAG-<br>PUR.        | Hazariabagh              | Paonamta ...       | 0'10                      | .....                   | .....                   | .....                    | .....                      | 0'03                        | 0'10                      | 3                              | 0'23                    | 11'90  | 13'05  | 33'03  | 35'42   |
|                            |                          |                    | (Giridi) ...              | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | .....                          | .....                   | .....  | ?  | ?  | ?   |
|                            |                          | Hazariabagh ...    | .....                     | 0'05                    | 0'20                    | .....                    | .....                      | 0'08                        | 0'08                      | 4                              | 2'21                    | 1'35   | 14'03  | 37'77  | 35'66   |
|                            |                          | Somnagar ...       | 0'01                      | 0'32                    | .....                   | .....                    | .....                      | 0'30                        | 0'16                      | 4                              | 1'63                    | 8'48   | 12'30  | 31'16  | 34'21   |
|                            |                          | Manudi Hill ...    | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | .....                          | .....                   | 14'51  | ?  | 35'61  | ?   |
|                            |                          | Joomurrah Hill ... | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | .....                          | .....                   | 15'40  | ?  | 45'18  | ?   |
|                            |                          | Barri ...          | .....                     | .....                   | .....                   | .....                    | .....                      | 0'08                        | 1'00                      | 2                              | 1'08                    | 12'39  | ?  | 31'03  | ?   |
|                            |                          | Chitra ...         | .....                     | 0'24                    | .....                   | .....                    | .....                      | .....                       | 0'00                      | 2                              | 0'24                    | 11'05  | ?  | 37'30  | ?   |
|                            |                          | Karagdeha ...      | 0'40                      | .....                   | .....                   | .....                    | .....                      | .....                       | 2'00                      | 2                              | 3'40                    | 20'42  | ?  | 61'30  | ?   |
|                            |                          | Kamghar ...        | 1'00                      | 2'20                    | 0'30                    | .....                    | .....                      | .....                       | .....                     | 3                              | 3'50                    | 14'80  | ?  | 44'04  | ?   |
|                            | Lohardugga               | Lohardugga ...     | 0'01                      | .....                   | 0'18                    | 0'04                     | .....                      | 0'45                        | 0'40                      | 5                              | 1'17                    | 18'59  | ?  | 44'06  | ?   |
|                            |                          |                    | Kanoni ...                | 2'04                    | .....                   | 0'25                     | .....                      | .....                       | 3'08                      | 3                              | 3'27                    | 13'20  | 15'14  | 48'01  | 38'02   |
|                            |                          | Palanow ...        | .....                     | 0'31                    | .....                   | .....                    | .....                      | 0'55                        | 1'76                      | 3                              | 2'62                    | 13'12  | 12'33  | 40'00  | 31'51   |
|                            |                          | Silli ...          | 0'07                      | 0'02                    | .....                   | .....                    | .....                      | .....                       | 2'02                      | 2                              | 2'11                    | 15'40  | ?  | 37'85  | ?   |
|                            |                          | Balmat ...         | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | .....                          | .....                   | ?  | ?  | ?  | ?   |
|                            |                          | Koosnabad ...      | .....                     | 1'00                    | 2'50                    | .....                    | .....                      | .....                       | .....                     | .....                          | .....                   | ?  | ?  | ?  | ?   |
|                            |                          | Gersah ...         | 1'23                      | 0'13                    | .....                   | .....                    | .....                      | .....                       | .....                     | .....                          | .....                   | ?  | ?  | ?  | ?   |
|                            | Singbhoon                | Cynnoona ...       | 0'04                      | 0'36                    | .....                   | 0'02                     | 0'45                       | .....                       | 0'08                      | 5                              | 1'85                    | 14'25  | 14'50  | 43'23  | 39'60   |
|                            |                          |                    | Chakradhar-<br>pore.      | 0'21                    | .....                   | .....                    | 0'35                       | 0'03                        | .....                     | 0'22                           | 4                       | 0'96   | 9'43   | ?  | 32'53   |
|                            |                          | Ghatilla ...       | 3'56                      | .....                   | .....                   | .....                    | .....                      | .....                       | 0'32                      | 2                              | 3'88                    | 17'77  | ?  | 42'71  | ?   |
|                            |                          | Bakaragura ..      | 1'19                      | .....                   | .....                   | 0'48                     | .....                      | 0'50                        | 0'52                      | 4                              | 2'09                    | 9'79   | ?  | 30'45  | ?   |
|                            | Mauchoon                 | Purulia ...        | 1'70                      | 0'05                    | .....                   | .....                    | .....                      | .....                       | .....                     | 2                              | 1'75                    | 14'69  | 14'25  | 34'07  | 37'32   |
|                            |                          |                    | Godindapore ...           | 0'01                    | 0'10                    | .....                    | .....                      | .....                       | .....                     | 0'25                           | 3                       | 0'30   | 7'53   | 13'17  | 22'75   |
|                            |                          | Raghnath-<br>pore. | 0'32                      | 0'05                    | .....                   | .....                    | .....                      | .....                       | .....                     | 2                              | 0'37                    | 8'03   | ?  | 28'01  | ?   |
|                            |                          | Barrabhoon...      | 2'00                      | 0'10                    | .....                   | .....                    | .....                      | .....                       | 0'42                      | 3                              | 3'42                    | 14'02  | ?  | 32'30  | ?   |
|                            |                          | Jhalda ...         | 2'00                      | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | .....                          | .....                   | ?  | ?  | ?  | ?   |
|                            |                          | Chas ...           | .....                     | .....                   | .....                   | .....                    | .....                      | .....                       | .....                     | .....                          | .....                   | ?  | ?  | ?  | ?   |

*Explanation.*—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 6th September 1887.

**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVA-  
TIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
2ND OF SEPTEMBER 1887.**

At the close of the previous week a feeble area of low pressure had formed over South-East and South Bengal, which was accompanied by a distinct, though feeble, cyclonic circulation of winds, and thus conditions had become distinctly more favourable for rainfall in the south of the province, than they had previously been. On the 27th the very feeble depression had moved in a westerly direction and was in South-West Bengal, and moving towards Chutia Nagpur, and it was again accompanied by the distinct though feeble wind circulation. In connection with this feeble whirl, heavy rain was falling at many of the southern stations, and amounts of two inches and upwards were reported at Saugor Island, Diamond Harbour, Jehanabad, Burdwan, Raipur in the Bankoora district (5·65 inches) and Bongong; and in Chutia Nagpur at Ranchi, Ghatsila, Barrabhoom and Jhalda, while in the north of the province the following stations also received very heavy rain:—Matabhanga, Kissengunge, Soopool, Mahua, Patna, Banka and Nanihat. On Sunday, the 28th, the depression had disappeared in a westerly direction, and a moderate south-easterly and southerly monsoon current set in from the Bay of Bengal, but rainfall on this day was usually confined to a few light showers, and there was no general rain in any district. These conditions continued practically unaltered on the following day, and though during the whole of this time a fairly strong monsoon current was blowing at the head of the Bay and in Ceylon, as shown by wind velocities at Saugor Island and Galle, yet rainfall over almost the whole of Bengal was comparatively light. On Tuesday, the 30th, however, though the general conditions had scarcely altered, heavy and rather general rain commenced in the northern districts of the province, and on this day Protapgunge, in the North Bhagulpore district, received 7·35 inches and Buxa 4·21 inches, and over the southern districts moderate showers were rather numerous. This heavy rain in the north of Bengal on the 30th set up a slight cyclonic circulation of winds, which was distinctly noticeable on the 31st, and pressure also became slightly low over the central and northern parts of the province, and with these favourable conditions for rainfall, particularly heavy rain was received over a considerable part of North Bengal. On this day Julpigoree reported the excessive fall of 11·47 inches, Mickiungge one of 7·75 inches, Pallacotta 7·51 inches, Protapgunge 5·11 inches and Kaliagunge 4 inches, while moderately heavy showers became pretty numerous over the whole province. On the 1st of September the meteorological conditions had scarcely changed, except that the rainfall rather decreased in quantity in the northern districts, but the area of rainfall extended, and rain was more general than on the previous day, and on the last day of the week the area of rainfall again extended, and the great majority of the stations in the province received moderate rain. The only other noticeable feature in the meteorology of the 2nd was that a westerly element had appeared in some of the wind directions, and this was the only occasion during the week when the influence of the Bombay current was at all felt in Bengal.

*Pressure.*—During the previous week the mean pressure over the province had been very nearly normal. At the commencement of the present week, the changes were governed by the movement of the very slight depression, but with its disappearance from the province on the 28th, pressure commenced to rise steadily up till the 1st of September, when a slight reaction set in, which was, however, again followed by a rise on the 2nd. It will thus be seen that the mean pressure for the week has been above the normal over the greater part of the province, and taking only those stations into consideration from which observations have been received for several years, and which therefore afford reliable averages, the mean pressure of the whole province of Bengal for the week has been 0·022 inch in excess of the normal. In Orissa, however, pressure has been very slightly below the normal, while in the north of the province, at Purneah, there has been an excess of 0·044" and at Durbhunga one of 0·035". In Assam, at Sibsagor, the mean pressure has been 0·016" in defect of the normal, at Silchar it has been 0·023" in excess, and at Dhubri 0·026" in excess.

*Temperature.*—The variations of temperature during the week have again not been very large, and the mean temperature in no case differs from the normal by as much as one degree. Generally temperature has been in excess of the normal, and the mean average temperature for the whole of Bengal is only about 0·4° in excess of the normal. In Assam, on the other hand, the mean temperature has been in defect of the normal by 0·5°.

*Rainfall.*—The general distribution of the rainfall as to time and district has already been referred to under the meteorological summary, and it will have been seen that the northern districts have received very heavy rain, while the remainder of the province has received only moderate general rain. Thus North Bengal has received an average fall of nearly four inches of rain, and North Behar an average of a little more than three inches. South-West and East Bengal and Chutia Nagpur have received between one-and-a-half and two inches, and Orissa and South Behar between one and one-and-a-half inches. Compared with the normal falls, and expressed as a percentage of this amount, the falls in the various districts during the week have been in Orissa 78 per cent., in South-West Bengal 76 per cent., in East Bengal 56 per cent., in North Bengal 105 per cent., in North Behar 111 per cent., in South Behar 51 per cent., and in Chutia Nagpur 72 per cent.

Taking these districts as having an equal value in the calculation, the rainfalls of the whole province may be said to have been equal to 78 per cent. of the normal.

As before indicated, the rainfall in the following districts has been very largely in excess of the normal :—Julpigoree, Purneah, and Ohumparun ; while the following districts have received falls largely in defect of the normal :—Bankoorah, Furreedpore, Dacca, Oomilla, Mymensingh, Pubna, Maldah, Mozufferpore, Sarun, Shahabad, South Bhagulpore, Monghyr, and Sonthal Pergunnahs.

The following table gives the summary of the temperature and rainfall data of each of the eight meteorological divisions of the province for the week ending Friday, the 2nd of September 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                          |                         |                        |   |           | RAINFALL.       |            |                            |                                     |            |                         |                |                         |                 |
|------------------------------|-------------------------------|------------------------------|--------------------------|-------------------------|------------------------|---|-----------|-----------------|------------|----------------------------|-------------------------------------|------------|-------------------------|----------------|-------------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.       |                         |                        | Average mean of week above or<br>below normal mean of week. | (Of week. |                 |            | Rainy days.                |                                     |            | Since 1st of<br>August. |                | Since 15th<br>May 1887. |                 |
|                              |                               |                              | Average for week.        |                         |                        |   | Average.  | Normal average. | Variation. | Average number in<br>week. | Normal average num-<br>ber in week. | Variation. | Aver g-.                | Normal average | Average.                | Normal average. |
|                              |                               |                              | 1/1 highest of each day. | 1/1 lowest of each day. | 1/1 mean for each day. |   |           |                 |            |                            |                                     |            |                         |                |                         |                 |
|                              |                               |                              |                          |                         |                        |   |           |                 |            |                            |                                     |            |                         |                |                         |                 |
| Orissa                       | 82.4                          | 74.6                         | 88.1                     | 78.6                    | 83.4                   | +0.3  | 1.46      | 1.86            | -0.41      | 3.5                        | 3.5                                 | 0          | 9.20                    | 11.96          | 32.05                   | 35.55           |
| South-West Bengal            | 91.8                          | 75.0                         | 80.2                     | 78.1                    | 83.7                   | +0.1  | 1.72      | 2.27            | -0.55      | 3.6                        | 3.7                                 | -0.1       | 10.50                   | 13.68          | 36.94                   | 38.21           |
| East Bengal                  | 90.4                          | 74.5                         | 87.3                     | 77.8                    | 82.6                   | +0.6  | 1.70      | 3.06            | -1.36      | 4.0                        | 4.5                                 | -0.5       | 12.35                   | 17.16          | 41.80                   | 56.81           |
| North Bengal                 | 91.3                          | 71.8                         | 88.6                     | 77.7                    | 83.2                   | +0.3  | 3.93      | 3.75            | +0.18      | 4.0                        | 4.0                                 | 0          | 15.60                   | 15.26          | 59.76                   | 52.01           |
| North Beha-                  | 92.5                          | 73.6                         | 89.3                     | 78.2                    | 83.8                   | +0.2  | 3.18      | 2.87            | +0.31      | 3.5                        | 3.4                                 | +0.1       | 14.74                   | 12.27          | 41.98                   | 34.80           |
| South Behar                  | 88.9                          | 78.3                         | 89.8                     | 78.9                    | 84.4                   | +0.7  | 1.07      | 2.10            | -1.03      | 2.0                        | 3.2                                 | -1.2       | 10.03                   | 11.97          | 32.50                   | 32.23           |
| Central Nagpur               | 86.5                          | 70.9                         | 84.9                     | 72.1                    | 78.5                   | +0.5  | 1.60      | 2.21            | -0.61      | 3.3                        | 4.1                                 | -0.8       | 12.46                   | 13.89          | 37.68                   | 36.73           |
| Assam                        | 91.6                          | 73.5                         | 87.8                     | 76.9                    | 82.4                   | -0.5  |           |                 |            |                            |                                     |            |                         |                |                         |                 |

\* Ohyebassa not included.

METEOROLOGICAL OFFICE, BENGAL ;  
The 6th September 1887.

A. PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal.

**Abstract of the results of Meteorological Observations taken at the Alipore Observatory in the month of August 1887.**

|  | Inches. | Date.              | Hour. |
|--|---------|--------------------|-------|
| The mean pressure of the month ... ..  | 29.628  |                    |       |
| The average pressure of August from 24 years' registers ...  | 29.598  |                    |       |
| The highest pressure in the month ... ..   | 29.780  | 31st               | 10h.  |
| The lowest pressure in the month ... ..  | 29.433  | 1st                | 16h.  |
| The range of pressure ... ..   | 0.347   |                    |       |
| The total number of hours of bright sunshine during the month  | 161.9   |                    |       |
| The maximum possible number of hours of sunshine ...   | 398.4   |                    |       |
| °  |         |                    |       |
| The mean temperature of the month ... ..   | 82.9    |                    |       |
| The average temperature of August from 24 years' registers...  | 83.1    |                    |       |
| The highest temperature in the month ... ..  | 90.9    | 17th               |       |
| The lowest temperature in the month ... ..   | 75.9    | 2nd                |       |
| The range of temperature during the month ... ..   | 15.0    |                    |       |
| The mean daily range of temperature ... ..   | 9.5     |                    |       |
| The greatest range of temperature in one day ... ..  | 12.5    | 17th               |       |
| Per cent.  |         |                    |       |
| The mean humidity of the month ... ..  | 86      |                    |       |
| The average humidity of August from 24 years' registers ...  | 86      |                    |       |
| Inches   |         |                    |       |
| The mean vapour tension of the month ... ..  | 0.964   |                    |       |
| The average vapour tension of August from 9 years' registers ...   | 1.002   |                    |       |
| The mean cloud proportion of the month ... ..  | 7.44    |                    |       |
| The average cloud proportion of August from 10 years' registers  | 8.14    |                    |       |
| Inches.  |         |                    |       |
| The total rainfall of the month ... ..   | 10.28   |                    |       |
| The total rainfall indicated by a Beckley's self-registering rain-gauge (mouth of the gauge about 52 feet above the ground)    | 10.15   |                    |       |
| The average fall of August from 48 years' registers ...  | 13.94   |                    |       |
| The greatest fall in 24 hours ... ..   | 1.97    | 1st                |       |
| Days.  |         |                    |       |
| The number of rainy days in the month ... ..   | 23      |                    |       |
| The average number of rainy days in August from 24 years' registers ... ..   | 25      |                    |       |
| °  |         |                    |       |
| The mean maximum equilibrium temperature of solar radiation during the month ... ..  | 147.3   |                    |       |
| The mean difference of sun and air temperatures ... ..   | 59.8    |                    |       |
| The greatest sun temperature ... ..  | 156.7   | 27th               |       |
| The greatest excess of sun over air temperature ... ..   | 69.2    | 27th               |       |
| The mean temperature of the nocturnal radiation thermometer on woollen cloth ... ..  | 75.4    |                    |       |
| The mean depression of the nocturnal radiation thermometer below the minimum air temperature at 4 feet above the ground ... .. | 2.6     |                    |       |
| The greatest depression of the nocturnal radiation thermometer below the minimum air temperature ... ..                        | 4.6     | 17th               |       |
| Miles.   |         |                    |       |
| The mean movement of the wind per day ... ..   | 122.2   |                    |       |
| The greatest movement of the wind in one day ... ..  | 218.0   | 2nd                |       |
| The greatest movement of the wind in one hour ... ..   | 14.0    | 2nd 11 to noon     |       |
|  |         | 11th 10 to 11 A.M. |       |
|  |         | 17th 2 to 3 P.M.   |       |

The number of hours with winds from each of the 8 points—

N. 1, NE. 12, E. 63, SE. 161, S. 260, SW. 175, W. 48, NW. 4, Calm 20.

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park-street Observatory). The barometer is about 3 feet higher at Alipore, and, other things being equal, reads therefore .003 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently about 0.6° higher; and, finally, the thermometer which furnished the record of temperature at the Surveyor-General's Office during 20 years and upwards is found to read 0.6 higher than the Kew standard thermometer, which is the standard of reference at the present Observatory.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 6th September 1887.

A. PEDLER,  
for Offg. Meteorological Reporter to the Govt. of India.

**Results of the Meteorological Observations taken at the Alipore Observatory from  
28th August to 3rd September 1887.**

| Month. | Day. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 55° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain.   | WEATHER                     |
|--------|------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|-----------------------------|
|        |      |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |         |                             |
| 1887.  |      | O               |                                     | inches.                              | O            | O        | O      | O        | O              | Inches.         | O          | %         |                       |                 | Inches. |                             |
| Aug.   | 28th | 152.5           | 9.5                                 | 29.614                               | 82.8         | 88.3     | 12.0   | 76.3     | 79.0           | 0.941           | 77.5       | 81        | SE by S and SSE       | 138             | 0.04    | Partially cloudy, d.        |
| "      | 29th | 147.5           | 4.9                                 | .668                                 | 82.5         | 87.0     | 8.8    | 78.2     | 79.5           | .971            | 78.3       | 87        | SSE and ESE           | 89              | 0.06    | Chiefly cloudy, o, g, t, d. |
| "      | 30th | 122.1           | Nil                                 | .708                                 | 81.7         | 84.7     | 6.3    | 78.4     | 79.5           | .980            | 78.6       | 90        | SSE and ESE           | 71              | 0.39    | Cloudy, o, g, p.            |
| "      | 31st | 144.8           | 4.9                                 | .729                                 | 82.4         | 87.7     | 10.2   | 77.5     | 79.4           | .905            | 78.2       | 87        | SSE and WSW           | 76              | 0.03    | Chiefly cloudy, o, g, t, d. |
| Sept.  | 1st  | 140.6           | 0.7                                 | .724                                 | 82.2         | 85.5     | 6.3    | 79.2     | 79.3           | .966            | 78.2       | 88        | SSE and S by E        | 100             | Nil     | Cloudy, o.                  |
| "      | 2nd  | 146.5           | 2.4                                 | .738                                 | 81.5         | 86.3     | 8.2    | 78.1     | 79.3           | .973            | 78.4       | 90        | SSE and S             | 116             | 0.38    | Cloudy, o, g, t, d, p.      |
| "      | 3rd  | 147.9           | 2.6                                 | .705                                 | 82.5         | 86.5     | 8.7    | 77.8     | 79.1           | .951            | 77.7       | 86        | SSW and S by W        | 167             | Nil     | Chiefly cloudy, o.          |

|  |     |         |                  |
|--|-----|---------|------------------|
| The mean pressure of the seven days  | ... | Inches. | 29.698           |
| The average pressure of the corresponding period for 24 years, S. G.'s Office          | ... | ...     | 29.637           |
| The total number of hours of bright sunshine   | ... | ...     | 25.0             |
| The maximum possible number of hours of sunshine                                       | ... | ...     | 88.0             |
|  |     | O       |                  |
| The mean temperature of the seven days   | ... | ...     | 82.2             |
| The average temperature of the corresponding period for 24 years, S. G.'s Office       | ... | ...     | 83.8             |
| The extreme variation of temperature   | ... | ...     | 12.0             |
| The maximum temperature  | ... | ...     | 88.3             |
|  |     | Inches. | 12               |
|  |     | lbs.    |                  |
| The highest velocity of the wind in one hour   | ... | ...     | Not measureable. |
|  |     | %       |                  |
| The mean relative humidity   | ... | ...     | 87               |
| The average relative humidity of the corresponding period for 24 years, S. G.'s Office | ... | ...     | 85               |
|  |     | Inches. |                  |
| The total fall of rain from 28th August to 3rd September 1887                          | ... | ...     | 0.90             |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ...     | 2.06             |
| The total fall from 1st January to 3rd September 1887                                  | ... | ...     | 46.10            |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ...     | 49.19            |

The mean pressure, temperature, &c., are deduced from the traces of the barograph and thermograph.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, t thunder, Δ dew.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 5th September 1887.



**Abstract of the results of the Thermometric Observations taken at the Meteorological Office, Chowringhee, in the month of August 1887.**

|   |     |     |       |         |
|---|-----|-----|-------|---------|
| The mean temperature during the month                         | ... | ... | 82.3  | Date.   |
| The highest temperature during the month                      | ... | ... | 93.2  | 17th    |
| The lowest temperature during the month                       | ... | ... | 76.3  | 2nd     |
| The range of temperature during the month                     | ... | ... | 16.9  |         |
| The mean daily range of temperature during the month          | ... | ... | 1.5   |         |
| The greatest range of temperature in one day during the month | ... | ... | 15.0  | 13th    |
| The mean humidity during the month                            | ... | ... | 88    | %       |
| The mean vapour tension during the month                      | ... | ... | .970  | Inches. |
| The total rainfall of the month                               | ... | ... | 10.68 |         |
| The greatest fall in 24 hours                                 | ... | ... | 2.54  | 1st     |
| The number of rainy days in the month                         | ... | ... | 25    | days    |

A. PEDLER,

*for Offg. Meteorological Reporter to the Govt. of India.*

METEOROLOGICAL OFFICE, INDIA ;

*Calcutta, the 5th September 1887.*

**Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 28th August to 3rd September 1887.**

| MONTH.    | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|-----------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|           |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.     |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| August    | 28th  | 82.9         | 91.0     | 14.2   | 76.3     | 79.8           | .977            | 78.5       | 87        | 0.23    |
| "         | 29th  | 81.0         | 90.0     | 12.0   | 78.0     | 80.1           | 1.016           | 79.7       | 96        | 0.06    |
| "         | 30th  | 81.6         | 85.9     | 7.1    | 78.8     | 79.7           | .989            | 78.9       | 91        | 0.24    |
| "         | 31st  | 81.7         | 89.5     | 12.1   | 77.4     | 79.2           | .966            | 78.2       | 89        | 0.04    |
| September | 1st   | 81.7         | 83.4     | 4.1    | 79.3     | 79.1           | .961            | 78.0       | 89        | .....   |
| "         | 2nd   | 80.5         | 89.0     | 10.8   | 78.2     | 79.4           | .991            | 79.0       | 95        | 0.43    |
| "         | 3rd   | 80.8         | 88.5     | 10.7   | 77.8     | 78.8           | .959            | 78.0       | 91        | 0.06    |

The mean temperature of the seven days

The extreme variation of temperature

The maximum temperature

The mean relative humidity

The total fall of rain from 28th August to 3rd September 1887

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ;

*The 5th September 1887.*

A. PEDLER,

*for Offg. Meteorological Reporter to the Govt. of India.*

## MEMORANDUM.

THE birth and death returns of the principal Municipalities in Bengal for the week ending 20th August 1887 disclose the following results :—

1. That births were registered at the rate of 18·9 per 1,000 of population, and deaths at 29·1 per 1,000. The ratios of the preceding week ending 13th August being 16·7 and 28·6 per 1,000, respectively, a fair advance in birth registration is indicated.

2. That the following Municipalities furnished the highest proportions of births and deaths :—

| Births.    |     |     |                  | Deaths.             |     |     |                  |
|------------|-----|-----|------------------|---------------------|-----|-----|------------------|
|            |     |     | Ratio per mille. |                     |     |     | Ratio per mille. |
| Arrah      | ... | ... | 43·1             | Arrah               | ... | ... | 149·5            |
| Bhagulpore | ... | ... | 31·7             | Gya                 | ... | ... | 62·8             |
| Beauleah   | ... | ... | 31·5             | Beauleah            | ... | ... | 42·0             |
| Serampore  | ... | ... | 29·4             | Serampore           | ... | ... | 39·2             |
| Durbhanga  | ... | ... | 29·1             | Bhagulpore          | ... | ... | 32·6             |
| Gya        | ... | ... | 28·7             | Monghyr             | ... | ... | 32·5             |
|            |     |     |                  | Burdwan             | ... | ... | 32·0             |
|            |     |     |                  | Puri                | ... | ... | 31·6             |
|            |     |     |                  | Suburbs of Calcutta | ... | ... | 30·2             |

3. That the mortality from the specific death-causes stood as follows in contrast with similar information for the preceding week :—

|                  |     |     |     | Ratio per mille during the weeks ending— |                   |
|------------------|-----|-----|-----|--|-------------------|
|                  |     |     |     | 20th August 1887.                        | 13th August 1887. |
| Cholera          | ... | ... | ... | 5·5                                      | 5·4               |
| Small-pox        | ... | ... | ... | ·2                                       | ...               |
| Fever            | ... | ... | ... | 11·8                                     | 10·4              |
| Bowel-complaints | ... | ... | ... | 3·6                                      | 5·5               |
| Injury           | ... | ... | ... | ·5                                       | ·3                |
| Other causes     | ... | ... | ... | 7·5                                      | 7·0               |

The comparison indicates, chiefly, much increase in the death-rate from fever,\* and a sensible diminution in that from bowel-complaints.

4. That in local incidence of the diseases above named, while no Municipality presented noticeably high mortality from small-pox and injury, Puri suffered pre-eminently from bowel-complaints, which carried off 14·7 per 1,000 of its population, and the following Municipalities from cholera, fever and "other causes," which exhibited the death-rates noted opposite them :—

| Cholera.  |     |                  | Fever.   |     |                  | Other Causes. |     |                  |
|-----------|-----|------------------|----------|-----|------------------|---------------|-----|------------------|
|           |     | Ratio per mille. |          |     | Ratio per mille. |               |     | Ratio per mille. |
| Arrah     | ... | 83·7             | Beauleah | ... | 34·1             | Arrah         | ... | 25·1             |
| Burdwan   | ... | 12·2             | Arrah    | ... | 32·3             | Gya           | ... | 21·8             |
| Gya       | ... | 10·2             |          |     |                  | Serampore     | ... | 13·7             |
| Serampore | ... | 7·8              |          |     |                  | Bhagulpore    | ... | 11·8             |
| Patna     | ... | 6·5              |          |     |                  |               |     |                  |

It will be seen from the above figures that cholera prevailed with marked fatality in the Arrah town.

5. That the death-rates in relation to Sex, Class and Age, stood as follows :—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |     |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |     | Ratio per mille. |
| Males   | ... | 27·7             | Christians          | ... | 13·0             | Under 1 year         | ... | 210·9            |
| Females   | ... | 30·6             | Hindus              | ... | 31·5             | 1 and under 5 years  | ... | 50·7             |
| Ratio of male deaths to every 100 female deaths | 102 |                  | Mahomedans          | ... | 24·0             | 5 " " 10 "           | ... | 17·9             |
|   |     |                  |                     |     |                  | 10 " " 15 "          | ... | 16·8             |
|   |     |                  |                     |     |                  | 15 " " 20 "          | ... | 23·5             |
|   |     |                  |                     |     |                  | 20 " " 30 "          | ... | 15·9             |
|   |     |                  |                     |     |                  | 30 " " 40 "          | ... | 19·1             |
|   |     |                  |                     |     |                  | 40 " " 50 "          | ... | 22·4             |
|   |     |                  |                     |     |                  | 50 " " 60 "          | ... | 25·7             |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 66·5             |

R. LIDDERDALE, M.D., Deputy Surgeon-General,

The 5th September 1887.

Sanitary Commissioner for Bengal.

Principal municipalities in Bengal during the week ending 20th August 1887.

| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
|--------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                          |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  | Ratio of male deaths to every 100 female deaths. |  |
|                          |  |  |  |  |  | DISEASE.                                 |  |  |  |  |  |  |  |  |  |  |  |
| NAMES OF MUNICIPALITIES. |  |  | DEATHS FROM—                             |  |  | DISEASE.                                 |  |  |  |  |  |  |  |  |  | Ratio of male deaths to every 100 female deaths. |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
| POPULATION.              |  |  | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |  |  |  |  |  |  |  |  |  | Sex.   |  |
|                          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

\* A special census of the Europeans in the Darjiling Municipality was recently taken, as the census of this section of the community, taken in February 1887, was not reliable owing to the Europeans being at a minimum in that month. The number of the census as before, as it was necessary to re-census them. The ratios have consequently been calculated on the revised population under all heads in the above table, except "Age," the ratios under which have been corrected. The number of the census as before, as it was necessary to re-census them. The ratios have consequently been calculated on the revised population under all heads in the above table, except "Age," the ratios under which have been corrected.

[illegible]

**OFFICE OF SANITARY COMMISSIONER FOR BENGAL,**  
*The 5th September 1887.*

**R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.**

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

## ORISSA COAST CANAL.

LENGTH OF CANAL OPEN, 91 MILES.

Statement showing Quantities of Goods carried during the month of July 1887.

| Number of boats or rafts. | DESCRIPTION.                                   | TOTAL GOVERNMENT AND PRIVATE. |                 |                    |  | PRIVATE.           |            | REMARKS. |
|---------------------------|--|-------------------------------|-----------------|--------------------|--|--------------------|------------|----------|
|                           |  | Quantity—Tons.                |                 |                    | Value.   | Quantity.          | Value.     |          |
|                           |  | Up.                           | Down.           | Total.             | Rupees.  | Tons.              | Rupees.    |          |
| 161                       | 1. Grain ...                                   | 1,699                         | 41              | 1,740              | 49,595   | 1,740              | 49,595     |          |
| 2                         | 2. Cotton ...                                  | .....                         | .....           | .....              | .....  | .....              | .....      |          |
| 32                        | 3. Oilseeds ...                                | 2                             | .....           | 2                  | 132  | 2                  | 132        |          |
| 4                         | 4. Salt ...                                    | 18                            | 287             | 305                | 21,450   | 305                | 21,450     |          |
| .....                     | 5. Piece-goods ...                             | .....                         | 13              | 13                 | 6,700  | 13                 | 6,700      |          |
| .....                     | 6. Metal ...                                   | .....                         | .....           | .....              | .....  | .....              | .....      |          |
| 5                         | 7. Building materials ...                      | .....                         | 24              | 24                 | 1,152  | 24                 | 1,152      |          |
| 365                       | 8. Miscellaneous ...                           | 35                            | 227             | 262                | 31,715   | 257                | 30,765     |          |
| 3                         | 9. Fuel ..                                     | .....                         | 48              | 48                 | 675  | 48                 | 675        |          |
| .....                     | 10. Timber ...                                 | .....                         | .....           | .....              | .....  | .....              | .....      |          |
| 3 rafts                   | 11. Bamboos ...                                | 200 c. ft.                    | 75 c. ft.       | 275 c. ft.         | 15   | 275 c. ft.         | 15         |          |
| 572 & 3 rafts.            | 12. Total ...                                  | 1,754 & 200 c. ft.            | 640 & 75 c. ft. | 2,394 & 275 c. ft. | 1,11,434   | 2,389 & 275 c. ft. | 1,10,484   |          |
| 493 & 2 rafts.            | 13. Total of same month last year              | 1,287 & 75 c. ft.             | 419             | 1,706 & 75 c. ft.  | 96,189   | 1,706 & 75 c. ft.  | 96,189     |          |
|                           |  | Up.                           | Down.           | Total.             |  |                    | Rs. A. P.  |          |
| 14.                       | Total number of boats plying cargo ... No.     | 265                           | 307             | 572                | Total tollage of month—24+25+26 ...                  |                    | 2,529 11 6 |          |
| 15.                       | Total number of boats plying passenger ... No. | 31                            | 34              | 65                 |  |                    |            |          |
| 15a.                      | Ditto empty ...                                | 3                             | 7               | 10                 | Total tollage of same month last year ...            |                    | 1,698 11 3 |          |
| 16.                       | Total registered tonnage, cargo ...            | 3,746                         | 2,381           | 6,127              |  |                    |            |          |
| 17.                       | Total registered tonnage, passenger ...        | 191                           | 181             | 372                | Memorandum of Tollage.                               |                    |            |          |
| 17a.                      | Ditto empty ...                                | 39                            | 52              | 91                 |  |                    |            |          |
| 18.                       | Ton mileage ...                                | 77,224                        | 64,869          | 142,093            |  |                    |            |          |
| 19.                       | Estimated value of cargo Rs.                   | 48,745                        | 62,674          | 111,419            | 1. Balance not recovered on the 1st of the month ... |                    | 418 12 0   |          |
| 20.                       | Number of passengers ...                       | 145                           | 182             | 327                | 2. Tollage per month ...                             |                    | 2,529 11 6 |          |
| 21.                       | Rafts, bamboos... c. ft.                       | 200                           | 75              | 275                |  |                    |            |          |
| 22.                       | Do., bullahs ...                               | .....                         | .....           | .....              |  |                    |            |          |
| 23.                       | Estimated value of rafts Rs.                   | 10                            | 5               | 15                 | 3. Total ...   |                    | 2,948 7 6  |          |
| 24.                       | Tollage on boats                               | 1,437-12-9                    | 908-0-3         | 2,345-13-0         |  |                    |            |          |
| 25.                       | Compounded tollage on boats Rs.                | 83-6-0                        | 99-5-6          | 182-11-6           |  |                    |            |          |
| 26.                       | Tollage on rafts                               | 1-0-0                         | 0-3-0           | 1-3-0              | 4. Amount paid into treasury during the month ...    |                    | 2,210 9 9  |          |
| 27.                       | Total tollage on boats per ton-mile ... Rs.    | .....                         | .....           | 0-0-3              |  |                    |            |          |
| 28.                       | Total tollage on rafts per 100 cubic feet Rs.  | .....                         | .....           | 0-6-11             | 5. Balance due at the end of the month ...           |                    | 737 13 9   |          |

CALCUTTA,

The 6th September 1887. }

A. D. McARTHUR, Major, R.E.,

Under-Secretary to the Government of Bengal.

**PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.**  
**SOUTH-WESTERN CIRCLE.**

NUDDA RIVERS.

*Statement showing Quantities of Goods carried during the month of July 1887.*

| Number of boats or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |                          |                            |  | PRIVATE.                   |                         | REMARKS. |
|---------------------------|---|-------------------------------|--------------------------|----------------------------|--|----------------------------|-------------------------|----------|
|                           |   | Quantity—Tons.                |                          |                            | Value.   | Quantity.                  | Value.                  |          |
|                           |   | Up.                           | Down.                    | Total.                     | Rupces.  | Tons.                      | Rupces.                 |          |
| 1,077                     | 1. Grain ...                                  | 612                           | 21,318                   | 21,930                     | 12,64,673  | 21,930                     | 12,64,673               |          |
| 3                         | 2. Cotton ...                                 | .....                         | 24                       | 24                         | 7,180  | 24                         | 7,180                   |          |
| 390                       | 3. Oilseeds ...                               | 85                            | 7,951                    | 8,036                      | 7,73,932   | 8,036                      | 7,73,932                |          |
| 514                       | 4. Salt ...                                   | 4,238                         | .....                    | 4,238                      | 3,58,112   | 4,238                      | 3,58,112                |          |
| 3                         | 5. Piece-goods ...                            | 2                             | .....                    | 2                          | 2,000  | 2                          | 2,000                   |          |
| 28                        | 6. Metal ...                                  | 50                            | 22                       | 72                         | 41,135   | 72                         | 41,135                  |          |
| 49                        | 7. Building materials ...                     | 199                           | 354                      | 553                        | 10,800   | 553                        | 10,800                  |          |
| 1,615                     | 8. Miscellaneous ...                          | 3,106                         | 15,475                   | 18,581                     | 23,03,662  | 18,581                     | 23,03,662               |          |
| 109                       | 9. Fuel ...                                   | 2,111                         | 406                      | 2,517                      | 24,557   | 2,517                      | 24,557                  |          |
| 11 rafts                  | 10. Timber ...                                | 1,865 c. ft.                  | 6,902 c. ft.             | 8,767 c. ft.               | 6,037  | 8,767 c. ft.               | 6,037                   |          |
| 10 "                      | 11. Bamboos ...                               | .....                         | 8,300 "                  | 8,300 "                    | 790  | 8,300 "                    | 790                     |          |
| 3,788 & 21 rafts.         | 12. Total ...                                 | { 10,403 & 1,865 c. ft.       | { 45,550 & 15,202 c. ft. | { 55,953 & 17,067 c. ft. } | 47,92,878 {  | { 55,953 & 17,067 c. ft. } | { 47,92,878             |          |
| 3,649 & 32 rafts.         | 13. Total of same month last year             | { 14,443 & 48 No              | { 54,604 & 5,293 No.     | { 69,047 & 5,341 No. }     | 46,15,523 {  | { 69,047 & 5,341 No. }     | { 46,15,523             |          |
| 14.                       | Total number of boats plying cargo No.        | 1,226                         | 2,562                    | 3,788                      | Total tollage of month—<br>24 + 25 + 26 ...          |                            | Rs. A. P.<br>29,017 1 6 |          |
| 14a.                      | Total number of empty boats and steamers ...  | 731                           | 278                      | 1,009                      |  |                            |                         |          |
| 15.                       | Total number of boats plying passenger No.    | 1,008                         | 1,637                    | 2,645                      | Total tollage of same month last year ...            |                            | 28,322 11 0             |          |
| 16.                       | Total registered tonnage, cargo ...           | 370,324                       | 618,740                  | 989,064                    |  |                            |                         |          |
| 17.                       | Total registered tonnage, passenger ...       | 702                           | 1,532                    | 2,234                      | Memorandum of Tollage.                               |                            |                         |          |
| 18.                       | Ton-mileage ...                               | .....                         | .....                    | .....                      | Rs. A. P.  |                            |                         |          |
| 19.                       | Estimated value of cargo ...                  | 14,32,670                     | 33,53,381                | 47,86,051                  | 1. Balance not recovered on the 1st of the month ... |                            | 1,031 14 8              |          |
| 20.                       | Number of passengers ...                      | 834                           | 1,169                    | 2,003                      |  |                            |                         |          |
| 21.                       | Rafts, bamboos c. ft.                         | .....                         | 8,300                    | 8,300                      |  |                            |                         |          |
| 22.                       | Do., bullahs "                                | 1,865                         | 6,902                    | 8,767                      | 2. Tollage per month ...                             |                            | 29,017 1 6              |          |
| 23.                       | Estimated value of rafts ...                  | 2,777                         | 4,050                    | 6,827                      |  |                            |                         |          |
| 24.                       | Tollage on boats Rs.                          | 8,426-6-0                     | 20,522-3-0               | 28,948-9-0                 | 3. Total ...   |                            | 30,049 0 2              |          |
| 25.                       | Compounded tollage on boats Rs.               | .....                         | .....                    | .....                      |  |                            |                         |          |
| 26.                       | Tollage on rafts "                            | 13-2-0                        | 55-6-6                   | 68-8-6                     | 4. Amount paid into treasury during the month ...    |                            | 26,284 1 6              |          |
| 27.                       | Total tollage on boats per ton-mile ...       | .....                         | .....                    | .....                      |  |                            |                         |          |
| 28.                       | Total tollage on rafts per 100 cubic feet ... | .....                         | .....                    | .....                      | 5. Balance due at the end of the month ...           |                            | 3,764 14 8              |          |

CALCUTTA,  
The 6th September 1887.

A. D. McARTHUR, Major, R.E.,  
Under-Secretary to the Government of Bengal.

CIRCULAR AND EASTERN CANALS.

*Approximate return of traffic for the week ending Saturday, the 3rd September 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.      | WEEK ENDING SATURDAY, THE<br>3RD SEPTEMBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>4TH SEPTEMBER 1886. |                     |          |
|-----------------------|--|---------------------|----------|--|---------------------|----------|
|                       | Number of<br>boats.                              | Weight of<br>cargo. | Tollage. | Number of<br>boats.                              | Weight of<br>cargo. | Tollage. |
|                       | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... .. | 735  | 1,18,420            | 1,899    | 536  | 87,781              | 1,651    |
| Jute ... ..           | 62   | 25,335              | 495      | 68   | 28,580              | 507      |
| Firewood ... ..       | 128  | 63,510              | 936      | 156  | 66,485              | 982      |
| Other articles ... .. | 805  | 1,70,545            | 2,744    | 870  | 1,83,260            | 2,677    |
| Total ... ..          | 1,730  | 3,77,910            | 6,074    | 1,630  | 3,66,106            | 5,817    |

## Nalhati State Railway.

Statement showing Increases and Decreases in tonnage of Staples carried over the Nalhati State Railway during the month of July 1887, as compared with the same month of the previous year.

| STAPLES.                                      | 1886.     |            | 1887.     |            | 1886.     | 1887.     | Increase. | Decrease. |
|---|-----------|------------|-----------|------------|-----------|-----------|-----------|-----------|
|   | Up.       | Down.      | Up.       | Down.      | Total.    | Total.    |           |           |
| I.—Coal ...                                   | Tons. 371 | Tons. .... | Tons. 371 | Tons. .... | Tons. 371 | Tons. 371 | Tons. 290 | .....     |
| II.—Cotton, raw ...                           | 13        | .....      | 12        | .....      | 13        | 12        | .....     | 1         |
| III.—Cotton twist and yarn—                   |           |            |           |            |           |           |           |           |
| 1.—European ...                               | 1         | .....      | .....     | .....      | 1         | .....     | .....     | 1         |
| 2.—Indian ...                                 | .....     | .....      | .....     | .....      | .....     | .....     | .....     | .....     |
| IV.—Cotton piece-goods—                       |           |            |           |            |           |           |           |           |
| 1.—European ...                               | 27        | .....      | 31        | .....      | 27        | 31        | 4         | .....     |
| X.—Jute—                                      |           |            |           |            |           |           |           |           |
| 1.—Raw ...                                    | .....     | 1          | .....     | .....      | 1         | .....     | .....     | 1         |
| 2.—Gunny-bags and cloths ...                  | 3         | 3          | 4         | .....      | 6         | 4         | .....     | 2         |
| VII.—Grains—                                  |           |            |           |            |           |           |           |           |
| 1.—Wheat ...                                  | 3         | .....      | 3         | .....      | 3         | 3         | .....     | .....     |
| 2.—Rice ...                                   | 410       | .....      | 51        | 176        | 410       | 227       | .....     | 183       |
| 3.—Others ...                                 | 32        | 7          | 4         | 7          | 39        | 11        | .....     | 28        |
| VIII.—Hides and skins—                        |           |            |           |            |           |           |           |           |
| 1.—Hides of cattle—                           |           |            |           |            |           |           |           |           |
| a.—Dressed ...                                | .....     | .....      | .....     | .....      | .....     | .....     | .....     | .....     |
| b.—Undressed ...                              | .....     | .....      | .....     | .....      | .....     | .....     | .....     | .....     |
| 2.—Skins of sheep, goats and small animals—   | .....     | 5          | .....     | 2          | 5         | 2         | .....     | 3         |
| a.—Dressed ...                                | .....     | .....      | .....     | .....      | .....     | .....     | .....     | .....     |
| b.—Undressed ...                              | .....     | .....      | .....     | .....      | .....     | .....     | .....     | .....     |
| XI.—Lac—                                      |           |            |           |            |           |           |           |           |
| 1.—Stick ...                                  | .....     | 1          | .....     | .....      | 1         | .....     | .....     | 1         |
| XIII.—Liquors—                                |           |            |           |            |           |           |           |           |
| 1.—Beer ...                                   | 1         | .....      | 1         | .....      | 1         | 1         | .....     | .....     |
| 2.—Wines ...                                  | 1         | .....      | 1         | .....      | 1         | 1         | .....     | .....     |
| XIV.—Metals—                                  |           |            |           |            |           |           |           |           |
| 2.—Iron ...                                   | 2         | .....      | .....     | .....      | 2         | .....     | .....     | 2         |
| 4.—Others ...                                 | 2         | .....      | 3         | 6          | 2         | 9         | 7         | .....     |
| XV.—Oils—                                     |           |            |           |            |           |           |           |           |
| 1.—Castor ...                                 | 1         | .....      | .....     | .....      | 1         | .....     | .....     | 1         |
| 2.—Kerosine ...                               | 1         | .....      | 2         | .....      | 1         | 2         | 1         | .....     |
| 3.—Others ...                                 | .....     | .....      | 3         | .....      | .....     | 3         | 3         | .....     |
| XIX.—Provisions—                              |           |            |           |            |           |           |           |           |
| 1.—Ghee ...                                   | .....     | .....      | 4         | .....      | .....     | 4         | 4         | .....     |
| 3.—Others ...                                 | .....     | .....      | .....     | 6          | .....     | 6         | 6         | .....     |
| XX.—Railway plant and rolling-stock           | 7         | 6          | 38        | 32         | 13        | 70        | 57        | .....     |
| XXI.—Salt ...                                 | 21        | 16         | 20        | .....      | 40        | 20        | .....     | 20        |
| XVI.—Oil-seeds—                               |           |            |           |            |           |           |           |           |
| 2.—Mustard and rape ...                       | 55        | 10         | 30        | .....      | 65        | 30        | .....     | 35        |
| 3.—Others ...                                 | 4         | .....      | 17        | .....      | 4         | 17        | 13        | .....     |
| XXIII.—Silk, raw—                             |           |            |           |            |           |           |           |           |
| 2.—Indian ...                                 | 1         | 28         | .....     | 37         | 29        | 37        | 8         | .....     |
| XXIV.—Silk piece-goods—                       |           |            |           |            |           |           |           |           |
| 2.—Indian ...                                 | .....     | 7          | .....     | 3          | 7         | 3         | .....     | 4         |
| XXVII.—Stone and lime ...                     | .....     | 3          | .....     | .....      | 3         | .....     | .....     | 3         |
| XXVI.—Sugar—                                  |           |            |           |            |           |           |           |           |
| 1.—Drained ...                                | .....     | .....      | 15        | .....      | .....     | 15        | 15        | .....     |
| 2.—Undrained ...                              | 20        | .....      | 5         | .....      | 20        | 5         | .....     | 15        |
| XXX.—Tobacco ...                              | 4         | 10         | 5         | 1          | 14        | 6         | .....     | 8         |
| XXVIII.—Paper and pasteboard ...              | 53        | .....      | .....     | .....      | 1         | .....     | .....     | 1         |
| XXXIII.—All other articles of merchandise ... | .....     | 51         | 100       | 100        | 104       | 200       | 96        | .....     |
| Total ...                                     | 1,037     | 148        | 1,010     | 370        | 1,185     | 1,380     | 504       | 309       |

## INCREASE.

Tons.

Coal ... 290  
This increase is due partly to steamer service and partly to the silk factories being worked by steam-power to greater extent.

Railway plant and rolling-stock ... 57

This increase is due to greater railway materials carried during this month.

Oil-seeds—

(6).—Others ... 13

The increase in this head is due to greater demand in the local market.

Sugar—

(1).—Drained ... 15

The increase in this commodity is due to demands of the locality.

All other articles of merchandise ... 96

There was increase in this commodity in both upwards and downwards, and this may be ascribed to local and foreign demands.

## DECREASE.

Grain—

(2).—Rice ... 183

The decrease in this staple is due to low rate of the market.

(5).—Others ... 28

The decrease in this staple is due to low rate of the market.

Salt ... 20

This decrease is due to less demand in the intermediate stations.

Oil-seeds—

Mustard and rape ... 35

This decrease is due to low prices at Azimgunge this year.

Sugar—

(2).—Undrained ... 15

The decrease in this staple is due to less demand.

NALHATI, the 3rd September 1887.

R. G. MOOKERJEE, Manager.



## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 27th August 1887 on 1,519 miles open.

|   | COACHING TRAFFIC.     |                 | MERCHANDISE AND MINERAL TRAFFIC. |                | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |            |
|---|-----------------------|-----------------|----------------------------------|----------------|-----------------------------|-----------------|--------------------------|--------------|------------|
|   | Number of passengers. | Receipts.       | Weight carried.                  | Receipts.      |                             |                 | Coaching.                | Merchandise. | Total.     |
|   |                       | Rs. A. P.       | MDS. S.                          | Rs. A. P.      | Rs. A. P.                   | Rs. A. P.       |                          |              |            |
| Total traffic for the week ...                              | 230,464*              | 2,76,535 7 0*   | 22,88,331 0                      | 4,33,419 6 0   | 17,343 9 0                  | 7,27,528 6 0    | 67,354                   | 69,322½      | 136,628½   |
| Or per mile of railway ...                                  | .....                 | 182 0 10        | .....                            | 285 7 9        | 11 6 8                      | 478 15 3        | .....                    | .....        | .....      |
| For previous 7 weeks of half-year ...                       | 1,763,740             | 17,36,391 13 0  | 1,51,39,736 10                   | 31,90,797 13 6 | 1,43,278 1 9                | 60,79,461 11 3  | 474,272½                 | 662,710½     | 1,076,988  |
| Total for 8 weeks ...                                       | 1,994,204             | 20,12,927 4 0   | 1,74,27,067 10                   | 36,33,417 2 6  | 1,60,615 10 9               | 68,06,990 1 3   | 511,583½                 | 672,603      | 1,213,616½ |
| COMPARISON.   |                       |                 |                                  |                |                             |                 |                          |              |            |
| Total for corresponding week of previous year ...           | 201,080               | 2,33,386 1 10   | 20,96,322 10                     | 4,04,816 11 4  | 16,527 9 2                  | 7,44,730 6 4    | 66,467                   | 84,830       | 155,303    |
| Per mile of railway corresponding week of previous year ... | .....                 | 154 0 10        | .....                            | 326 9 9        | 10 14 7                     | 494 9 2         | .....                    | .....        | .....      |
| Total to corresponding date of previous year ...            | 1,901,875½            | 18,67,099½ 11 3 | 1,85,15,861 0                    | 42,08,187 13 3 | 1,17,461 15 11              | 63,32,749 8 5   | 559,113                  | 787,019      | 1,346,132  |

\* The increase in coaching traffic is due partly to the running of a special train with treasure from Gwahar to Armenian Ghat and partly to Sun Eclipse.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 28TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 28TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 1,516                                      | 7,44,730  | 492              | 1,519                                      | 7,27,528  | 479              | 1,515   | 1,01,16,332     | 12,618           | 1,519   | 1,82,81,720     | 12,031           | .....                   | 8,31,612                |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 27th August 1887 on 57½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | MDS. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 11,730                | 5,084 14 0  | 34,074 0                         | 2,312 14 0  | 30 2 0                      | 8,027 14 0      | 1,713                    | 654          | 2,394  |
| Or per mile of railway ...                                  | 203                   | 89 6 2      | 595 0                            | 40 7 1      | 0 8 5                       | 140 5 7         | .....                    | .....        | .....  |
| For previous 7 weeks of half-year ...                       | 78,200                | 37,555 14 0 | 2,75,214 20                      | 17,722 12 0 | 266 11 0                    | 55,485 5 0      | 11,900½                  | 5,886½       | 17,787 |
| Total for 8 weeks ...                                       | 89,930                | 43,240 12 0 | 3,09,274 20                      | 20,035 10 0 | 296 13 0                    | 61,513 3 0      | 13,613½                  | 6,537½       | 20,181 |
| COMPARISON.   |                       |             |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 9,675½                | 4,959 0 2   | 52,217 0                         | 2,529 3 0   | 27 1 9                      | 7,515 4 11      | 1,756                    | 824          | 2,613  |
| Per mile of railway corresponding week of previous year ... | 169                   | 86 11 2     | 913 0                            | 44 3 5      | 6 7 7                       | 131 6 2         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 80,884                | 45,315 13 2 | 3,78,317 20                      | 22,132 6 0  | 262 7 6                     | 67,710 10 8     | 13,911                   | 7,240        | 21,151 |

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 28TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 28TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 57½  | 7,515     | 131              | 57½  | 8,028     | 140              | 57½   | 1,04,308        | 3,399            | 57½   | 1,82,257        | 3,186            | .....                   | 12,141                  |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

*Approximate Return of Traffic for week ended 27th August 1887 on 12 miles open.*

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN |              |        |
|---|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|-------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.               | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                         |              |        |
| Total traffic for the week ...                              | 2,509                 | 407 8 0    | 9,475 10                         | 212 1 0    | 11 4 0                      | 630 13 0        | 406½                    | 58           |        |
| Or per mile of railway ...                                  | 33 15 4               |            |                                  | 17 10 9    | 0 15 0                      | 52 9 1          | .....                   | .....        | ...    |
| For previous 7 weeks of half-year ...                       | 23,407                | 3,862 4 0  | 63,648 20                        | 1,641 7 0  | 65 7 0                      | 5,509 2 0       | 2,687½                  | 908          | 3,     |
| Total for 8 weeks ...                                       | 25,916                | 4,269 12 0 | 73,123 30                        | 1,853 8 0  | 75 11 0                     | 6,109 15 0      | 3,093                   | 966          | 4,     |
| COMPARISON.   |                       |            |                                  |            |                             |                 |                         |              |        |
| Total for corresponding week of previous year ...           | 2,738½                | 447 1 7    | 7,777 0                          | 150 5 0    | 6 12 3                      | 604 2 10        | 309                     | 94           | <      |
| Per mile of railway corresponding week of previous year ... | .....                 | 37 4 2     | .....                            | 12 8 5     | 0 9 0                       | 50 5 7          | .....                   | .....        | ....   |
| Total to corresponding date of previous year ...            | 22,187                | 3,759 13 6 | 92,821 30                        | 1,836 10 0 | 83 14 0                     | 5,680 6 0       | 3,214                   | 1,212        | 3,4    |

*Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 28TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 28TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 12   | 604       | 50               | 12   | 631       | 53               | 12  | 22,953          | 1,913            | 12  | 20,800          | 1,733            | .....                   | 2,153                   |

## SINDIA STATE RAILWAY.

*Approximate Return of Traffic for week ended 27th August 1887 on 74½ miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 5,418                 | 5,367 15 0  | 1,12,776 10                      | 3,872 8 0   | 60 0 0                      | 9,309 7 0       | 735½                     | 11,407½      | 2,142½  |
| Or per mile of railway ...                                  | .....                 | 71 12 3     | .....                            | 51 12 4     | 0 14 0                      | 124 7 4         | .....                    | .....        | .....   |
| For previous 7 weeks of half-year ...                       | 36,152                | 27,046 15 0 | 6,38,309 0                       | 17,618 12 0 | 421 11 0                    | 45,117 6 0      | 5,000½                   | 7,941½       | 12,942½ |
| Total for 8 weeks ...                                       | 41,570                | 32,414 14 0 | 7,51,084 10                      | 21,321 4 0  | 400 11 0                    | 54,426 13 0     | 5,736                    | 9,348½       | 15,084½ |
| COMPARISON.   |                       |             |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 4,178                 | 3,032 8 2   | 1,38,056 30                      | 2,675 0 0   | 73 6 6                      | 5,780 14 8      | 604                      | 1,406        | 2,100   |
| Per mile of railway corresponding week of previous year ... | .....                 | 40 8 8      | .....                            | 35 12 2     | 0 15 9                      | 77 4 7          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 40,816                | 30,096 5 11 | 6,04,621 20                      | 22,389 12 0 | 823 10 3                    | 53,299 12 2     | 6,048                    | 8,643        | 14,691  |

*Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 28TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 28TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 74½  | 5,781     | 7                | 74½  | 9,309     | 124              | 74½   | 1,40,675        | 2,001            | 74½   | 1,08,632        | 2,254            | 18,947                  | .....                   |

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 27th August 1887, on 22½ miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 13,332                | 3,941 10 0  | 3,125 0                          | 114 14 0  | 4 9 0                       | 4,061 1 0       | 924                      | 44           | 968    |
| Or per mile of railway ...                                  | .....                 | 177 2 5     | .....                            | 5 2 7     | 0 3 4                       | 182 8 4         | .....                    | .....        | .....  |
| For previous 7 weeks of half-year ...                       | 111,125               | 30,714 5 0  | 24,719 10                        | 846 15 0  | 44 0 0                      | 31,905 4 0      | 6,763½                   | 474½         | 7,238  |
| Total for 8 weeks ...                                       | 124,457               | 34,655 15 0 | 27,844 10                        | 961 13 0  | 48 9 0                      | 35,666 5 0      | 7,687½                   | 518½         | 8,206  |
| COMPARISON.   |                       |             |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 13,073                | 3,288 10 0  | 2,066 0                          | 72 0 0    | 3 4 0                       | 3,363 14 0      | 852                      | 16           | 868    |
| Per mile of railway corresponding week of previous year ... | .....                 | 147 12 10   | .....                            | 3 3 10    | 0 2 4                       | 151 3 0         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 135,962               | 33,360 0 3  | 24,580 20                        | 906 1 0   | 48 0 3                      | 34,254 7 6      | 8,091                    | 150          | 8,250  |

*Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 26TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 25TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½  | 3,364     | 151              | 22½  | 4,061     | 183              | 22½   | 1,06,987        | 4,808            | 22½   | 1,12,723        | 5,066            | 5,740                   | .....                   |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 27th August 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |           | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-----------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P. | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,216                 | 980 15 3  | 12,411 20                        | 725 9 0    | 29 9 0                      | 1,716 1 3       | 377                      | 211          | 588    |
| Or per mile of railway ...                                  | .....                 | 24 9 6    | .....                            | 17 4 5     | 0 11 3                      | 41 9 2          | .....                    | .....        | .....  |
| For previous 7 weeks of half-year ...                       | 15,433                | 6,717 3 6 | 57,091 30                        | 5,290 12 0 | 189 11 0                    | 13,197 10 6     | 1,996                    | 2,288        | 4,284  |
| Total for 8 weeks ...                                       | 17,649                | 7,708 2 9 | 69,419 10                        | 6,015 5 0  | 219 4 0                     | 15,913 11 9     | 2,373                    | 2,499        | 4,872  |
| COMPARISON.   |                       |           |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,305                 | 943 6 5   | 16,215 20                        | 1,269 3 0  | 13 4 0                      | 2,215 13 5      | 280                      | 308          | 588    |
| Per mile of railway corresponding week of previous year ... | .....                 | 22 7 5    | .....                            | 30 3 6     | 0 5 0                       | 52 15 11        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 21,010½               | 8,847 4 4 | 55,179 30                        | 4,946 11 0 | 156 5 3                     | 13,949 4 7      | 3,172                    | 1,784        | 4,956  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 26TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 25TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 42   | 2,223     | 53               | 42   | 1,746     | 42               | 42  | 40,963          | 954              | 42  | 63,638          | 1,516            | 23,396                  | .....                   |

EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DAOCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 20th August 1887 on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|--------------|---|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |   |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.    | Rs. A. P.   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                | 112,153               | 45,500 0 0         | 5,35,766 0                       | 1,12,320 0 0 | 12,740 0 0  | 1,70,560 0 0    | 10,534                   | 21,010       | 40,544  |
| Or per mile of railway ...                                    | 174                   | 71 0 0             | 824 0                            | 174 0, 0     | 1 0 0†  | 240 0 0         | .....                    | .....        | .....   |
| For previous 6 weeks of half-year ...                         | 752,854               | 3,16,930 0 0       | 34,83,427 0                      | 5,35,650 0 0 | 95,070 0 0  | 9,46,950 0 0*   | 122,264                  | 121,327      | 243,591 |
| Total for 7 weeks ...   | 865,000               | 3,61,430 0 0       | 40,79,193 0                      | 6,47,970 0 0 | 1,07,810 0 0                                      | 11,17,210 0 0   | 141,798                  | 142,337      | 284,135 |
| COMPARISON.   |                       |                    |                                  |              |   |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 141,027*              | 44,081 0 0         | 4,44,833 0                       | 96,764 0 0   | 9,523 0 0   | 1,50,967 0 0    | 17,395                   | 19,737       | 37,132  |
| Per mile of railway corresponding period of previous year ... | 283                   | 71 0 0             | 734 0                            | 150 0 0      | .....   | 233 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 850,081               | 3,43,701 0 0       | 28,57,446 0                      | 5,00,603 0 0 | 68,792 0 0  | 9,13,062 0 0    | 127,507                  | 126,530      | 254,037 |

\* Includes monthly tickets.  
† Steam-boat earnings, Rs. 12,200 have been excluded from the calculation.  
NOTE.—Daoca and Assam-Bihar sections are also published separately.

FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 21ST AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 21ST AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 20TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 606  | 1,50,967  | 249              | 645  | 1,70,560  | 264              | 606   | 27,56,503       | 227              | 645   | 28,93,218       | 234              | 1,36,745                | .....                   |

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 27th August 1887, on 125 miles open.

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                 | 20,435                | 6,640 0 0          | 45,580 0                         | 2,430 0 0  | 30 0 0                      | 9,100 0 0       | 3,501                    | 1,919        | 5,420  |
| Or per mile of railway ...                                     | 163                   | 53 0 0             | 365 0                            | 20 0 0     | .....                       | 73 0 0          | .....                    | .....        | .....  |
| For previous 7 weeks of half-year ...                          | 171,847               | 55,950 0 0         | 2,69,674 0                       | 18,430 0 0 | 1,040 0 0                   | 75,420 0 0      | 25,545                   | 12,780       | 38,325 |
| Total for 8 weeks ...  | 192,322               | 62,590 0 0         | 3,35,374 0                       | 20,860 0 0 | 1,070 0 0                   | 81,520 0 0      | 29,046                   | 14,699       | 43,745 |
| COMPARISON.  |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...              | 19,169                | 6,261 0 0          | 16,180 0                         | 1,321 0 0  | 32 0 0                      | 7,614 0 0       | 4,014                    | 1,766        | 5,780  |
| Per mile of railway, corresponding period of previous year ... | 153                   | 50 0 0             | 129 0                            | 11 0 0     | .....                       | 61 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...               | 197,527               | 63,516 0 0         | 1,20,865 0                       | 9,352 0 0  | 224 0 0                     | 73,092 0 0      | 33,139                   | 13,236       | 46,395 |

FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 26TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 26TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125  | 7,614     | 61               | 125  | 9,100     | 73               | 125   | 2,48,650        | 95               | 125   | 2,40,555*       | 95               | 905                     | .....                   |

\* Audited up to week ending 30th June 1887.

## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 20th August 1887 on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 14,917                | 3,920 0 0          | 9,051 C                          | 710 0 0    | 50 0 0                      | 4,680 0 0       | 2,181                    | 803          | 2,984  |
| Or per mile of railway ...                                    | 173                   | 45 0 0             | 105 0                            | 8 0 0      | 1 0 0                       | 54 0 0          | .....                    | .....        | .....  |
| For previous 6 weeks of half-year ...                         | 65,477                | 21,790 0 0         | 61,172 0                         | 5,290 0 0  | 820 0 0                     | 27,900 0 0      | 15,603                   | 6,315        | 19,918 |
| Total for 7 weeks ...   | 80,394                | 25,710 0 0         | 70,223 0                         | 6,000 0 0  | 870 0 0                     | 32,580 0 0      | 15,784                   | 7,118        | 22,902 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 7,870                 | 2,156 0 0          | 2,113 0                          | 1,512 0 0* | 51 0 0                      | 4,019 0 0       | 1,261                    | 340          | 1,610  |
| Per mile of railway corresponding period of previous year ... | 92                    | 28 0 0             | 25 0                             | 18 0 0     | .....                       | 46 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 66,606                | 19,570 0 0         | 48,971 0                         | 3,825 0 0  | 1,149 0 0                   | 21,944 0 0      | 8,808                    | 5,865        | 14,673 |

\* Includes ballast-train earnings.

## FINANCIAL YEAR.

*Approximate Statement of Gross Receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 21ST AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 21ST AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 20TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 86   | 4,019     | 47               | 86   | 4,680     | 54               | 86  | 91,314          | 53               | 86  | 94,065          | 55               | 3,321                   | .....                   |

## ASSAM-BEHAR STATE RAILWAY.

## PUBNEAH SECTION.

*Approximate Return of Traffic for week ended 20th August 1887 on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 7,507*                | 2,690 0 0*         | 6,306 0                          | 780 0 0    | 20 0 0                      | 3,490 0 0       | 760                      | 328          | 1,078  |
| Or per mile of railway ...                                    | 192                   | 69 0 0             | 162 0                            | 20 0 0     | .....                       | 89 0 0          | .....                    | .....        | .....  |
| For previous 6 weeks of half-year ...                         | 19,328                | 6,320 0 0          | 100,477 0                        | 11,180 0 0 | 210 0 0                     | 17,710 0 0      | 4,206                    | 2,570        | 6,776  |
| Total for 7 weeks ...   | 26,835                | 9,010 0 0          | 106,783 0                        | 11,960 0 0 | 230 0 0                     | 21,200 0 0      | 4,956                    | 2,898        | 7,854  |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | Nil.               | Nil.                             | Nil.       | Nil.                        | Nil.            | Nil.                     | Nil.         | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

\* Increase as compared the previous week due to Molla passengers.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 21ST AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 20TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 21ST AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 20TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  |           |                  |  | Rs.       | Rs.              |   |                 |                  |   | Rs.             | Rs.              |                         |                         |
| .....                                      | Nil.      | .....            | 39   | 3,490     | 89               | .....   | Nil.            | .....            | 39  | 61,716          | 79               | 61,716                  | .....                   |

## TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 27th August 1887, on 249 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|--------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.    | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week on 249 miles open ...                    | 36,081                | 11,270 0 0         | 90,051 0                         | 7,033 0 0    | 2,800 0 0                   | 21,132 0 0      | 6,181                    | 3,000        | 9,180  |
| Or per mile of railway ...  | 145                   | 45 5 0             | 362 0                            | 28 5 0       | 2 13 0                      | 76 7 0*         | .....                    | .....        | .....  |
| For previous 7 week of half-year ...                                | 248,360               | 96,016 0 0         | 8,95,736 0                       | 77,315 0 0   | 17,375 0 0                  | 1,90,706 0 0    | 47,351                   | 36,015       | 84,366 |
| Total for 8 weeks ...   | 319,381               | 1,07,286 0 0       | 9,85,737 0                       | 81,358 0 0   | 20,175 0 0                  | 2,11,838 0 0    | 53,632                   | 39,024       | 93,556 |
| COMPARISON.   |                       |                    |                                  |              |                             |                 |                          |              |        |
| Total for corresponding week of previous year on 246 miles open ... | 29,763                | 9,430 13 2         | 1,14,925 10                      | 10,145 4 0   | 1,931 2 0                   | 21,527 3 11     | 4,052                    | 4,003        | 9,555  |
| Per mile of railway corresponding week of previous year ...         | 121                   | 38 5 0             | 467 0                            | 41 4 0       | 1 6 0                       | 80 15 0*        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...                    | 267,787               | 86,437 2 9         | 9,64,714 0                       | 1,00,885 9 0 | 25,295 8 1                  | 2,12,615 3 10   | 41,592                   | 36,087       | 78,279 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of railway."

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 28TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 28TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 246  | 21,527    | 88               | 249  | 21,132    | 85               | 246   | 6,61,745        | 2,696            | 248 3/4   | 6,93,902        | 2,792            | 33,067                  | .....                   |

## NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 27th August 1887, on 27 1/4 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated), including steam boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|---|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |   |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,775                 | 1,027 13 3         | 4,712 10                         | 317 7 0    | 22 15 7   | 1,368 3 10      | 509                      | 254          | 763    |
| Or per mile of railway ...                                  | 102                   | 37 11 0            | 173 0                            | 11 10 0    | 0 14 0  | 50 3 0          | .....                    | .....        | .....  |
| For previous 7 weeks of half-year ...                       | 22,872                | 8,408 2 9          | 71,496 30                        | 4,646 9 0  | 181 0 5   | 13,325 12 2     | 3,745                    | 2,304        | 6,049  |
| Total for 8 week ...  | 25,645                | 9,436 0 0          | 76,209 0                         | 4,964 0 0  | 204 0 0   | 14,694 0 0      | 4,254                    | 2,558        | 6,812  |
| COMPARISON.   |                       |                    |                                  |            |   |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 1,861                 | 752 10 9           | 3,630 20                         | 283 12 0   | 7 12 0  | 1,044 2 9       | 509                      | 254          | 763    |
| Per mile of railway corresponding week of previous year ... | 66                    | 27 10 0            | 133 0                            | 10 7 0     | 0 4 0   | 38 5 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 19,417                | 7,480 0 8          | 60,120 10                        | 3,748 13 0 | 112 1 9   | 11,340 15 5     | 4,290                    | 2,106        | 6,496  |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 28TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 28TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 27 1/4                                     | 1,044     | 38               | 27 1/4                                     | 1,368     | 50               | 27 1/4  | 35,076          | 1,309            | 27 1/4  | 40,031          | 1,469            | 4,855                   | .....                   |

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|   |     |     |     |           |
|---|-----|-----|-----|-----------|
| Approximate earnings for week ending 20th August 1887 | ... | ... | ... | Rs.       |
| Corresponding week last year                          | ... | ... | ... | 9,120     |
|   |     |     |     | 13,240    |
| Decrease  | ... | ... | ... | 4,120     |
| Receipts from 1st July to 20th August 1887            | ... | ... | ... | 63,515    |
| From 1st July to 21st August 1886                     | ... | ... | ... | 68,302    |
| Decrease  | ... | ... | ... | 4,787     |
| Miles open, week ending 20th August 1887              | ... | ... | ... | Miles.    |
| Corresponding week last year                          | ... | ... | ... | 51        |
|   |     |     |     | 51        |
| Receipts per mile open, week ending 20th August 1887  | ... | ... | ... | Rs. A. P. |
| Corresponding week last year                          | ... | ... | ... | 178 13 2  |
|   |     |     |     | 259 9 8   |
| Decrease  | ... | ... | ... | 80 12 6   |

CHIEF OFFICER, D.-H. RAILWAY, DARJEELING, *the 29th August 1887.*

W. STEVENSON, Acting Manager

NOTE.—The traffic during the corresponding period last year was exceptionally heavy, as there was an accumulation of goods to be worked off owing to the line having been blocked during the previous week by slips.

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|   |     |     |     |           |
|---|-----|-----|-----|-----------|
| Approximate earnings for week ending 27th August 1887 | ... | ... | ... | Rs.       |
| Corresponding week last year                          | ... | ... | ... | 10,380    |
|   |     |     |     | 12,082    |
| Decrease  | ... | ... | ... | 1,702     |
| Receipts from 1st July to 27th August 1887            | ... | ... | ... | 73,895    |
| From 1st July to 26th August 1886                     | ... | ... | ... | 80,184    |
| Decrease  | ... | ... | ... | 6,489     |
| Miles open, week ending 27th August 1887              | ... | ... | ... | Miles.    |
| Corresponding week last year                          | ... | ... | ... | 51        |
|   |     |     |     | 51        |
| Receipts per mile open, week ending 27th August 1887  | ... | ... | ... | Rs. A. P. |
| Corresponding week last year                          | ... | ... | ... | 203 8 6   |
|   |     |     |     | 230 14 6  |
| Decrease  | ... | ... | ... | 38 6 0    |

CHIEF OFFICER, D.-H. RY., DARJEELING, *the 3rd September 1887.*

W. STEVENSON, Acting Manager, D.-H. Railway.







# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, SEPTEMBER 14, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## RESOLUTION ON THE REPORT ON THE LEGAL AFFAIRS OF THE GOVERNMENT OF BENGAL FOR THE YEAR 1886-87.

### RESOLUTION.

#### JUDICIAL.

*Calcutta, the 5th September 1887.*

READ —

The Report on the Legal Affairs of the Government of Bengal for the year 1886-87.

Read also—

The Reports for the two preceding years, and the orders of Government thereon.

The following statement shows the result of Government litigation in all the Civil Courts of Bengal during the year 1886-87 as compared with the two previous years:—

|  | 1884-85. | 1885-86. | 1886-87. |
|--|----------|----------|----------|
| Decided in favour of Government ...    | 448      | 576      | 742      |
| Decided against Government ...         | 148      | 92       | 167      |
| Compromised, remanded or withdrawn ... | 102      | 340      | 142      |
| Percentage in favour of Government ... | 75       | 86½      | 81½      |

The increase is due to a large number of land acquisition cases in connection with the Kidderpore Wet-dock.

2. The result of Government litigation in the High Court only was as follows:—

|  | 1884-85. | 1885-86. | 1886-87. |
|--|----------|----------|----------|
| Decided in favour of Government ...    | 24       | 28       | 30       |
| Decided against Government ...         | 1        | 4        | 77       |
| Compromised, remanded or withdrawn ... | 4        | 305      | 2        |
| Percentage in favour of Government ... | 96       | 87½      | 28       |

The Legal Remembrancer points out that the low percentage of cases decided in favour of Government is due to the fact that 66 enhancement of rent-suits from Malinaggar, in the district of Mozufferpore, were decided by the High Court against the Government in two special appellate decisions, each governing a number of cases. Even if the 66 cases be treated as two cases, the percentage of decisions in favour of Government would still be far from good. The Lieutenant-Governor is satisfied that in many of the cases noticed in the Report, the Government had no reasonable grounds to go upon, and such cases should not have been taken into or defended in Court. The Legal Remembrancer will be asked to report specially on this point, and to state whether he can suggest any means whereby a more careful examination of the probabilities of success may be made in the first instance, and a stricter watch kept over the progress of cases afterwards. The attention of the Revenue Department will also be called to this matter.

3. Sir Stuart Bayley does not deem it necessary to discuss the details of the various cases which have been decided against Government. With reference to the case under Act XI of 1859 mentioned by Mr. Allen in paragraph 12 of his Report, the suggestion made by him will be considered in the Revenue Department. On the data now before him, the Lieutenant-Governor is certainly of opinion that the Commissioner or the Board of Revenue would have done well to cancel the sale.

4. Perhaps the most important case during the year was the Dearsa Survey case, in the district of Furreedpore, in which a quantity of land was resumed as new accretions, and assessed under the provisions of Act IX of 1847. The plaintiffs instituted a suit against Government claiming the land as a re-formation on the site of their permanently-settled mouzah. The Government urged that the lands being liable to assessment under Act IX of 1847, the Civil Court had no jurisdiction to entertain the suit. This contention was disallowed by the Court of first instance, but allowed by the District Judge on appeal. On a second appeal to the High Court, the question of jurisdiction was referred to a Full Bench and decided against the Government. The Legal Remembrancer has made the following remarks regarding this case: "The question whether the land is liable to assessment, or already covered by an existing settlement, appears to have been always reserved for the decision of the Revenue authorities, and section 6 of Act IX of 1847 declares the Board's decision final in such a case. This judgment of the Full Bench, ignoring this principle, and overruling previous decisions of the High Court itself, has been appealed to Her Majesty in Council."

5. The result of Government litigation in the lower appellate Courts was as follows:—

|                                     |     | 1884-85. | 1885-86. | 1886-87. |
|-------------------------------------|-----|----------|----------|----------|
| Decided in favour of Government     | ... | 111      | 29       | 25       |
| Decided against Government          | ... | 8        | 17       | 7        |
| Compromised, remanded, or withdrawn | ... | 8        | ...      | 17       |
| Percentage in favour of Government  | ... | 93       | 63       | 78       |

As regards the seven suits decided against Government, Sir Stuart Bayley would only remark that the suits mentioned in paragraphs 20 and 21, which were brought for the cancellation of certificates issued under Act VII (B.C.) of 1880, show the necessity for the exercise of caution and supervision in the application of the certificate procedure.

6. The following was the result of Government litigation in the Courts of first instance:—

|                                    |     | 1884-85. | 1885-86. | 1886-87. |
|------------------------------------|-----|----------|----------|----------|
| Decided in favour of Government    | ... | 313      | 519      | 687      |
| Decided against Government         | ... | 139      | 71       | 83       |
| Compromised, or withdrawn          | ... | 90       | 35       | 123      |
| Percentage in favour of Government | ... | 69       | 88       | 89       |

The increase in the number of cases is due to there having been an unusually large number of land acquisition cases in the districts of the 24-Pergunnahs, Patna, and Dacca. Of the 83 cases decided against

Government, 21 were cases under the Land Acquisition Act, in which the Judge awarded larger amounts of compensation than had been offered by the Collector. Of the remaining cases, 35 were brought by the tenants of Bokalia, in the district of Chittagong, for a reduction in the rent assessed on them under Act VIII (B.O.) of 1879. In these cases appeals have been instituted in the District Judge's Court against the decisions of the Munsif. The result of the appeal filed in the case arising out of an alleged encroachment on a public road mentioned in paragraph 31 of the Report, should be specially reported. The suit, brought by the Maharajah of Durbhunga against the Chairman of the Durbhunga Municipality, for the recovery of a piece of land which had been acquired by Government, is one of great importance, as affecting the powers of a Manager under the Court of Wards. The Legal Remembrancer should see that the case on behalf of Government is properly and thoroughly placed before the High Court on appeal. This remark also applies to the case mentioned in paragraph 38, as the question as to the existence of any transferable right is one of great importance. As remarked by the Collector, the judgment, if not upset on appeal, will certainly form a most inconvenient precedent.

7. The figures below show the result of the litigation in which the Court of Wards were concerned for the year under report as compared with the two preceding years:—

|   | 1884-85. | 1885-86. | 1886-87. |
|---|----------|----------|----------|
| Decided in favour of Court of Wards ... | 700      | 1,113    | 1,034    |
| Decided against Court of Wards ...      | 121      | 158      | 310      |
| Compromised, remanded or withdrawn ...  | 56       | 44       | 91       |
| Percentage in favour of Court of Wards  | 85½      | 87½      | 77       |

The low percentage is said to be due to the fact that 210 cases instituted by the Manager of the Dighapatia Estate for recovery of arrears of rent were decided against the Court of Wards during the year. Appeals have been preferred in these cases.

8. The following table shows the amount of Government decrees recovered during 1886-87, as compared with the amounts recovered during the two previous years:—

|                            | 1884-85. | 1885-86. | 1886-87. |
|----------------------------|----------|----------|----------|
|                            | Rs.      | Rs.      | Rs.      |
| Amount under realization . | 6,42,647 | 6,26,182 | 50,449   |
| Realized during the year . | 20,407   | 12,338   | 13,367   |
| Percentage of recovery .   | 3½       | 2        | 26½      |

Omitting the Canning decrees which were remitted in the previous year, the amount under realization in 1885-86 was only Rs. 44,903, or less than in the present year. The percentage of recovery on that amount was Rs. 27½, so that the percentage has dropped by 1 per cent. during the year under report.

9. The amount of Wards' decrees recovered during 1886-87, as compared with the realizations of the two preceding years, was as follows:—

|                              | 1884-85. | 1885-86. | 1886-87.  |
|------------------------------|----------|----------|-----------|
|                              | Rs.      | Rs.      | Rs.       |
| Amount under realization ... | 5,72,757 | 9,37,524 | 11,07,570 |
| Realized during the year ... | 1,02,253 | 1,69,179 | 1,63,506  |
| Percentage of recovery ...   | 19½      | 18       | 14½       |

The Lieutenant-Governor is of opinion that the percentage of recovery, both on Government decrees and Wards' decrees, is exceedingly bad. The most unsatisfactory feature of Government litigation in Bengal is that Government must of course make good to the uttermost farthing all adverse decrees, while it experiences the greatest difficulty in realizing the decrees in its favour, some of them being wholly infructuous. The Board of Revenue are of opinion that what is necessary to improve realization is greater energy on the part of the officers in the Execution Department. This remark of course applies only

to Wards' decrees. As regards Government decrees, Sir Steuart Bayley agrees with the opinion of his predecessor that small collections are due in a great measure to the facility for concealing property, to the joint family system, and to the prevalence of *benamée* transactions, which offer almost insuperable obstacles to the realization of decrees, even by private persons. Sir Steuart Bayley has no doubt that the offences of fraudulent concealment, removal, or transfer of property are of frequent occurrence in Bengal. Collectors, however, have some remedy in their own hands, as they might apply to the Magistrate in any fitting case to issue process under section 424 of the Penal Code, an offence, for the prosecution of which no sanction is required. The Lieutenant-Governor is not aware whether a commission upon realizations is now paid to Nazirs and their subordinates. If not, he thinks that the experiment might be tried. The Legal Remembrancer will be asked to report on this point. Statement E appended to the Report shows that the amount expended in litigation by Government during the year was Rs. 48,368, while the receipts amounted to only Rs. 13,367.

ORDER.—Ordered that a copy of this Resolution be forwarded to the Superintendent and Remembrancer of Legal Affairs for information and submission of the report called for in paragraphs 2, 6 and 9.

Ordered also that a copy of this Resolution, with a copy of the Report, be forwarded to the Revenue Department of this Office with special reference to the remarks contained in paragraph 2.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

*Offg. Chief Secretary to the Govt. of Bengal.*

## DONATION BY MAHARANI SARNAMAYEE FOR THE PROMOTION OF TECHNICAL EDUCATION.

### GENERAL DEPARTMENT—EDUCATION.

*Calcutta, the 9th September 1887.*

#### RESOLUTION.

#### READ—

- An endorsement from the Commissioner of the Presidency Division, No. 69MG, dated the 7th March 1887, forwarding a copy of a letter No. 46, dated the 14th February 1887, from Maharani Sarnamayee of Cossimbazar, Member of the Imperial Order of the Crown of India.
- An endorsement from the Commissioner of the Presidency Division, No. 39JNG, dated the 2nd August 1887, forwarding a copy of a further communication No. 197, dated the 1st July 1887, from Maharani Sarnamayee.
- A letter from the Director of Public Instruction No. 5616, dated the 18th August 1887.

In commemoration of the Jubilee year of the reign of Her Majesty the Queen-Empress of India, the Maharani Sarnamayee of Cossimbazar, Member of the Imperial Order of the Crown of India, has offered to make an endowment of Rs. 20,000 for the promotion of technical education in the Moorshedabad district, and with this view has proposed the following scheme. Of the sum of Rs. 20,000, Rs. 5,000 will be appropriated for the purpose of obtaining the necessary apparatus and instruments, and the income accruing from the

investment of the remainder will be expended, in concert with the Municipal Commissioners of Berhampore, on (1) the endowment of a class at the Berhampore Collegiate School to which the present technical school under the charge of the Municipal Commissioners will, together with its apparatus and materials, be transferred; and (2) the establishment of classes in connection with this technical class at some of the elementary schools maintained by, and situated within, the municipality.

The Lieutenant-Governor has pleasure in accepting Maharani Sarnamayee's munificent gift, and desires to communicate to her his approval of the scheme which she proposes, and to tender his thanks for her great liberality.

ORDER.—Ordered that a copy of this Resolution be published in the *Calcutta Gazette*, and that a copy of it be forwarded to the Commissioner of the Presidency Division for information and communication to the Maharani Sarnamayee of Cossimbazar, Member of the Imperial Order of the Crown of India.

Ordered also that a copy be sent to the Director of Public Instruction for information.

By order of the Lieutenant-Governor of Bengal,

W. C. MACPHERSON,

*Offg. Secretary to the Govt. of Bengal.*

# RESOLUTION ON THE GENERAL ADMINISTRATION REPORT OF THE RAJSHAHYE DIVISION FOR 1886-87.

GENERAL DEPARTMENT—MISCELLANEOUS.

*Calcutta, the 13th September 1887.*

## RESOLUTION.

READ—

The Annual Administration Report of the Rajshahye Division for 1886-87.

The Rajshahye Division was in the charge of Lord H. Ulick Browne until the 1st October 1886, when, on his retirement from the Bengal Civil Service after nearly 10 years successful administration of the Division, he was succeeded by Mr. Lewis. The Report is submitted by Mr. Lewis, who held charge of the Division for the remainder of the year under review.

2. *Tours*.—Mr. Lewis was on tour in the Division for 138 days, and did a large amount of inspection work, including inspection of all the district offices and six of the sub-divisional offices. All the district and sub-divisional officers spent the prescribed period in touring, and appear to have made good use of their time in camp; the longest tours were made by Messrs. Oldham and Paul in Darjeeling (119 days), Mr. Sunder in Alipore (159 days), and Mr. O'Donnell in Kurseong (147 days). The time spent in the interior by Joint and Assistant Magistrates, other than those in charge of sub-divisions, was insufficient, and the attention of the Commissioner is called to the Resolution on the Report for 1883-84, in which it was urged that an effort should be made to arrange for the Joint-Magistrates to spend at least a month in camp.

3. *Weather and crops*.—The rainfall of the year was copious and well distributed, and the outturn of the crops was generally good, that of the aman dhan, which is the chief food crop of the division, being an unusually full crop. Indigo, which is now grown only to a limited extent in three districts of the division, was damaged by the heavy rains of July and August, and jute and tobacco, which were not such good crops as in the preceding year, suffered, the former from the excessive rainfall and the latter from hail. The year was favourable to the cultivation of ganja, and the outturn of this crop was very satisfactory.

The following estimate of the outturn of the different crops, in which the average harvest is taken at 16 annas, is taken from the Commissioner's report:—

| NAME OF CROP.                              | DINA-<br>PORE.                  |           | RAJ-<br>SHAHYE.                 |          | PUBNA.                          |              | BOGSA.                          |           | RUNG-<br>PORE.                  |                  | JULPI-<br>GORREE.               |            | DAR-<br>JEELING.                |          | DIVI-<br>SIONAL. |          | REMARKS.  |
|--|---------------------------------|-----------|---------------------------------|----------|---------------------------------|--------------|---------------------------------|-----------|---------------------------------|------------------|---------------------------------|------------|---------------------------------|----------|------------------|----------|---|
|  | Average<br>outturn in<br>annas. |           | Average<br>outturn in<br>annas. |          | Average<br>outturn in<br>annas. |              | Average<br>outturn in<br>annas. |           | Average<br>outturn in<br>annas. |                  | Average<br>outturn in<br>annas. |            | Average<br>outturn in<br>annas. |          |                  |          |   |
|  | 1885-86.                        | 1886-87.  | 1885-86.                        | 1886-87. | 1885-86.                        | 1886-87.     | 1885-86.                        | 1886-87.  | 1885-86.                        | 1886-87.         | 1885-86.                        | 1886-87.   | 1885-86.                        | 1886-87. | 1885-86.         | 1886-87. |   |
| 1. Rice—                                   |                                 |           |                                 |          |                                 |              |                                 |           |                                 |                  |                                 |            |                                 |          |                  |          |   |
| (a) Boro ... ..                            | 12                              | 12        | 6'3                             | 8'6      | 22                              | 14           | 16                              | 16        | ...                             | Little<br>grown. | Not grown.                      |            | (d) 16                          | (d) 16   | (e) 11'8         | 12'6     | (a) Little is grown.<br>(b) Very little grown<br>in the hills only.   |
| (b) Bhadoi (aus) ...                       | 16                              | 18        | 11                              | 11'3     | 17                              | 17           | 20                              | 16        | 14'5                            | 18               | 15                              | 10         | 16                              | 16       | 15'6             | 15'1     | (c) This has been cor-<br>rected from 14'6 to<br>12, as there was a<br>mistake in calculating<br>the average in the<br>previous year's<br>report. |
| (c) Hymantoe (amun)                        | 18                              | 16        | 12                              | 14'6     | 16                              | 19           | 20                              | 18        | 16'5                            | 20               | 16                              | 16         | 16                              | 14       | 16'3             | 17'0     |   |
| 2. Jute ... ..                             | 16                              | 14        | 10'6                            | 10       | 16                              | 15           | 12                              | 16        | 16                              | 16               | 12                              | 10         | 12                              | 10       | 15'5             | 12'7     |   |
| 3. Tobacco ... ..                          | 15                              | 12        | (a) 7'5                         | 7'3      | 16                              | 16           | 16                              | 16        | 16                              | 15               | 16                              | 9          | 16                              | 14       | 11'6             | 12'7     | (d). The outturn of<br>the rice which grows<br>in the hills.  |
| 4. Indigo ... ..                           | Not grown<br>much.              | 11        | 10'5                            | Nil      | Nil                             | Not grown.   | 12                              | 16        | Not grown.                      | Not grown.       | Not grown.                      | Not grown. | Not grown.                      | 11'5     | 13'2             | 13'2     | (e). The last year's<br>figures were wrong.   |
| 5. Sugarcane ... ..                        | 19                              | 19        | 11'7                            | 12'6     | 14                              | 14           | 18                              | 18        | 16                              | 16               | 15                              | 12         | 14                              | 16       | 15'4             | 15'2     |   |
| 6. Cold-weather crops—                     |                                 |           |                                 |          |                                 |              |                                 |           |                                 |                  |                                 |            |                                 |          |                  |          |   |
| (a) Mustard ... ..                         | 16                              | 14        | 10'1                            | 9'3      | 17                              | 15           | 12                              | 14        | 11'5                            | 10               | 14                              | 12         | 14                              | 12       | 13'5             | 14'3     |   |
| (b) Pulses of all sorts<br>taken together. | 16                              | 14        | 10'6                            | 11'6     | 14                              | 15           | 8                               | 18        | 11'5                            | 17               | 12                              | 8          | 16                              | 13       | 12'6             | 13'8     |   |
| (c) Wheat ... ..                           | Not grown<br>much.              | 8'6       | 9'6                             | 14       | 14                              | 16           | (a) 16                          | 10        | 17                              | 8                | 9                               | ...        | (b)                             | 11'3     | 13'1             | 13'1     |   |
| 7. Potatoe ... ..                          | 16                              | 12        | Not much<br>grown.              | ...      | ...                             | 12           | 16                              | 10        | 18                              | 14               | 11                              | 12         | 10                              | 12'8     | 13'4             | 13'4     |   |
| 8. Indian corn ... ..                      | Not grown<br>much.              | Ditto.    | ...                             | 14       | 15                              | Not grown    | Not grown                       | Not grown | Not grown                       | Not grown        | Not grown                       | 16         | 16                              | 15       | 15'5             | 15'5     |   |
| 9. Cotton ... ..                           | Not grown                       | Ditto     | ...                             | ...      | ...                             | Ditto        | Little grown                    | 16        | 8                               | (b)              | ...                             | ...        | ...                             | ...      | ...              | ...      |   |
| 10. Rhea ... ..                            | Ditto                           | Not grown | ...                             | ...      | ...                             | Ditto        | Ditto                           | Not grown | Ditto                           | Not grown        | Ditto                           | Not grown  | Ditto                           | ...      | ...              | ...      |   |
| 11. Silk ... ..                            | Ditto                           | 9         | 9                               | ...      | ...                             | Little grown | Not grown                       | Ditto     | Not grown                       | Ditto            | Not grown                       | Ditto      | ...                             | ...      | ...              | ...      |   |
| 12. Tea ... ..                             | Ditto                           | Not grown | ...                             | ...      | ...                             | Not grown    | Ditto                           | 12        | 13                              | 16               | 16                              | 14         | 14                              | 14       | 14'5             | 14'5     |   |
| 13. Millets ... ..                         | ...                             | ...       | ...                             | ...      | ...                             | ...          | ...                             | 16        | 16                              | ...              | ...                             | 12         | 14                              | 14       | 15               | 15       |   |

4. *Public Health and Vaccination.*—The mortality statistics of the year show an increase in the number of deaths in all the districts of the division except Rajshahye and Bogra. This increase is to some extent attributed to improved registration, but the year appears to have been generally unhealthy in this division and especially so in Dinagepore, where the public health is reported to have been extremely bad and the season is compared with the memorably unhealthy year, 1877. Cholera was epidemic in Pubna in the hot weather and in Julpigoree after the rains, and was also prevalent in the Darjeeling Terai and in Rungpore. In the last named district the prevalence of fever and cholera resulted in the highest annual figures of mortality ever recorded for the district, viz, 32·22 per mille. The highest death-rate, viz, 35·27, was recorded in Julpigoree.

Vaccination operations generally appear to have been very much on the same scale as last year, except in Rungpore and Julpigoree. In Rungpore there was an increase of 6,000 vaccinations, which is balanced by a falling off of about the same number in Julpigoree; the decrease in the latter case was due to the insufficiency of vaccinators. In Pubna it is said that vaccination is still regarded with distrust in backward villages; but on the whole and especially in the Darjeeling hills it seems that the system is gaining popularity.

5. *Material Condition of the people, &c.*—The Commissioner considers that the material condition of the people of the Rajshahye Division is at present good, owing to the favourable harvests of recent years, and the District Officers give satisfactory accounts of the general prosperity in ordinary years, and of the increased comfort of the cultivators and labouring classes in the present times of plenty. The Officiating Collector of Dinagepore, whose estimate is the lowest with regard to the material condition of the people, places the mass of the cultivating classes in his district half way in the scale of comfort between the same classes in Eastern Bengal and Behar, and remarks that, while there appears to him to be a great difference between the standard of comfort maintained by the ryots of Dinagepore and that of the Mymensingh ryots, there is, on the other hand, an absence of any appearance of actual squalor and want such as may be met with in the interior of a Behar district. The Commissioner, however, who has served in Dinagepore, takes a more cheerful view of the condition of the district, and writes as follows:—

“Rents in Dinagepore are low, land is still plentiful, though much waste and jungle has been reclaimed of late years, and the cultivator has a ready market for his produce.

These are not conditions that tell against the welfare of the agricultural community, and the fact that the villagers can afford to import labour to carry on agricultural operations proves that their condition is good. I have always considered Dinagepore as pre-eminently a district where the ryots hold their own acres not liable to rack-renting, where, though the zemindars are poor, there are a large number of substantial ryots, mundols, jotedars, and others, through whose influence a system of village government prevailed; where generally the peasantry live in ease and content. It is true that some years have elapsed since I was Magistrate of Dinagepore; but I cannot think that the mere fact of the district having been since then opened out to trade can have had any evil effect on the condition of the people at large."

A proof of the general agricultural prosperity is found in the fact that while there is no emigration from the division, immigrant labourers come every year into all its seven districts to take part in the harvesting and field work, and in road-making and tank-digging. In the year under review, the Assam-Bihar Railway works also attracted large numbers of up-country labourers to Dinagepore. A falling off in the number of immigrant labourers who came to work in the Julpigoree tea-gardens is ascribed to the fact that unfair and illegal means were largely used by Assam recruiters both in the Chota Nagpore recruiting grounds and *en route* to divert the labourers to Assam. These accusations ought to have been enquired into at the time. If Assam recruiters offer higher terms than the Julpigoree recruiters and by fair means are able to persuade labourers to go to Assam in preference to the Julpigoree gardens no grievance is established; but, it is the duty of the local officers to ensure that no fraud or compulsion is used to intending emigrants.

No general change occurred in the wages of agricultural labour except in the Rajshahye district where a rise is attributed to the good crops. The price of food fell everywhere as compared with the average prices of the last five years, common rice ranging in the plains districts from 20½ seers a rupee in Rungpore to 24½ seers in Dinagepore. The price of food has fallen. Compared with the average quantity sold per rupee during the five preceding years, the average quantity of common rice and wheat increased in all districts, and of pulses everywhere, except in Rajshahye, and there further appears to have been an improvement in 1886-87 over the year 1885-86.

6. *Manufactures and Trade.*—Jute, tea, silk, molasses, and tobacco are the most important manufactures of the division. The outturn of tea in Darjeeling increased from 9,090,298 lbs. in 1885 to 9,416,631 lbs. in 1886, and in Julpigoree tea cultivation continued to expand, and there was an advance of little short of two million pounds in the outturn (5,571,404 lbs.) as compared with that of the preceding year. The continued decline in the silk industry of the Lower Provinces has occupied the attention of Government, and steps have been taken under the supervision of the Agricultural Department with a view to investigate and combat disease among silk-worms.

The Commissioner gives a very interesting review of the trade of the division registered in the calendar year 1886. His figures represent the trade carried by the Northern Bengal State Railway, the Darjeeling-Himalayan Railway, the Eastern Bengal State Railway, and the Serajgunge steamer service, the total value of which is estimated approximately at 10 crores of rupees. The figures show a net excess of exports over imports to the value of about one-and-a-half crores of rupees. It is to be observed that the exports to Calcutta, Assam, and Eastern Bengal were more than double those of 1885. The expansion of the Serajgunge steamer trade is especially noticeable. External trade is carried on with Bhutan, Sikkim, Nepaul, and Thibet. There was a very considerable increase in the trade with Sikkim, Nepaul, and Thibet during the earlier months of 1886, but towards the end of the year a strict blockade was maintained, and trade in consequence was brought to a standstill. Trade with Bhutan also fell off. On the general trade aspects of the division the Commissioner writes:—

"The opening out of lines of railway and their attendant feeder roads have given a great impetus to the extension of trade and commerce in the division, and this has reacted favourably in improving the condition of the people. The cultivators have a readier market for their produce and can obtain better prices, and as a consequence cultivation has extended. It is not so long ago since Rajshahye, Dinagepore, Rungpore, and Bogra were covered with jungle famous for the shikar to be had in them, immense tracts of which have now been cleared for cultivation. During even the nine years that have intervened since I was personally acquainted with some of the above districts, a great change has taken place, and the effect of the impetus given to trade on the material condition and well-being of the people is very marked."

7. *State of public feeling.*—The District Officers state that public feeling on general subjects is as yet almost unknown, but they are unanimous



in their reports regarding the unprecedented enthusiasm and loyalty evinced, by all classes on the occasion of the celebration of the Queen-Empress's Jubilee. The imposition of the income-tax does not appear to have been followed by any pronounced feeling of discontent, and it is said to be considered more equitable than its predecessor, the license-tax, the incidence of which was on one section of the community only. The provisions of the Tenancy Act are gradually becoming better understood, and the excitement attendant on its introduction has, according to the Collectors of Rungpore and Rajshahye, subsided. Local Self-Government in Pubna is said to have been greatly appreciated as a mark of confidence in the people.

8. *Employment of Muhammadans.*—A comparison between the tabulated statement prepared by the Commissioner under this head and that submitted last year shows no change in the number of Muhammadan gazetted officers, but a very large increase in the numbers of Muhammadan officers employed by Government in superior and inferior service; as, however, last year's returns were admittedly incorrect, and did not include certain departments taken into account this year, it is impossible to draw conclusions on the subject at present. The statement for 1886 is reproduced below :—

| DISTRICTS.        | Proportion of Muham-<br>madans to<br>district<br>population. | Proportion<br>of educated<br>Muham-<br>madans<br>in the<br>district as<br>compared<br>with edu-<br>cated<br>Hindus. | NUMBER OF PERSONS IN GOVERNMENT SERVICE. |                              |                    |                              |                    |                              | REMARKS.   |
|-------------------|--|---|--|------------------------------|--------------------|------------------------------|--------------------|------------------------------|--|
|                   |  |   | Gazetted.                                |                              | Superior service.  |                              | Inferior service.  |                              |  |
|                   |  |   | Total<br>officers.                       | Muham-<br>madan<br>officers. | Total<br>officers. | Muham-<br>madan<br>officers. | Total<br>officers. | Muham-<br>madan<br>officers. |  |
| Dinagore ... ..   | 1 to 1.0   | 1 to .8   | 19                                       |                              | 211                | 34                           | 645                | 259                          | Excluding officers<br>and men serving<br>under the Muni-<br>cipality and the<br>District Road<br>Cess Committee. |
| Rajshahye ... ..  | 1 to 1.2   | 1 to .9   | 42                                       |                              | 373                | 92                           | 834                | 415                          |  |
| Pubna ... ..      | 1 to 1.3   | 1 to 1.8  | 19                                       |                              | 317                | 87                           | 639                | 389                          |  |
| Bogra ... ..      | 1 to 1.2   | 1 to .6   | 10                                       |                              | 305                | 173                          | 333                | 233                          |  |
| Rungpore ... ..   | 1 to 1.6   | 1 to 1.18   | 30                                       |                              | 605                | 206                          | 412                | 208                          |  |
| Julpigoree ... .. | 1 to 2.7   | 1 to 1.9  | 15                                       |                              | 213                | 38                           | 613                | 178                          |  |
| Darjeeling ... .. | 1 to 18.7  | 1 to 10.5   | 22                                       |                              | 140                | 24                           | 431                | 68                           |  |
| Total ... ..      | 1 to 1.5   | 1 to 1.1  | 107                                      | 13                           | 2,344              | 654                          | 3,977              | 1,927                        |  |

9. *Police and Crime.*—There was a slight decrease in cognizable crime in the division, the number of cognizable offences reported falling from 13,225 to 12,891, but this decrease occurred in Dinagore and Rajshahye only, the returns of the other districts showing a small increase. Non-cognizable cases rose from 8,503 to 9,356, the increase having been common to all the districts of the division except Dinagore. A considerable amount of work continues to be disposed of by the Magisterial Benches. With regard to the conduct of the regular police, the Lieutenant-Governor observes that the figures showing the percentage of police officers and men punished judicially and departmentally exhibit very far from satisfactory results as regards every district except Dinagore, and there the conduct of the force is expressly reported by the Magistrate to have been most unsatisfactory.

10. *Civil Justice.*—From the statement of civil suits, it appears that the total number of suits instituted in 1886 was 45,199 as against 44,407 in 1885. Rent suits increased in number in Rajshahye and Pubna, but fewer were instituted in all the other districts of the division; suits for title and for money and moveable property increased generally. The explanation of the fluctuations appears to be that in a season of plenty tenants have been in a better position to pay their rents; while, on the other hand, creditors have for the same reason been eager to seize the opportunity to sue their debtors. It is also possible that, owing to doubts being entertained as to the effects of certain provisions of the Tenancy Act, suits are being withheld pending the decision of test cases.

11. *Land Revenue and Settlements.*—The total land revenue demand of the division for the year was Rs. 51,21,620 from 5,447 estates, and the collections reached the percentage of 96.48 against 96.04 in 1885-86. The remissions granted amounted to Rs. 18,311 only as against Rs. 32,600 during the preceding year, and the balance outstanding at the close of the year was also smaller than that with which it opened. Under the head of settlements the grant of leases of waste land in Julpigoree, amounting to 22,394 acres, and the Mircha Deara Settlement in Rajshahye, were the most important operations. In Pubna, Bogra, and Rungpore a re-valuation under the Cess Act of 292 estates was completed with the result of a net increase of Rs. 48,779 in valuation and Rs. 918 in both the cesses.



12. *Relations between Landlord and Tenant.*—The relations existing between landlords and tenants in the Rajshahye Division appear to be on the whole satisfactory, but in Pubna they are reported to be in many instances strained. The circular orders issued by the Board of Revenue are said to have to a great extent settled the disputes, which were at first frequent, regarding the filling up of the printed form of rent receipt. The work done under the Tenancy Act during the year in the Collectors' offices relates principally to the issue of notices under the different sections and the payment of landlords' fees on the transfer of tenures. The Commissioner expresses only the general opinion that "the Act has worked on the whole satisfactorily," and adds that all the District Officers have not reported fully on the matter. The Lieutenant-Governor hopes that a fuller notice of the working of the Act will be given in next year's report. It is noticed that landlords in many cases do not appreciate the provisions of section 12 of the Act, which were inserted especially for their benefit, and refuse to accept fees sent to them with notices of transfer under the impression that acceptance will bind them to acknowledge such transfer.

13. *Excise and Stamps.*—The Excise revenue rose from Rs. 6,02,106 to Rs. 6,51,713, in the year under review, the increase being shared in by all the districts. This general improvement was obviously due to the prosperous condition of the people caused by good harvests, and the consequent advantageous settlement of shops. In the stamp revenue there was an increase in three districts, and a decrease in four, resulting in a net increase of Rs. 30,508 for the division.

14. *Monetary arrangements.*—The value of notes received from, and issued to, the public in payment of Government dues increased in five of the seven districts, the divisional result being a decrease in the receipt, and an increase on the issue side. Stock-notes continue to be unpopular, only one sale and one renewal being reported for the whole division. There was a large increase in the amount of money deposited in Savings Banks, no doubt due to the great convenience to the people of post offices as banks for deposits. As regards money-orders, there has been a steady increase in transactions since their transfer to the Postal Department.

15. *Education.*—Three thousand four hundred and thirty-eight schools and 87,556 pupils were under the cognizance of the Education Department in this Division at the end of the year. There was a rather large decrease under lower primary schools and pupils on account of further exclusion from the system of rewards, and therefore from the returns of very small and inefficient schools; the decrease is especially marked in Bogra, Pubna, and Rajshahye. The Lieutenant-Governor has again to notice with regret the decrease in the number of girls' schools and of pupils attending them, attributed to the stricter working of the reward system. In Rajshahye, in spite of the fact that for the first time some girls were successful in the Lower Primary Scholarship examination, there was a discouraging decrease from 27 schools and 482 pupils to 20 schools and 330 pupils, and in Pubna the decrease was still greater. The attention of the Director of Public Instruction will be called to this portion of the Commissioner's report.

16. *Communications, Road Cess Committees.*—Rupees 3,63,000 were spent during the year by the District Road Cess Committees in original works and repairs. The Commissioner especially insists on the necessity of improving communications in the Dooars in order to encourage the taking up of waste lands.

The members of the Road Cess Committees in Rajshahye and Rungpore are said to have taken much interest in their work. Before the close of the year District Boards had been constituted in Rajshahye and Pubna.

17. The Commissioner's remarks on the conduct of officers will be noted in the Appointment Department.

18. The Lieutenant-Governor observes that this report is 73 pages long without appendices, against reports of 63 pages and 46 pages for the years 1885-86 and 1884-85. The Commissioner has too often quoted at length the opinions of his District Officers, instead of summarising the results of the year for the Division as a whole. Sir Stuart Bayley requests therefore that the Commissioner's future reports may be more concise.

By order of the Lieutenant-Governor of Bengal,

W. C. MACPHERSON,

Offy. Secretary to the Government of Bengal.

## RESOLUTION ON THE GENERAL ADMINISTRATION REPORT OF THE DACCA DIVISION FOR 1886-87.

GENERAL DEPARTMENT—MISCELLANEOUS.

*Calcutta, the 18th September 1887.*

### RESOLUTION.

READ—

The General Administration Report of the Dacca Division for 1886-87.

MR. W. R. LARMINIE was Commissioner of this division throughout the year under review. The report is submitted by Mr. C. F. Worsley, who subsequently officiated as Commissioner.

2. *Annual Tours.*—The Commissioner set a good example to the officers of the division in spending 128 days on tour, visiting the head-quarters of each district twice or oftener, and all of the sub-divisions, except Jamalpore, once. The Collectors' tours were all of sufficient length, except in Dacca. Mr. Fasson was especially energetic in visiting all parts of the Backergunge district. In explanation of the deficiency of 11 days in the case of the Dacca district, it is said that the use of a steamer during the rainy season rendered it possible for the Collector to see more of the interior in less time than usual; but this is not a sufficient reason for curtailing the prescribed number of days. The Sub-divisional Officers, with one exception, spent 120 days or more in camp. The exception is in the case of Baboo Mahendra Chundra Mozumdar, Sub-divisional Officer of Kishoregunge, whose tour was in the preceding year also short by 35 days, and whose repeated shortcomings in this respect call for an expression of the Lieutenant-Governor's displeasure. It is impossible for a Sub-divisional Officer to be efficient in his work unless he moves about actively in his sub-division, and it is noticed that this officer's executive work has fallen under the censure of the Commissioner.

3. *Weather and Crops.*—The rainfall of the year was in excess of the average of the last four years, except in Backergunge, where the total for the year was deficient, although in the same district damage was done by excessive rain in the transplanting season. The rainy season was marked by very high floods, especially in Dacca, but notwithstanding these the agricultural results are said to have been generally good. The tables appended to the Report show, however, that the *amun* rice, which is the most important crop in the division, was a full crop only in the Furreedpore district, and below the average in the other three districts. *Aus* rice and jute also suffered from excessive flooding; but judging from the trade returns, the latter crop was abundant. The yield of winter crops, *i.e.*, mustard, linseed and pulses, is said to have been good, but this is not generally borne out by the figures of outturn.

4. *Material condition of the people and prices of food and labour.*—No change in the material condition of the people is reported, the agricultural classes continuing to be well-to-do and prosperous, and the literate classes, including office-seekers, to struggle with straitened circumstances and limited prospects. The deterioration in the condition of landed proprietors, remarked by the Collector of Dacca, is, it is to be feared, the consequence of constant litigation and improvidence, and not of a depreciation in the value of landed property. That the year was a favourable one is shown by increased trade and by better collections of revenue under all heads. The price of common rice fell in every district, and wages of labour continued to maintain a high rate.

5. *Public health.*—The total number of deaths registered was 188,994 against 164,359 in 1885-86. The increase may to some extent be due to improved registration; but it is believed that the year was unhealthy except in Furreedpore. Cholera of a virulent type was generally prevalent but fever and small-pox were less fatal in every district except Backergunge. The practice of steeping jute indiscriminately in stagnant khals and bheels is noted as decidedly injurious to health, and steps should be taken to prevent the pollution of drinking-water by instituting prosecutions for nuisance.

6. *Trade and Commerce.*—The main lines of traffic with Calcutta and western districts continue unchanged. Trade is most brisk in the rainy season when

boat communication is easy and cheap, but is greatly impeded at other times by the want of roads. In Dacca the jute and rice trade increased, and both the import and export trade flourished in Mymensingh; but the low price of rice, which diminished the purchasing power of the cultivators, had a depreciating effect on trade in Backergunge. The value of the trade of the Naraingunge port rose from 65½ lakhs of rupees in 1885-86 to 88½ lakhs in 1886-87. Far the most important trade staple of this division is jute, the export of which from Naraingunge were valued at 80½ lakhs of rupees, or 91 per cents. of the trade of the port.

7. *Public feeling and Administrative arrangements.*—The Lieutenant-Governor has again, in the case of this Division, to notice the universal and spontaneous display of feeling called forth on the occasion of Her Majesty's Jubilee. Much interest is reported to have been taken by the educated classes in the enquiries of the Public Service Commission, and some enthusiasm was displayed in the districts of Dacca and Furreedpore on the occasion of elections to the Local Boards under the Local Self-Government Act. The working of the Tenancy Act is noticed later in this review.

The following table shows the extent to which Muhammadans are employed in Government service in this Division—

| DISTRICT.   | A                  |         |        | B                             |         |        | C  |         |        | Grand Total. | REMARKS.              |
|-------------|--------------------|---------|--------|-------------------------------|---------|--------|--|---------|--------|--------------|-----------------------|
|             | Gazetted Officers. |         |        | Officers in superior service. |         |        | Officers in inferior service, including menial servants. |         |        |              |                       |
|             | Muhammedans.       | Hindus. | Total. | Muhammedans.                  | Hindus. | Total. | Muhammedans.   | Hindus. | Total. |              |                       |
| Dacca       | 2                  | 52      | 54     | 147                           | 705     | 852    | 1,026  | 1,225   | 2,251  | 3,157        | } Figures of 1885-86. |
| Furreedpore | 13                 | 31      | 44     | 50                            | 464     | 514    | 487  | 418     | 905    | 1,502        |                       |
| Backergunge | 8                  | 44      | 52     | 176                           | 877     | 1,053  | 287  | 272     | 559    | 1,085        |                       |
| Mymensingh  | 0                  | 37      | 37     | 171                           | 787     | 958    | 450  | 561     | 1,017  | 2,021        |                       |
| Total       | 33                 | 164     | 197    | 553                           | 2,833   | 3,386  | 2,250  | 2,506   | 4,756  | 8,345        |                       |

\* Do not include Rural Sub-Registrars and Registrars of Muhammadan marriages. The figures of other districts include them.

Sixty-four per cent. of the total male population are Muhammadans; but for every Muhammedan able to read and write three Hindus were returned at the last census. It will be seen therefore that in superior service the Muhammedans do not hold their own in this division, while in inferior service they do much more than hold their own. Some thing may be done to redress this balance by proper supervision on the part of heads of offices when vacancies are filled; but it lies with the Muhammedans themselves to make good their position by improvement in education.

8. *Police and Crime.*—The conduct of the regular police is, on the whole, favourably reported upon, but the standard of merit does not appear to be high, and the success of the force in bringing offenders to justice is not satisfactory. In every district of this division the town police are said to be overworked and underpaid. The improvement in the payment of chowkidars' wages throughout the division is very satisfactory, and to this is naturally in a large measure attributable the good service reported to have been done by their agency. The returns, as compared with those for 1886, show an increase in both cognizable and non-cognizable crime; but the figures are below the average of recent years. The results of the prosecution of false cases were slightly better than formerly. The extraordinary want of uniformity shown in the extent to which, in the different districts of the division, the power of refusing enquiry is exercised by the police is unsatisfactory, and suggests the conclusion that section 157 of the Criminal Procedure Code is nowhere duly appreciated or judiciously utilised.

9. *Civil Justice.*—The fluctuations in the number of civil suits were slight, and all that need be observed is that the Tenancy Act has not conduced to an increase of litigation.

10. *Land Revenue, &c.*—The current demand of land revenue rose from Rs. 33,67,739 to Rs. 33,83,507, and there was a general improvement in

collections. In spite of a heavy arrear balance, the collections in Backergunge for the first time within the last ten years reached the normal standard of 90 per cent., a result which is most creditable to Mr. Fasson. The balances at the close of the year show a decrease in every district, and the number of certificates filed fell from 14,096 to 13,662. There was an increase in revenue both from Stamps and Excise, and, with regard to the latter, it is satisfactory to note that it was accompanied by a general decrease in the number of shops and licenses. The collections under the present Income-tax Act more than doubled those under the Act of 1872, and showed an increase of 63·1 per cent. over those under the License-tax Act in 1885-86.

11. *Relations between Landlord and Tenant.*—In the Dacca and Furreedpore districts relations between landlord and tenant are reported to have been more satisfactory than in the preceding years; but in Backergunge, and still more in Mymensingh, there appears to be considerable tension. The reports of the District Officers under this head are chiefly taken up with accounts of the introduction of the form of rent receipt prescribed by the Tenancy Act. The difficulties attending the introduction of the form are briefly put by Mr. Glazier, Collector of Mymensingh, as follows:—

“Rent receipts are making their way but slowly. A large number have been used, but their use is by no means universal. In many cases the zemindars do not care to use them, as they do not see their way to incorporate with the rent the illegal cesses they have been accustomed to levy. In other cases the ryots object to them, as they do not agree to the amount of annual rent the zemindar wishes to enter in the receipt.”

On the whole matters appear to be settling down with the more general recognition on the part of the landlords that accurate records will check litigation and with the growing appreciation by the ryots of the benefit of a definite acquittance. The management of the Dakhin Shabazpore estate in Backergunge was taken over by the Court of Wards on the application of the joint-proprietors under the provisions of sections 93 to 95 of the Tenancy Act, and the result of the experiment will be awaited with interest. On the general working of the Tenancy Act in this division, Mr. Larminie made the following remarks in his Land Revenue Report:—

“So far I think there is no reason to be dissatisfied with the working of the new Rent Law. Its provisions are of course being only gradually understood, and it would be very rash as yet to predict that the present calm will continue. I see no reason, however, to anticipate any serious disturbances. From what I have been able to gather, a certain sense of security has grown up amongst the ryots, and landlords generally have become conscious that it is useless to try and either evade or act in opposition to the law.

12. *Monetary arrangements.*—There was a large decrease, which is not fully accounted for, in both the receipts and the issue of currency notes everywhere except in Mymensingh. Money-order transactions and savings bank deposits increased in a very satisfactory manner.

13. *Railways and communications.*—The passenger traffic on the Dacca State Railway was most encouraging, but the high rate of freight seems to have interfered with the success of the goods traffic. It is unfortunate that there is not more successful enterprise in the matter of internal steamer communication in this division. Existing roads were maintained in an efficient state, except in the district of Furreedpore, and more original works were executed than in the preceding year. Considerable damages caused by floods had to be made good in the Dacca district. The schemes for the opening up of khals in the Backergunge district appear to be particularly useful.

14. *Education.*—The returns of the Education Department show a continued loss of lower primary schools and pupils in all the districts of this division, except Dacca, with the result that the aggregate numbers of schools of all kinds and pupils at the end of the year were 9,248 and 213,096 respectively as against 11,248 and 245,735 at the end of the preceding year. The Circle Inspector writes that the schools which have disappeared from departmental cognizance were for the most part of inferior quality; but it is also said that in Furreedpore the prosecution of some gurus for submitting false returns alarmed others and prevented them from furnishing any returns. The loss of schools, including girls' schools, was proportionately largest in Furreedpore, and it is observed that the Deputy Inspector in that district is charged with want of interest in his work. In Dacca only was there improvement in female educa-

tion in the year, and the good result here is perhaps due to greater efficiency. The number of upper primary schools and secondary schools increased, and the results of the Entrance Examination were remarkably good.

15. *Working of Committees and conduct of zemindars.*—District and Municipal Committees appear on the whole to have worked very well in this division, but the Lieutenant-Governor regrets to hear of irregularity on the attendance of Honorary Magistrates in Dacca. An efficient Bench of Honorary Magistrates reflects credit on the Magistrate of the district, and on Sub-divisional Magistrates, and no effort should be spared to obtain the zealous co-operation of non-official gentlemen in the administration of justice.

16. The Commissioner finishes his report with a long list of generous donations, many of which are intended to commemorate the Jubilee of the Queen-Empress, made by the zemindars of this division, who are not second in public spirit and liberality to the zemindars of any other part of these Provinces.

17. The Commissioner's remarks on the character of his subordinates will be communicated to the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

W. C. MACPHERSON,

*Offg. Secretary to the Government of Bengal.*

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## CONFERENCE FOR DISCUSSION OF CERTAIN EDUCATIONAL QUESTIONS.

### GENERAL DEPARTMENT—EDUCATION.

*Calcutta, the 13th September 1887.*

#### RESOLUTION.

**READ** the following papers on the subject of the periodical holding of Educational Conferences:—

Paragraph 20 of Bengal Government letter No. 2285T—G, dated 25th September 1884, addressed to the Government of India.

Paragraph 29 of Government of India Resolution No. 10—309, dated 23rd October 1884.

Paragraphs 39 and 339 of the Report on Public Instruction in Bengal for 1883-84, and paragraphs 6 and 20 of the Government Resolution thereon, dated 23rd February 1885.

Letter from the Secretary to the Calcutta Missionary Conference, dated 15th March 1886.

Letter from the Director of Public Instruction, No. 2851, dated 27th April 1886.

Letter from the Director of Public Instruction, No. 5303, dated 15th August 1886.

Letter to the Director of Public Instruction, No. 575, dated 18th August 1886.

Letter from the Director of Public Instruction, No. 7528, dated 2nd December 1886.

Letter to the Director of Public Instruction, No. 693, dated 21st December 1886.

Letter from the Director of Public Instruction, No. 4005, dated 21st June 1887.

In paragraph 29 of the Home Department Resolution No. 10—309, dated the 23rd October 1884, the Government of India approved the recommendation of the Education Commission that conferences (1) of officers of the Education Department, and (2) of such officers with managers of aided and unaided schools should be held from time to time for the discussion of questions affecting education, the Director of Public Instruction being in each case *ex-officio* President of the Conference. In accordance with this recommendation, a conference of Inspectors of Schools in the Lower Provinces was held in 1884, and interprovincial conferences have been held of Inspectors of European schools in the Bengal Presidency. Two educational conferences have also been held at Calcutta in 1886 and 1887 at which teachers and managers of European schools attended for the purpose of discussing the provisions of the Code for European schools. A more general conference was proposed by the Director of Public Instruction in his report for the year 1883-84 for consideration of the rules for grant-in-aid to colleges and native schools, with special reference to the standards and other requirements of female education. This proposal was approved by the Lieutenant-Governor, but arrangements were postponed during Sir Alfred Croft's absence on furlough. In August of last year it was determined that a conference, which should be as representative as possible, should be held in Calcutta in the cold weather of 1886-87, and a report of the proceedings of this Conference, which was duly held, has been submitted to Government.

2. In the deliberations of the Conference, which met altogether sixteen times, commencing from the 14th February 1887 to 30th April, the ladies and gentlemen below named took part:—

1. The Revd. K. S. Macdonald, M.A.; } Representatives of the Calcutta Missionary
2. Mr. W. C. Madge, } Conference.
3. „ Abdur Rahman, Barrister-at-Law, representative of the Muhammadan Literary Society.
4. „ Ameer Ali, Barrister-at-Law, representative of the National Muhammadan Association.
5. Baboo Bijoy Kishen Mukherjee, President of the Uttarpara Hitakari Sabha.
6. „ Surja Kumar Adhikari, B.A., Principal, Metropolitan Institution.
7. „ Umee Chundra Dutt, B.A., Principal, City College.
8. „ Krishna Behari Sen, M.A., Principal, Albert College.
9. Dr. Guru Das Banerjee, Member of the Bethune School Committee.
10. Miss A. M. Hoare, Superintendent of the S. P. G. Zenana Mission.
11. „ Hook, Superintendent of the American Zenana Mission.
12. Mrs. Clifford, of the Church of England Zenana Mission.
13. „ Macdonald, of the Free Church Zenana Mission.
14. „ M. Wheeler, Inspectress of Schools.
15. Rai Radhika Prasanna Mukherjee, Barrister, Inspector of Schools, Presidency Circle.

The Director of Public Instruction was *ex-officio* President of the Conference, and the Inspector of Schools, Presidency Circle, acted as Secretary.

The subjects discussed by the Conference were—(1) The grant-in-aid Rules. (2) The course and standards of female education and the means of encouraging and extending it. (3) The revision of the regulations governing the transfer of pupils from one school to another.

3. *The grant-in-aid Rules.*—The principal changes recommended by the Conference refer to rules 6, 11, 14, 15, 16, 19, 20, 21, and to the rules regarding special and building grants. The reasons for the changes and additions made are thus stated in paragraphs 4 and 5 of the Director of Public Instruction's report No. 4005, dated 21st June 1887.

"Rule 6 has been considerably simplified, and brought into harmony with the requirements of classes needing special encouragement, as recommended by the Education Commission. Provision has also been made for a certain proportion of free scholars in aided schools, in accordance with recommendation 5, chapter VII, and recommendation 22, chapter VIII of the report of the Education Commission.

In Rule 9 (i) the distance of four miles has been substituted for six miles in accordance with the unanimous recommendation of the Circle Inspectors. The shorter distance has been for years past practically accepted by the officers dealing with applications for grants-in-aid.

In Rule 11—Municipal contributions are treated as receipts from public sources, in accordance with the views expressed in the report of the Education Commission, chapter XII, paragraph 668, and its appendix, page xxxvi. Similarly, in the report of the Sub-Committee of the Education Commission appointed in 1882 to revise the annual statistical returns of the Education Department, it is explained (paragraph 11) that "schools, whether aided from provincial, from local, or from municipal funds, are classed together as aided schools," in general table III, now in use throughout India. The effect of the proposed change of rule will be to render schools situated within municipal limits more dependent than before on municipal contributions.

Rule 14—Has been altered with a view to encourage independent effort in the direction of higher education. Paragraph 478 of the report of the Education Commission (page 420), pointed out that, although a proportion of 25 per cent. of the total expenditure was sufficient for Calcutta, it was not large enough for the country districts of Bengal, where no aided college had yet been established by private enterprise; and that it was therefore necessary to raise the proportion to 33 per cent. This recommendation has now been adopted.

Rules 15 and 16.—The difference of advancement between district and district, which has all along been recognised for middle schools, is now extended to high schools, in accordance with the recommendations of the Circle Inspectors. In rule 16, the limit up to which the higher rate of aid to middle schools may be given has been raised from Rs. 30 to Rs. 40, as it is now recognised that middle schools maintained at a cost of from Rs. 30 to Rs. 40 a month are just those that need most encouragement.

Rule 20.—The conference raised strong objections to the rule that "a grant should ordinarily be reduced on renewal." It has been reproduced (in new rule 19) in a less stringent form, and in closer accordance with the principles declared in paragraphs 507-509 of chapter VIII of the Education Commission's Report.

Proposed rule 20 merely confirms the existing practice. The object of the stamped agreement is to fix the responsibility of the managers in a formal way.

Rule 21 (1) (b).—Charges for servants and contingencies are omitted, except in the case of girls' schools. Many schools are apt to raise these charges above what is necessary, in order to claim a larger grant. If not recognised in the grant, the expenditure on this account will be kept at the lowest possible point.

Rule 21 (3).—There is greater simplicity in submitting the accounts for the month for which the grant is claimed, and not for the previous month. This change renders it necessary also to substitute the word "due" for "paid" in the form of certificate annexed to the account.

Rule 21 (7a).—It is the duty of the Department not only to see that competent teachers are appointed, but to protect them against the chance of wrongful dismissal.

Rule 21 (10 and 11).—Are introduced as being an improvement on the existing rules.

Rule 21 (15-18).—These are new provisions to meet cases that arise from time to time. The object is to enable the Department to exercise more complete control over the accounts of schools, and to secure the construction of school buildings in accordance with sanitary principles.

Rules 22-29.—Provide for special grants for buildings and furniture, and have been adopted bodily from the corresponding sections in the Code for European schools. In rule 24 the proportion of the maximum Government contribution has been defined in the case of each class of schools.

Rule 30.—This is a new rule, intended for the assistance of schools that desire only a temporary advance from the public funds in lieu of a grant.

5. It only remains for me to add that the forms have been altered to suit the rules, and that in Form A a statement of the proposed fee-rates is in future to be entered."

The amendments in the rules are approved by the Lieutenant-Governor, with the exception of the change recommended in the second sentence of rule 20 (new rule 19). The proposed change in this rule shown in the margin\* would abolish an important principle of the grant-in-aid system—the gradual

\* Existing rule.—A grant should ordinarily be reduced on renewal.

Proposed rule.—A grant may be reduced on renewal if this can be done without loss of efficiency.



transfer of Government aid from established to new and struggling institutions. It is only by enforcing this principle that funds can be secured, without imposing additional burdens on the tax-payer, for the development of education in parts of the country still in a backward state among classes who have not as yet taken full advantage of the benefits offered, and in directions which have hitherto been to some extent overlooked. The proviso suggested in the words "if this can be done without loss of efficiency," implies that grants made for a term are to be treated in fact as perpetual, except in the rare case where the withdrawal of the grant would not lead to some diminution in the facilities afforded for instruction. Such a rule would, however, altogether cripple the action of Government in promoting the general cause of education. It implies that Government must for ever renew all grants in full, unless precisely the same efficiency can be obtained with the diminished income as with the greater, and that though there may be no funds available, or though such funds as can be used might produce more good if devoted to some other purpose. The Lieutenant-Governor cannot therefore approve this amendment, but he accepts an amendment of the rule

A grant should ordinarily be reduced on renewal, when this can be done without serious loss of efficiency.

shewn on the margin, which has been proposed by Sir Alfred Croft. The addition of the sentence requiring that notice be given to managers of

schools in all cases of reduction of grants is in accordance with the recommendation made by the Education Commission in paragraph 509 of their report, and is accepted.

The Lieutenant-Governor agrees with the Director of Public Instruction in thinking that it will be necessary to revise, in the sense of the grant-in-aid rules now sanctioned, the rules relating to grant-in-aid, in Part VI (Education) of the rules framed under the Local Self-Government Act, for all schools, the grants to which are sanctioned by District Boards. The Director is requested to submit draft revised rules for the approval of Government.

4. *The course and standards of female education, and the means of encouraging and extending it.*—The improved vernacular standards of examination adopted by the Conference for girls' schools and zenanas are approved by the Lieutenant-Governor. In view, however, of the present urgent necessity for keeping down all expenditure which is not absolutely necessary, the proposal to provide an additional Inspectress of Schools, and to create special scholarships for girls, cannot be sanctioned. The proposal that rewards should be given to female teachers on passing by standards IV, VI or VII to the amount of Rs. 10, Rs. 20, and Rs. 30, respectively, will not involve much cost and may be sanctioned.

5. *The revision of the regulations governing the transfer of pupils from one school or college to another ("inter-school rules") with a view to their application to the educational institutions of Calcutta.*—The "inter-school rules" or "transfer rules" for colleges and high schools, as revised at the Conference, are sanctioned provisionally for one year; they will be again subject to revision in the light of experience at the end of that time. The Lieutenant-Governor accepts the Director's recommendation that the revised rules should be at once applied to Calcutta only, and that Circle Inspectors and other local authorities should be consulted as to the expediency of substituting these rules throughout Bengal for those now in force.

6. Sir Steuart Bayley desires that his thanks may be conveyed to the President and to the ladies and gentlemen who took part in the deliberations of the Conference.

ORDERED—That this Resolution and the revised rules and forms approved in paragraphs 3 and 5 above, and also the statement of vernacular standards of examination for girls' schools and zenanas, be published in the *Calcutta Gazette*, and that copies be sent to the leading newspapers. The Bengali Hindi, and Uriya Translators will be requested to translate the revised grant-in-aid rules into Bengali, Hindi, and Uriya, and to publish them in the vernacular *Gazettes*; also to furnish the Director of Public Instruction with as many copies of the translations of the rules as may be required for distribution. The Bengali Translator will also be requested to translate into Bengali the vernacular standards of examination for girls' schools and zenanas, and to publish the same in the *Bengali Gazette*; also to furnish the Director of Public Instruction with as many copies of the vernacular translation of the standards as may be required for distribution.



The Superintendent of Government Printing, Bengal, will be asked to supply the Director of Public Instruction with as many English copies (1) of the revised grant-in-aid rules and forms, (2) of the vernacular standards of examinations for girls' schools and zenanas, and (3) of the transfer rules of high schools and colleges as may be required for distribution.

By order of the Lieutenant-Governor of Bengal,

W. C. MACPHERSON,

*Offg. Secretary to the Govt. of Bengal.*

## RULES FOR GRANTS-IN-AID TO COLLEGES AND SCHOOLS IN BENGAL, 1887.

1. A grant from Provincial revenues is assigned by Government annually for the province, to be expended in grants-in-aid to schools not under Government management provided they fulfil the conditions prescribed in the following rules.

2. The grant is distributed by the Director of Public Instruction, on the recommendation of the Circle Inspector, to schools which are certified to be eligible under these rules, reference being had to the requirements of each locality, as compared with others, and to the funds disposable.

3. Any school to which aid is given, together with all its accounts, books, and other records, shall at all times be open to inspection and examination by any officer appointed by the Government for the purpose; and to this end the records and accounts shall be placed in such custody that they shall be always accessible on the visit of any inspecting officer. Such inspection and examination shall have no reference to religious instruction, but only to secular education.

4. Inspecting officers will interfere as little as possible with the local management of schools, but are employed to see that the instruction is efficient, and that the conditions on which the grants were made are fulfilled; and aid will be withdrawn from any school in which such conditions are not fulfilled.

5. Grants are given on the principle of strict religious neutrality, and no preference will be shown to any school on the ground that any particular religious doctrines are taught or not taught therein.

6. Grants-in-aid will be made to such colleges and schools only (with the exception of training schools, girls' schools, night schools for adults, and schools for aborigines and low castes) as require some fee, however small, from all their scholars. Exemption from this rule may be allowed in exceptional cases by the Director of Public Instruction.

7. The promoters or managers of any institution by whom application for a grant is made must appoint a Secretary to conduct their correspondence with the Department, and they must record the names of the managers.

8. The managers are responsible for the due expenditure of the school funds in accordance with the conditions of the grant.

9. In respect of any school for which application is made, full information must be supplied on the following points, and must be thrown into the shape given in form A appended to these rules—

- (a) The pecuniary resources, permanent and temporary, on which the school will depend for support.
- (b) The proposed monthly expenditure in detail.
- (c) The average number of pupils to be instructed.
- (d) The persons who will form the Committee of Management.
- (e) The class of school and course of instruction.
- (f) The number and salaries of the teachers.
- (g) The fees to be charged in each class.
- (h) The amount of aid sought.
- (i) The treasury at which the grant, if sanctioned, is to be payable.
- (j) The existence of other schools of all classes within a distance of four miles.

10. An application for a grant is made either directly to the Circle Inspector, or to the District Deputy Inspector, who forwards it with his remarks to the Inspector. The Inspector, after taking the opinion of the Magistrate upon his proposals, forwards the application to the Director for sanction. If the Magistrate and the Inspector differ, the decision rests with the Director.

11. Grants shall in no case exceed in amount the sums to be expended from private sources, except in special cases, under special orders of Government. Municipal contributions will be reckoned for this purpose as receipts from public sources.

12. Aided places of instruction are divided into the following classes:—

*Colleges*—In which students who have passed the University Entrance Examination are educated in the University Course or any part of it.

*High Schools*—In which students are educated up to the standard of the Entrance Examination.

**Middle Schools**—In which the scholars are educated up to the middle English or middle vernacular scholarship standard.

**Primary Schools**—In which the scholars are educated up to the upper or lower primary scholarship standard.

**Girls' Schools**—Including agencies for *senana* instruction.

**Training Schools**—For the training of masters and mistresses.

**Special Schools**—For instruction in special subjects.

Grants are also given in certain cases in aid of boarding establishments.

13. Grants are of two kinds—annual grants and special grants.

#### ANNUAL GRANTS.

14. For colleges the grants shall not exceed one-half of the income guaranteed from private sources, and in Calcutta they shall not exceed one-third of such income.

15. For high schools the grants shall not exceed one-half of the income guaranteed from private sources, except in the districts of—

|   |                     |
|---|---------------------|
| Berhboom,                                       | Chittagong,         |
| Dinapore,                                       | Tipperah.           |
| Rungpore,                                       | Noakhally,          |
| Bogra,  | The Patna Division, |
| Darjeeling,                                     | „ Bhagulpore „      |
| Julpigoree,                                     | „ Orissa „          |
| Mymensingh,                                     | Chota Nagpore „     |
| The island of Dhukin Shahbazpur in Backergunge, |                     |

in which the grants may equal two-thirds of the income so guaranteed.

16. For middle schools, in which the expenditure is more than Rs. 40 a month, the grants shall not exceed two-thirds of the income guaranteed from private sources, except in the districts mentioned in the last rule, in which the grants may equal the income so guaranteed.

17. For primary schools, as well as for girls' schools, training schools, and special schools the grant shall not exceed a sum equal to the full amount of the income guaranteed.

18. The amounts above laid down are *maximum* amounts, and it must be understood that the *maximum* grant will not in all cases, and as a matter of course, be sanctioned.

19. Grants will be sanctioned ordinarily for a term of three years; but the Inspector may at any time during its currency recommend the revision of any grant. A grant should ordinarily be reduced on renewal, when this can be done without serious loss of efficiency. In this way money will from time to time be set free, and the Department will be able to aid new schools even though the grant-in-aid allotment remains stationary. Notice of any proposed reduction shall in all cases be given to the managers, who shall be allowed an opportunity of stating any objection that they may have to the reduction.

20. When a grant is sanctioned, the managers shall sign an agreement on stamped paper to the effect that they will conduct the school in accordance with the conditions of the grant.

21. The sanction of a grant is conveyed in the following form\* :—

#### Office Memorandum of the Director of Public Instruction.

(1) A grant of Rs. \_\_\_\_\_ a month is sanctioned from the \_\_\_\_\_ 18 \_\_\_\_\_  
for the \_\_\_\_\_ school at \_\_\_\_\_ in zillah \_\_\_\_\_, on the following  
conditions :—

(a)—That Rs. \_\_\_\_\_ a month at least be regularly contributed from private sources.

(b)—That the following scale of expenditure be maintained, subject to any alteration that may be sanctioned by the Inspector.

Rs. A. P.

Head Master .

Second do.

Third do.

Do. do.

Do. do.

Do. do.

Servants } In the case of girls'  
Contingencies } schools only.

(2) The grant is payable every month.

(3) The monthly bill (in form B annexed) must be sent to the Inspector for counter-signature, and must be accompanied by a certificate (in form C) that all salaries for previous months have been paid in full.

(4) The monthly bill and the certificate must be signed by the Secretary of the school.

(5) The bill is countersigned on the distinct understanding that the salaries and other charges certified by the Secretary to have been paid have actually been paid.

\* In the case of colleges the form is modified.

(6) Salaries for service in any month become due on the first day of the following month.

(7) The appointment and dismissal of every teacher shall be notified to the department. No appointment shall be confirmed until it has received the sanction of the department; and the department shall have power to inquire into any case of the dismissal of a teacher.

(8) The grant is liable to be reduced or withdrawn if the payment of any teacher's salary is delayed for more than two months after it has become due.

(9) The grant is liable to be reduced or withdrawn if the school is unfavourably reported on as regards the attendance or proficiency of the scholars.

(10) The grant is liable to be reduced or withdrawn if the managers keep their accounts in a negligent and untrustworthy manner, or if they send up incorrect accounts, or if they fail to transmit punctually the periodical returns required by the department, or if the school-house is unfit for the purposes of the school, or is untidy or dirty, or if the department is otherwise dissatisfied with the management of the school.

(11) The grant is liable to be reduced or withdrawn if the teachers are inefficient, or if they are absent from duty otherwise than in accordance with the rules of the department, or if they keep the school registers in a negligent or untrustworthy manner.

(12) Holidays are not to exceed 60 days in the year, exclusive of Sundays, except under peculiar circumstances and with the sanction of the Inspector.

(13) Every new election to the Committee of Management must be notified to the Inspector under the signatures of the Secretary and of the member or members elected.

(14) Every change of Secretary must be notified to the Inspector under the signatures of the new Secretary and the Members of the Committee of Management.

(15) All receipts from whatever sources or for whatever purposes collected must be entered in the account book of the school, which shall be open to inspection and examination by any officer appointed by Government for that purpose.

(16) No part of the previous balance of a school shall be spent without the sanction of the Inspector, except for payment of the sanctioned establishment, in order to make up any deficit in the private contributions in any particular month.

(17) No new building shall be constructed for the school until the plan and estimates have been approved by the Inspector.

(18) Government may claim a fair share of any balance at the credit of a school at the time of its abolition, as well as of the sale proceeds of any school-house or furniture towards the erection or purchase of which a grant may have been made by Government.

#### SPECIAL GRANTS.

22. Grants may be given to managers of schools in aid—

(a) Of erecting, enlarging or furnishing school buildings.

(b) Of executing extensive repairs.

(c) In special cases, of paying off debts incurred in erecting or enlarging school buildings.

NOTE.—Expenditure in the purchase of buildings may be treated as expenditure in the erection of buildings.

23. Except in the case provided in the foregoing rule, no grant shall be made in consideration of former expenditure on school buildings.

24. In general, the proportion of the Government contribution made under rule 22 shall not exceed the proportion laid down in rules 14 to 17 for schools of the same classes.

25. Before a building grant is sanctioned, the site, plans, estimates, specifications, title and trust deed must be approved by the Director of Public Instruction. If the school receives no monthly grant, the managers must also satisfy the department that it is likely to be maintained in efficiency, and that it will be open to inspection.

26. The trust deed must declare the building to be granted in trust for school purposes only. It must also provide for the legal ownership of the premises, for the proper maintenance of the building, and for the inspection and management of the school.

NOTE.—This rule does not preclude the managers from using the building for other purposes when not required for the purposes of the school.

27. No grant is finally sanctioned until a certificate is received from the managers, setting forth that the funds in their hands will, when added to the grant, be sufficient to meet all claims and to close the account.

28. Advances may be made from time to time out of the sanctioned grant on receipt of a report from the Public Works Department that the work is proceeding satisfactorily.

29. The grant is not paid in full until—

(1). A report is received from the Public Works Department or other sufficient authority that the building is satisfactorily completed.

(2). The trust deed is duly registered, and a copy lodged with the Department.

30. Loans may also be made to managers of schools for the erection of school buildings. The amount of such loan shall generally be limited to the amount of any grant claimable under rule 24. The building shall be mortgaged to the Government as a guarantee for the repayment of the loan, and a term shall be fixed within which the loan is to be repaid. Interest at a rate not exceeding 4 per cent. may, if necessary, be charged.

(FORM A.—In which application must be made to the Inspector for new grants-in-aid or for renewal of old grants.)

APPLICATION FOR A GRANT-IN-AID FOR

No. THE CLASS SCHOOL AT IN THANA DISTRICT

PROPOSED CONSTITUTION.

Dated

| CLASSES. | Average number of pupils expected. | Fees to be charged in each class. | Proposed charges or rate of expenditure monthly. |     |     | Estimated receipts monthly.    |    |    | REMARKS. |
|----------|------------------------------------|-----------------------------------|--|-----|-----|--------------------------------|----|----|----------|
|          |                                    |                                   | Rs.  | A.  | P.  | Rs.                            | A. | P. |          |
| 1st      | ...                                |                                   | 1st Teacher                                      | ... | ... | From private sources.          |    |    |          |
| 2nd      | ...                                |                                   | 2nd "  | ... | ... | Fees                           |    |    |          |
| 3rd      | ...                                |                                   | 3rd "  | ... | ... | Subscriptions and donations    |    |    |          |
| 4th      | ...                                |                                   | 4th "  | ... | ... | Endowment                      |    |    |          |
| 5th      | ...                                |                                   | 5th "  | ... | ... | From Government.               |    |    |          |
| 6th      | ...                                |                                   | Prizes   | ... | ... | Grant-in-aid                   |    |    |          |
| 7th      | ...                                |                                   | Library  | ... | ... | Total from all sources         |    |    |          |
| 8th      | ...                                |                                   | • Servants                                       | ... | ... | The grant to be payable at the |    |    |          |
| 9th      | ...                                |                                   | • Contingencies                                  | ... | ... | Treasury.                      |    |    |          |
| Total    | ...                                |                                   | Total  | ... | ... |                                |    |    |          |

Here to be inserted the names of the persons who will form the Committee of Management.

Here to be inserted the Inspector's recommendation : information about other schools within a distance of four miles ; the Magistrate's opinion on the application ; and the Inspector's final remarks.

Recommendation of the Inspector.

Opinion of the Magistrate.

Final remarks of the Inspector.

Residences.

Profession and social position.

Names of Committee.

Members.  
Member and Secretary.

• For girls' schools only.

## Vernacular Standards of Examination for Girls' Schools and Zenanas.

*Note (1).—The text-books named in the table are recommended for the present. It will, however, be open to the managers of schools to substitute for those mentioned any other books of the same value, character, and standard of difficulty.*  
*Note (2).—In standards IV, VI, and VII, the departmental examinations for scholarships will be held in the text-books named.*

|   | LOWER PRIMARY STANDARDS.  |   |   |  |   | UPPER PRIMARY STANDARDS.   |  | MIDDLE STANDARD.  |
|---|---|---|---|--|---|--|--|---|
|   | Standard I.<br>A.   | Standard I.<br>B.   | Standard II.  | Standard III.  | Standard IV.  | Standard V.  | Standard VI.   | Standard VII.   |
| ading                                   | To recognise and name the letters of the alphabet, vowels and consonants.                                   | To have a correct knowledge of the sound and formation of the different vowel signs, from Part I, Barnaparchay. | To read with intelligence from any primer; to spell without mistake up to २२१ in Part II, Barnaparchay. | Competent knowledge of spelling in Part II, Barnaparchay; intelligent reading of Shikashon, Part III, reciting ten lines of poetry from Padyapath I. | <i>Bodhoday</i> with explanation; Padyapath I, committed to memory, with explanation.   | Questions out of the first half of Bastubichar; reading and explanation from Charupath II, and Padyapath II; committing to memory of Padyapath II. | Questions from Bastubichar; reading and explanation from Akiyan-Manjari II; Kabitasan-graha I, committed to memory, with explanation and paraphrasing. | Sitarbanabas, Padyapath III, Prabandha Kusum by Rajani Kanta Gupta.         |
| ating                                   | To write the letters legibly.   | Writing easy words from dictation.  | Dictation from the primer used in the class.  | Dictation from Bodhoday, each passage slowly read out twice. Reading from manuscript.  | Dictation from Charupath II, each passage read out slowly twice. Writing in simple Bengali the purport of lessons; reading from manuscript. | Short essays on subjects treated in the text-books of the class.   | Short essays on familiar subjects.   | Short essays on familiar subjects.  |
| ithmetic                                | To count up to 60, and be able to state of what two digits each number is composed. Easy mental arithmetic. | Writing down numbers of two digits; addition of numbers not exceeding two digits.                               | Numeration and addition of numbers up to four digits.   | Numeration in five figures; addition; subtraction; tables up to 3 X 10.  | Numeration in six figures; simple addition, subtraction, multiplication and division; tables up to 10 X 10; country tables to gandakia.     | The four simple and two compound rules; tables up to 12 X 12; easy money reductions; mankasa, serkasa.   | Four simple and compound rules; bazar weights and measures, mankasa, serkasa, bighakali, katakali, mashmahina.   | Add to Standard VI, simple proportion and simple fractions.                 |
| ummar                                   | .....   | .....   | .....   | Classification of letters, vowels, and consonants.   | Easy sandhi of vowels from the reader.  | Sandhi of vowels and consonants; easy samas.   | Sandhi, karak, striva, samas.  | Questions arising out of the text-books.                                    |
| ography                                 | .....   | .....   | .....   | .....  | Definitions, illustrated by the map, general knowledge of India.  | Definitions, general knowledge of Asia, knowledge of the districts of Bengal.  | Knowledge of map of the world, and of India in detail.   | Add to Standard VI, general knowledge of the four quarters.                 |
| story                                   | .....   | .....   | .....   | .....  | .....   | .....  | History of Bengal for beginners, by Raj Krishna Mukerjee.  | History of India by Ram gati Nyayaratna.                                    |
| netic<br>omy.                           | .....   | .....   | .....   | Garhaasthya Swasthyabodhi, by Chandranath Bose.  | Garhaasthya Path, by Chandranath Bose.  | Garhaasthya Path, by Chandranath Bose.   | Garhaasthya Path ..  | The Way to Health.  |
| idework                                 | .....   | Hemming: or, Arithmetic to Standard II.   | Top sewing or seaming: or, Arithmetic to Standard IV.   | Running and felling: or, Arithmetic to Standard V.   | Marking, stitches all crossed the same way and making a <i>koorta</i> or, Arithmetic to Standard VI.  | Cutting out a <i>koorta</i> , sewing on buttons and strings, and making button-holes: or, Arithmetic to Standard VII.                              | Gathering and sewing on a band, darning, and herring-boning: or, Prani Brittauta.  | Cutting out and making a <i>piran</i> ; and fancy-work: or, Padartha Bidya. |
| tional subject.<br>English<br>Language. | .....   | .....   | .....   | Step by Step ..  | Royal Reader I; dictation; nouns and verbs.   | Royal Reader II; dictation, parts of speech.   | Royal Reader III; letter writing, easy parsing.  | Royal Reader IV; letter writing, parsing.                                   |

## TRANSFER RULES—COLLEGES.

I.—A STUDENT applying for admission to a college affiliated to the University in Arts, or Law, shall be required to produce a certificate from the Principal of the college in which he was last reading. But if he applies, at the beginning of a session, for admission to the first year or to the third year class, the certificate of having passed the last Entrance or First Arts Examination respectively shall be accepted in lieu of such certificate. A student who has failed at the First Arts or the B. A. examination may be admitted in the following session to the second or fourth year class of the college, on production of the Registrar's receipt.

II.—The certificate shall run as follows :—

\_\_\_\_\_ is permitted to remove his name from the college register. He has been a student in the \_\_\_\_\_ class from \_\_\_\_\_ to \_\_\_\_\_ 18 ; during that period the roll of the class was called \_\_\_\_\_ times, and \_\_\_\_\_ was present on \_\_\_\_\_ of these occasions. His character and conduct have been \_\_\_\_\_ College fee paid for \_\_\_\_\_

III.—The certificate is to be given without any avoidable delay. The only grounds on which it can be refused are (1) gross misconduct, (2) failure to pay the sums due to the college, including college fees and fines and transfer fee (if any). If a certificate is refused, the cause of refusal shall be notified in writing to the applicant.

IV.—Fees are annual charges, though for the convenience of students they are levied monthly. They are therefore payable for the vacation months equally with others. If a student applies for transfer in or after the month of January, he shall be liable to pay fees in that college up to the close of the session. The transfer fee shall in no case exceed the ordinary admission fee.

V.—All questions arising between one Principal and another respecting the enforcement of these rules shall be referred as soon as possible to the Director of Public Instruction.

VI.—If a student be found producing a false certificate, or making a false statement as to his attendance at any college, he shall be liable to expulsion, and shall be reported to the Director of Public Instruction.

VII.—Wilful transgression of any of the foregoing rules will render a college liable to forfeit the right of sending up candidates for Government scholarships, and to be reported to the University.

## TRANSFER RULES—HIGH SCHOOLS.

I.—A BOY, before he is admitted to a high school, shall be required to state in what school he has last been reading, and to produce a certificate from the head-master of that school. He should also be required to bring with him a letter of application from his parent or guardian. If he has failed at the previous Entrance examination, and applies for admission at the commencement of the following session, the Registrar's receipt shall be accepted in lieu of a certificate.

II.—The certificate shall run as follows :—

"Certified that—was in the—class of the—school, and leaves with a—character. All sums due by him to this school have been paid. He has (or has not) passed the annual examination for promotion to the—class."

III.—The certificate is to be given without any avoidable delay. The only grounds on which it can be refused are (1) gross misconduct, (2) failure to pay the sums due to the school, including schooling fees and fines and transfer fee (if any). If a certificate is refused, the cause of refusal shall be notified in writing to the applicant.

IV.—Fees are payable for the vacation months equally with others. If a boy applies for transfer in or after the month of February, he shall be liable to pay fees in that school up to the close of the session. No transfer fee shall be charged to any pupil leaving a school at the close of a session, nor shall it in any case exceed the ordinary admission fee.

V.—A boy coming for admission shall not be placed in a class higher than that in which he was in the school he has left, or if he has passed the annual examination for promotion in that school, in the next higher class. This rule shall apply to admissions to the first and second classes only. Thus, a boy failing at the annual examination of the third class of one school cannot be admitted to the second class of another.

VI.—The fact of a boy appearing for admission without having undergone the annual examination of his old school must be regarded, unless the reverse is certified to by his former head-master, as sufficient evidence of his not having been fit for promotion; he should therefore be admitted into the class in which he was reading in the other school.

VII.—After admission under the foregoing rules, no boy shall be promoted to a higher class before the next annual examination of the school.

VIII.—All questions arising between one head-master and another respecting the enforcement of these rules shall be referred as soon as possible to the Inspector of Schools (or in Calcutta, to the Director of Public Instruction).

IX.—If a boy be found producing a false certificate, or making a false statement as to his attendance at any school, he shall be liable to expulsion, and shall be reported to the Department.

X.—Wilful transgression of any of the foregoing rules will render a school liable to forfeit the right of sending up candidates for junior scholarships, and to be reported to the University.

FORM A—(continued.)

PRESENT STATE OF THE SCHOOL.

To be filled up if the School has been in existence for six months and upwards.

| CLASSES. | Average number of pupils during the last six months. | Fees charged in each class. | Average charges incurred monthly for the last six months. | Average receipts monthly for the last six months.                         |               |  | REMARKS. |
|----------|--|-----------------------------|---|---|---------------|--|----------|
|          |  |                             | Rs.   A.   P.   | Rs.   A.   P.   | Rs.   A.   P. |  |          |
| 1st      |  |                             | 1st Teacher .. .. .                                       | <i>From private sources.</i>  |               |  |          |
| 2nd      |  |                             | 2nd .. .. .   | Fees .. .. .  |               |  |          |
| 3rd      |  |                             | 3rd .. .. .   | Subscriptions and donations ..  |               |  |          |
| 4th      |  |                             | 4th .. .. .   | Endowment .. .. .   |               |  |          |
| 5th      |  |                             | 5th .. .. .   | <i>From Public sources.</i>   |               |  |          |
| 6th      |  |                             |   | Government grant-in-aid† .. ..  |               |  |          |
| 7th      |  |                             |   | Municipal grant .. .. .   |               |  |          |
| 8th      |  |                             |   | Total from all sources .. ..  |               |  |          |
| 9th      |  |                             | * Servants .. .. .  | † Here enter number and date of order sanctioning existing grant, if any. |               |  |          |
|          |  |                             | * Contingencies .. .. .                                   |   |               |  |          |
| Total    |  |                             | Total .. .. .   |   |               |  |          |

\* For girls' schools only.

## Form B.

School at \_\_\_\_\_ in District \_\_\_\_\_

Month ending \_\_\_\_\_ 18 .

BILL FOR GRANT-IN-AID.

*The Secretary of State in Council for India* ... .. *Dr.*

|   | Rs. | A. | P.                               |  |
|---|-----|----|----------------------------------|--|
| To the grant-in-aid for the month ending ... .. |     |    |                                  | See orders of Director of Public Instruction No. _____, dated _____ 18 . |
| Payable at the _____ Treasury.                  |     |    |                                  |  |
| The _____                                       |     |    | Secretary of the School.         |  |
| Passed for Rs. _____                            |     |    |                                  |  |
| The _____ 18 .                                  |     |    | Inspector of Schools,<br>Circle. |  |

## Form C.

School at \_\_\_\_\_ in District \_\_\_\_\_

Month ending \_\_\_\_\_ 18 .

ABSTRACT ACCOUNT OF RECEIPTS AND DISBURSEMENTS.

| RECEIPTS. |  | Rs. | A. | P. | Rs. | A. | P. |
|-----------|--|-----|----|----|-----|----|----|
| (A)       | Fees and fines ... ..  |     |    |    |     |    |    |
| (B)       | { Subscriptions, donations, &c. ... ..                       |     |    |    |     |    |    |
|           | { Add (if necessary) from balance of previous account ... .. |     |    |    |     |    |    |
|           | Grant-in-aid ... ..  |     |    |    |     |    |    |
|           | Municipal grant ... ..                                       |     |    |    |     |    |    |
|           | Balance of previous account ... ..                           |     |    |    |     |    |    |
|           | Deduct amount (if any) carried to (B) ... ..                 |     |    |    |     |    |    |
|           | Total ... ..   |     |    |    |     |    |    |

| DISBURSEMENTS.            | Establishment.     | I.<br>Monthly charges specified in the grant. |    |    | II.<br>Charges due for the month. |    |    | Explanation of the differences, if any, between column II and column I. |
|---------------------------|--------------------|---|----|----|-----------------------------------|----|----|---|
|                           |                    | Rs.   | A. | P. | Rs.                               | A. | P. |   |
| * In girls' schools only. | Head Master ... .. |   |    |    |                                   |    |    |   |
|                           | 2nd " ... ..       |   |    |    |                                   |    |    |   |
|                           | 3rd " ... ..       |   |    |    |                                   |    |    |   |
|                           | 4th " ... ..       |   |    |    |                                   |    |    |   |
|                           | 5th " ... ..       |   |    |    |                                   |    |    |   |
|                           | 6th " ... ..       |   |    |    |                                   |    |    |   |
|                           | 7th " ... ..       |   |    |    |                                   |    |    |   |
|                           | 8th " ... ..       |   |    |    |                                   |    |    |   |
|                           | Head Pundit ... .. |   |    |    |                                   |    |    |   |
|                           | 2nd " ... ..       |   |    |    |                                   |    |    |   |
| 3rd " ... ..              |                    |   |    |    |                                   |    |    |   |
| Servants* ... ..          |                    |   |    |    |                                   |    |    |   |
| Contingencies* ... ..     |                    |   |    |    |                                   |    |    |   |
| Disbursements ... ..      |                    |   |    |    |                                   |    |    |   |
| Balance in hand ... ..    |                    |   |    |    |                                   |    |    |   |
|                           | Total ... ..       |   |    |    |                                   |    |    |   |

I declare that the sums stated above in column II are due for the month of \_\_\_\_\_ and that all salaries for previous months have been paid in full. In consideration thereof I apply for the Government grant of Rs. \_\_\_\_\_

The \_\_\_\_\_ Secretary of the School.

- NOTES—1. This account is for the month for which the accompanying grant-in-aid bill is drawn.  
 2. In the abstract of receipts must be credited against (A) the whole amount of fees and fines received during the month.  
 3. Against (A) and (B) together must be credited at least the amount guaranteed as the condition of the grant.  
 4. If the charges credited as being due are less than the charges specified in the grant, a proportionate reduction is to be made in the amount of the accompanying bill presented for countersignature.  
 5. The Secretary will send this account in duplicate, if required to do so by the Inspector.  
 6. If the declaration at the foot of this account is falsely signed, the Secretary is thereby rendered liable to all the penalties of clause 415 of the Penal Code.



## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 10th September 1887.

| No.                       | District and date of return. | Rainfall at Sudder station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|---------------------------|------------------------------|---------------------------------------|---|
| <b>BENGAL.</b>            |                              |                                       |   |
| <i>Western Districts.</i> |                              |                                       |   |
| BUWDWAN DIV.              | 1 Bardwan. Sept. 10, '87     | 3.13                                  | Weather—very hot and sultry. Paddy suffering much from want of rain all over Cutwa and Culna: prospects fair elsewhere, but rain nevertheless wanted. Prices for the most part stationary, but rising in Cutwa. Cholera in the Sudder; fever also prevalent. Rain now falling.  |
|                           | Culna ...                    | 0.79                                  |   |
|                           | Cutwa ...                    | 0.51                                  | Weather—very hot. Rain much wanted in all parts of the district. <i>Aus</i> rice in some places already damaged, and so will the <i>aman</i> crop on high lands also be if it do not rain soon. <i>Kelas</i> paddy flowering and <i>chali</i> is being reaped. <i>Birikalai</i> doing well. Sugarcane is being irrigated. Prices continue stationary. Public health good. |
|                           | Raneegunge ...               | 2.67                                  |   |
|                           | 2 Bankura „ 10, '87          | 0.51                                  | Weather—sultry. Rainfall very beneficial to young <i>aman</i> rice; but more urgently needed. Sugarcane flourishing. Public health not satisfactory; a good deal of fever and some cholera abroad. Cattle-pox also rife.  |
|                           | Bishenpur ...                | 1.08                                  |   |
|                           | 3 Beerbhoom „ 10, '87        | 2.79                                  | Weather—muggy. State and prospects of crops good. More rain wanted.   |
|                           | Rampur Haut ...              | 3.09                                  |   |
|                           | 4 Midnapore „ 10, '87        | 0.88                                  | Weather—hot and sultry, but to-day (10th) cool and damp. <i>Aus</i> paddy being reaped. Timely rain now falling will, if general, improve the prospects of winter rice which the dry weather has affected. A little fever and cholera reported.   |
|                           | 5 Hooghly „ 10, „            | Nil                                   |   |
| PRESIDENCY DIV.           | Serampur ...                 | 0.43                                  | Weather—a sultry week terminating with clouds and rain. Reaping of <i>aus</i> and jute in progress. Prospect of sugarcane promising. Paddy on low lands good. More rain wanted for crops on high lands. Fever to some extent in south of the district.  |
|                           | Jehanabad ...                | 1.75                                  |   |
|                           | Howrah „ 10, '87             | 1.00                                  |   |
|                           | Oulooberiah ...              | 2.52                                  |   |
|                           | <i>Central Districts.</i>    |                                       | Weather—unsettled: cloudy and very hot with occasional showers. Rain has been deficient this week and is badly wanted in Barrackpore, Dum-Dum and parts of Bunsirhat and Sudder. Prospects of jute, <i>aus</i> and sugarcane favourable. Public health fairly good for the time of year.  |
|                           | 6 24-Pergha, Sept. 10, '87   | 1.30                                  |   |
|                           | 7 Nudda „ 10, „              | 0.23                                  | Weather—very sultry and oppressive. <i>Aus</i> nearly harvested; outturn fair. <i>Aman</i> in some parts could not be transplanted for want of rain. Fever prevalent. Rivers rising steadily.   |
|                           | Kushtea ...                  | 2.05                                  |   |
|                           | Meherpur ...                 | 1.48                                  | Weather—seasonable. <i>Aus</i> paddy harvested. Transplantation of <i>aman</i> nearly completed. Rain of the week has done good. Public health generally good.  |
|                           | Chuadanga ...                | 1.43                                  |   |
| RAJSHAHY DIV.             | Ranaghat ...                 | Nil                                   | Weather—very hot; scanty rain. Harvesting of <i>aus</i> paddy continues. Prospects good. Rain wanted for <i>aman</i> paddy on high land.  |
|                           | 8 Khoolna „ 10, '87          | 3.60                                  |   |
|                           | 9 Jessore „ 10, „            | 1.12                                  | Weather—very hot; rain at intervals. Harvesting of <i>bhazdoi</i> paddy almost over. Prospects of <i>aman</i> still good, except in Kandi, where it is suffering from want of rain. Sowing of <i>til</i> has commenced. Sugarcane and jute progressing. Public health good.   |
|                           | Jhenidah ...                 | 0.63                                  |   |
|                           | Magurah ...                  | 0.34                                  | Weather—heavy rain in the beginning of the week; clear and very hot in the latter part. Transplantation of <i>aman</i> nearly finished. Harvesting of <i>bhazdoi</i> and jute continues. Rice 23 seers per rupee.   |
|                           | Narail ...                   | 0.25                                  |   |
|                           | Boungong ...                 | 0.45                                  | Weather—extremely hot. Cutting of <i>aus</i> paddy continues. Prospects of crops generally good. Fever rather prevalent.  |
|                           | 10 Moorshedabad „ 10, '87    | 2.78                                  |   |
|                           | Lalbagh ...                  | 4.50                                  | Heavy rain very favourable to the <i>aman</i> crop. Tobacco is being sown. Public health fair for the time of year.   |
|                           | Kandi ...                    | 1.15                                  |   |
| DACC DIVISION.            | Jungipur ...                 | 6.73                                  | Weather—very hot. State and prospects of crops satisfactory. Public health fair.  |
|                           | 11 Dacca „ 10, '87           | 5.75                                  |   |
|                           | Thakurgaon ...               | 8.15                                  | Weather—hot. Rivers rising. General health and prospects of crops good.   |
|                           | 12 Rajshahye „ 10, '87       | 4.51                                  |   |
|                           | Nattore ...                  | 3.20                                  | Weather—sultry. State and prospects of crops good.  |
|                           | Nowgong ...                  | 6.98                                  |   |
|                           | 13 Rangpur „ 10, „           | 5.85                                  | Weather—early in the week rainy; latterly hot and sultry. Reaping of <i>bhazdoi</i> and jute going on; outturn below the average. Sugarcane doing well. Transplantation of <i>aman</i> rice nearly completed everywhere. High floods in the east of the district. Public health good. Cattle-disease prevalent in places.   |
|                           | Kurigram ...                 | 9.13                                  |   |
|                           | Nilphamari ...               | 8.67                                  | Weather—very hot and fine. Prospects of crops continue good, but rain much wanted. Jute is being cut; outturn good. <i>Aus</i> nearly reaped. Public health good.   |
|                           | Gaibanda ...                 | 9.86                                  |   |
| DACC DIVISION.            | 14 Bogra „ 10, '87           | 6.56                                  | Weather—seasonable. Rivers rising. <i>Aman</i> doing well. Jute-steepling commenced. Public health good.  |
|                           | Sherpur ...                  | 6.24                                  |   |
|                           | Nowkhilla ...                | 3.70                                  | Weather—very hot. Cultivation of <i>aman</i> going on. Prospects good. More rain wanted. General health good.   |
|                           | 15 Pubna „ 10, '87           | 2.09                                  |   |
|                           | 16 Darjeeling „ 10, '87      | 6.36                                  | Weather—very hot. Heavy rain on 8rd. Transplanting of rice continues. Prospects of crops good.  |
|                           | Jalpigoree „ 10, „           | 14.09                                 |   |
|                           | Falakata ...                 | 34.70                                 |   |
|                           | 18 Dacca, Sept. 10, '87      | 2.34                                  |   |
|                           | Manickgunge ...              | Nil                                   |   |
|                           | Munshigunge ...              | 1.39                                  |   |
| DACC DIVISION.            | Naraingunge ...              | 1.5                                   | Weather—very hot. Cultivation of <i>aman</i> going on. Prospects good. More rain wanted. General health good.   |
|                           | 19 Farreedpur „ 10, '87      | 0.82                                  |   |
|                           | Goalundo ...                 | 0.11                                  | Weather—very hot. Heavy rain on 8rd. Transplanting of rice continues. Prospects of crops good.  |
|                           | Madaripur ...                | 1.10                                  |   |
|                           | 20 Backergunge „ 9, '87      | 2.15                                  |   |
|                           | 21 Mymensingh „ „ '87        | 2.23                                  |   |
|                           | Jamalpur ...                 | 6.77                                  |   |
|                           | Kishoregunge ...             | 4.68                                  |   |
|                           | Attea ...                    | 1.59                                  |   |
|                           | Netrokona ...                | 1.63                                  |   |

| No.                                    | District and date of return.    | Rainfall at Sudder Station in inches. | Character of the weather, state and progress of the crops, and state of health at date.  |
|--|---------------------------------|---------------------------------------|--|
| <b>BENGAL—contd.</b>                   |                                 |                                       |  |
| <i><b>Eastern Districts—contd.</b></i> |                                 |                                       |  |
| CHITTAGONG DIV.                        | 22 Chittagong, Sept. 13, '87    | 2.42                                  | Weather—hot. <i>Amra</i> and sugarcane thriving. Cholera reported; public health otherwise good. Prices stationary.  |
|  | 23 Noakbolly „ 9 „              | 1.94                                  | Weather—hot and close. Prospects of crops fair. More rain much wanted.   |
|  | „ Fenny „ „                     | 3.53                                  |  |
|  | 24 Tipperah „ 8 „               | 1.03                                  | Weather—very hot. Very insufficient rain. State and prospects of crops good, but much rain sadly wanted. Injury is being caused already to the crops in the east of the head-quarters sub-division.  |
|  | „ Brahmanbariah „ „             | 1.81                                  |  |
| CHITTAGONG HILL TRACTS.                | 25 Chittagong Hill Tracts „ 6 „ | 0.90                                  | Weather—sunny with occasional showers of rain throughout the week. <i>Jum</i> paddy ripening. Cotton doing well. Transplanting in low lands nearly over.   |
|  | „ „ „                           | 1.87                                  |  |
|  | Hill Tipperah „ 8 „             | 2.89                                  | Weather—hot; more rain wanted. Transplanting of <i>amra</i> paddy still going on. Prospects of sugarcane and <i>joom</i> crops fair. Public health good.   |
| <b>BEHAL.</b>                          |                                 |                                       |  |
| PATNA DIV.                             | 26 Patna, Sept. 10, '87         | 0.87                                  | Weather—hot. Transplantation of paddy still going on in some places.   |
|  | „ Barh „ „                      | 4.70                                  | Reaping of <i>bhadoi</i> crops almost finished; outturn satisfactory. Cholera still reported from Behar and Dinapore sub-divisions, but is decreasing.   |
|  | „ Behar „ „                     | 3.31                                  |  |
|  | 27 Gya „ 10 „                   | 1.34                                  | Weather—very hot. <i>Bhadoi</i> being harvested. Paddy suffering for want of rain. Cholera and fever still prevalent.  |
|  | 28 Shahabad „ 10 „              | 1.09                                  | Weather—bright and close. Transplanting of paddy progressing rapidly, but more rain wanted. <i>Bhadoi</i> crops being harvested. Prospects continue good. Public health generally good. Cholera much abated, but not completely disappeared. Prices stationary.  |
|  | „ Buxar „ „                     | 1.91                                  |  |
|  | „ Sasseram „ „                  | 0.65                                  |  |
|  | „ Blambah „ „                   | 1.45                                  |  |
|  | 29 Darbhanga „ 10 „             | 1.63                                  | Weather—clear. Prospects of <i>bhadoi</i> favourable. Harvesting of <i>makai</i> , <i>marua</i> and <i>aus</i> in progress. Rice transplantation nearly over. Price of common rice stationary. Public health generally good.   |
|  | „ „ „                           |                                       |  |
| BAGULPORE DIV.                         | 30 Mozuffernugur „ 10 „         | 2.88                                  | Weather—first part of the week rainy, latterly very hot and rainless. Crops very promising. <i>Bhadoi</i> being harvested. Some cholera still reported.  |
|  | „ Hajipur „ „                   | 2.31                                  |  |
|  | „ Sitamarhi „ „                 | 4.67                                  |  |
|  | 31 Saran „ 10 „                 | 1.85                                  | Weather—close and sultry. Prospects of crops continue good. Cholera fast abating. Inundation subsiding.  |
|  | „ Sewan „ „                     | 3.93                                  |  |
|  | „ Gopalgunge „ „                | 8.24                                  |  |
|  | 32 Champaran „ 10 „             | 3.11                                  | Weather—very hot and sultry with bright sunshine for the last two days. <i>Bhadoi</i> crops continue to be hopeful. Prospects of <i>aghani</i> promising. Prices stationary. Public health not very good.  |
|  | „ „ „                           |                                       |  |
|  | 33 Monghyr, Sept. 10, '87       | 3.48                                  | Weather—bright and very close. State and prospects of standing crops continue favourable. <i>Bhadoi</i> crops nearly harvested. A little cholera still lingers in the Beguserai sub-division; otherwise public health good. Ganges in flood.   |
|  | „ Beguserai „ „                 | 5.52                                  |  |
| BAGULPORE DIV.                         | „ Jamui „ „                     | 3.19                                  |  |
|  | 34 Bhagulpur „ 10 „             | 3.29                                  | Heavy rain early in week followed by sultry bright weather. Transplanting finished and late rice promising. Rainfall sufficient for the present, but more will soon be wanted. <i>Bhadoi</i> harvest with fair outturn in north and south continues. Cholera abating.  |
|  | „ Mudeepoorah „ „               | 7.66                                  |  |
|  | „ Soopool „ „                   | 1.46                                  |  |
|  | 35 Purneah „ „                  | .....                                 | Report not received.   |
|  | 36 Maldah „ 10 „                | 10.32                                 | Heavy rain on 3rd, 4th and 5th; since then bright sun and excessive heat. Harvesting of <i>bhadoi</i> crops going on with good outturn. Transplanted winter paddy doing well. Common rice selling at 21 seers per rupee. Fever rather prevalent.   |
|  | „ Chanchal „ „                  | 3.71                                  |  |
|  | „ Silgunge „ „                  | 5.59                                  |  |
|  | „ Chajole „ „                   | 5.40                                  |  |
|  | 37 Sonchal Perghe „ 10 „        | 2.07                                  | Weather—rather hot. Rainfall insufficient. More rain wanted to keep the rice fields moist. Transplanting nearly over. Outturn of <i>bhadoi</i> crop fair. Fever in Rajmehal; otherwise public health fairly good.  |
| ORISSA.                                | „ Dooighur „ „                  | 2.00                                  |  |
|  | „ Godda „ „                     | 1.60                                  |  |
|  | „ Jantara „ „                   | 3.09                                  |  |
|  | „ Pakour „ „                    | 7.07                                  |  |
|  | „ Rajmehal „ „                  | 2.45                                  |  |
|  | 38 Cuttack, Sept. 9, '87        | 0.43                                  | Weather—fair and hot. <i>Beali</i> rice is being reaped with moderate outturn. <i>Sarad</i> rice plants growing well, but want rain urgently. In some places want of rain very keenly felt. Price of rice almost unchanged. Cholera still continues in many places. Cattle-disease reported from the interior. |
|  | 39 Pooree „ „                   | .....                                 | Report not received.   |
|  | 40 Balasore „ 9 „               | 1.07                                  | Weather—cloudy, but hotter than in previous week. <i>Beali</i> paddy ripening. Weeding of <i>sarad</i> crop advancing. Prospects generally good except in parts of Chandbally and Baliapal thanas, where rain is much wanted. A few cases of cholera reported; public health otherwise good.                   |
|  | „ „ „                           |                                       |  |
| <b>CHOTA NAGPORE.</b>                  |                                 |                                       |  |
| <i>South-West Frontier Agency.</i>     |                                 |                                       |  |
| CHOTA NAGPORE.                         | 41 Hazaribagh, Sept. 9, '87     | 3.18                                  | Weather—bright; occasionally cloudy. Rice and other crops doing well, except in places where rain is much wanted. General health fair, but cases of cholera continue to be reported from several thanas.   |
|  | 42 Lohardugga „ 10 „            | 1.69                                  | Weather—hot. More rain wanted. Early paddy is being vigorously reaped. Prospects of winter crop fair. Prices as before. Cholera still prevails; public health otherwise good.  |
|  | „ Palamow „ „                   | 8.93                                  |  |
|  | 43 Singbhoom „ 9 „              | 0.32                                  | Weather—hot. Rain much wanted in parts. Rain required for upland paddy. Indian-corn and <i>gora dhan</i> are being cut. General health good.   |
| CHOTA NAGPORE.                         | 44 Manbhoom „ 10 „              | 1.38                                  | Weather—hot and close. Rainfall in the Ga'indpore sub-division and in Bagmandi. More rain is badly wanted in Taghanathpur and Gourangdi and generally throughout the east and south of the district. Public health good.   |
|  | „ Govindpur „ „                 | 2.65                                  |  |

Published for general information.

CALCUTTA, REVENUE DEPT. ;  
The 18th September 1887.W. C. MACPHERSON,  
Offg. Secy. to the Govt. of Bengal.

**Results of the Meteorological Observations taken at the Alipore Observatory from  
4th to 10th September 1887.**

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 55° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                  |                 | Rain.   | WEATHER                              |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|------------------------|-----------------|---------|--------------------------------------|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction.  | Miles recorded. |         |                                      |
| 1887.  |       | °               |                                     | Inches.                              | °            | °        | °      | °        | °              | Inches          | °          | %         |                        |                 | Inches. |                                      |
| Sept.  | 4th   | 148.6           | 2.6                                 | 29.694                               | 83.3         | 87.7     | 8.7    | 79.0     | 79.7           | 0.960           | 78.3       | 85        | S and SSW              | 149             | Nil     | Chiefly cloudy, o.                   |
| "      | 5th   | 148.5           | 3.2                                 | .728                                 | 83.3         | 88.1     | 9.7    | 78.4     | 80.1           | .983            | 78.7       | 86        | S and SW               | 59              | 0.06    | Chiefly cloudy, d, p.                |
| "      | 6th   | 153.6           | 9.0                                 | .779                                 | 84.2         | 88.9     | 10.9   | 78.0     | 79.0           | .963            | 78.1       | 83        | SW                     | 48              | Nil     | Partially cloudy.                    |
| "      | 7th   | 149.5           | 5.0                                 | .773                                 | 84.4         | 90.7     | 10.9   | 79.8     | 80.8           | 1.004           | 79.4       | 85        | SSW, WSW and variable. | 51              | 0.30    | Chiefly cloudy, o, e, d, t, p, d.    |
| "      | 8th   | 139.8           | 0.5                                 | .729                                 | 84.9         | 90.6     | 10.7   | 79.9     | 81.2           | 1.016           | 79.7       | 85        | WSW, N and NW by W.    | 58              | 0.02    | Cloudy, o, t, d, <, d.               |
| "      | 9th   | 152.7           | 3.3                                 | .638                                 | 85.9         | 91.3     | 10.3   | 81.0     | 81.9           | 1.036           | 80.3       | 83        | NW by W and variable.  | 70              | 0.01    | Chiefly cloudy, o, e, t, d, <, d, <. |
| "      | 10th  | 99.9            | Nil                                 | .526                                 | 79.4         | 85.5     | 8.1    | 77.4     | 77.2           | .908            | 76.3       | 91        | NNE, SE and variable.  | 53              | 1.03    | Cloudy, o, e, t, d, p, <.            |

|  |     |     |     |         |                  |
|--|-----|-----|-----|---------|------------------|
| The mean pressure of the seven days  | ... | ... | ... | Inches. | 29.694           |
| The average pressure of the corresponding period for 24 years, S. G.'s Office          | ... | ... | ... | ...     | 29.650           |
| The total number of hours of bright sunshine   | ... | ... | ... | Hours.  | 24.5             |
| The maximum possible number of hours of sunshine                                       | ... | ... | ... | ...     | 86.9             |
|  |     |     |     | °       |                  |
| The mean temperature of the seven days   | ... | ... | ... | ...     | 83.6             |
| The average temperature of the corresponding period for 24 years, S. G.'s Office       | ... | ... | ... | ...     | 83.2             |
| The extreme variation of temperature   | ... | ... | ... | ...     | 13.9             |
| The maximum temperature  | ... | ... | ... | ...     | 91.3             |
|  |     |     |     | Miles.  | 11               |
| The highest velocity of the wind in one hour   | ... | ... | ... | ...     | lbs.             |
|  |     |     |     | ...     | Not measureable. |
|  |     |     |     | %.      |                  |
| The mean relative humidity   | ... | ... | ... | ...     | 85               |
| The average relative humidity of the corresponding period for 24 years, S. G.'s Office | ... | ... | ... | ...     | 86               |
|  |     |     |     | Inches. |                  |
| The total fall of rain from 4th to 10th September 1887                                 | ... | ... | ... | ...     | 1.42             |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | ...     | 3.37             |
| The total fall from 1st January to 10th September 1887                                 | ... | ... | ... | ...     | 47.52            |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | ...     | 52.56            |

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h., 10h., 16h. and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloom, d drizzling rain, t thunder, p passing temporary showers, Δ dew, = fog, < lightning.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA ;  
Calcutta, the 12th September 1887.

## Meteorological Report of the Province of

| METEOROLOGICAL DIVISION. | DISTRICT.                                     | Representative stations. | STATION OBSERVATIONS.                         |  |                           |                            |                             |                   |                  |                                 |                                 |                         |                             |                          |                             |                            |                                     |       |
|--------------------------|---|--------------------------|---|--|---------------------------|----------------------------|-----------------------------|-------------------|------------------|---------------------------------|---------------------------------|-------------------------|-----------------------------|--------------------------|-----------------------------|----------------------------|-------------------------------------|-------|
|                          |   |                          | AIR PRESSURE.                                 |  |                           |                            |                             | TEMPERATURE.      |                  |                                 |                                 |                         | HUMIDITY.                   |                          | CLOUD.                      |                            | Rainfall.                           |       |
|                          |   |                          | Highest, 10 A.M., barometer reading of month. | Lowest, 10 A.M., barometer reading of month. | Mean, 10 A.M., for month. | Mean reduced to sea-level. | Variation from normal mean. | Highest of month. | Lowest of month. | Mean daily maximum temperature. | Mean daily minimum temperature. | Mean daily temperature. | Variation from normal mean. | Mean, 10 A.M., humidity. | Variation from normal mean. | Mean cloud amount, 10 A.M. | Variation from normal mean, 10 A.M. |       |
|                          |   |                          |   |  |                           |                            |                             |                   |                  |                                 |                                 |                         |                             |                          |                             |                            |                                     |       |
| OMAHA.                   | Pooree ...                                    | Gopalpore ...            | 29°730  | 29°518                                       | 29°614                    | 29°604                     | +014                        | 90°2              | 77°8             | 87°0                            | 80°2                            | 88°0                    | +0°3                        | 79                       | —                           | 5°7                        | —                                   | 12°30 |
|                          | False Point ...                               | False Point ...          | 29°774  | 29°502                                       | 29°637                    | 29°705                     | +028                        | 91°5              | 74°6             | 87°2                            | 77°8                            | 82°5                    | —0°2                        | 82                       | —3                          | 6°0                        | —0°7                                | 10°80 |
|                          | Cuttack ...                                   | Cuttack ...              | 29°686  | 29°505                                       | 29°614                    | 29°604                     | +020                        | 95°4              | 74°3             | 90°0                            | 78°1                            | 84°0                    | +0°1                        | 71                       | —10                         | 7°2                        | +0°2                                | 9°28  |
|                          | Balasore ...                                  | Balasore ...             | 29°730  | 29°520                                       | 29°630                    | 29°638                     | +031                        | 90°4              | 71°8             | 87°0                            | 77°4                            | 82°7                    | +0°7                        | 70                       | —                           | 5°9                        | —                                   | 10°26 |
| SOUTH-WEST BENGAL.       | South-West Midnapore and South 24-Pergunnahs. | Saugor Island ...        | 29°745  | 29°551                                       | 29°677                    | 29°703                     | +029                        | 91°7              | 75°0             | 88°1                            | 79°7                            | 88°9                    | +0°6                        | 84                       | —3                          | 8°2                        | +0°8                                | 12°84 |
|                          | Midnapore ...                                 | Midnapore ...            | 29°669  | 29°426                                       | 29°541                    | 29°711                     | +041                        | 91°3              | 71°8             | 89°2                            | 77°5                            | 83°4                    | +0°4                        | 77                       | —                           | 4°6                        | —                                   | 10°10 |
|                          | 24-Pergunnahs, Howrah, and Hooghly.           | Calcutta ...             | 29°780  | 29°519                                       | 29°670                    | 29°682                     | +051                        | 91°0              | 75°7             | 87°6                            | 78°1                            | 82°8                    | +0°1                        | 80                       | —9                          | 8°1                        | +0°1                                | 11°23 |
|                          | Burdwan ...                                   | Burdwan ...              | 29°706  | 29°432                                       | 29°564                    | 29°604                     | +031                        | 91°1              | 75°9             | 89°8                            | 78°7                            | 84°3                    | +0°3                        | 74                       | —10                         | 8°4                        | +0°3                                | 11°53 |
|                          | Bankoora ...                                  | Bankoora ...             | 29°473  | 29°236                                       | 29°370                    | —                          | —                           | 95°1              | 71°1             | 88°5                            | 77°2                            | 82°9                    | —                           | 78                       | —                           | 6°5                        | —                                   | 15°81 |
|                          | West Burdwan and Beerbhoom.                   | Ranigunj ...             | 29°460  | 29°210                                       | 29°340                    | 29°557                     | +041                        | 91°5              | 75°9             | 88°5                            | 77°4                            | 83°0                    | —0°3                        | 81                       | —                           | 7°6                        | —                                   | 14°37 |
|                          | Moorshedabad ...                              | Berhampore ...           | 29°742  | 29°493                                       | 29°631                    | 29°688                     | +028                        | 92°2              | 75°3             | 88°3                            | 78°6                            | 83°5                    | —0°7                        | 83                       | —3                          | 9°0                        | +0°3                                | 10°44 |
|                          | Nuddea ...                                    | Krishnagar ...           | 29°743  | 29°491                                       | 29°637                    | 29°702                     | —                           | 92°8              | 75°8             | 89°5                            | 77°6                            | 83°6                    | —                           | 76                       | —                           | 7°7                        | —                                   | 4°01  |
|                          | Jessore and Khoolna ...                       | Jessore ...              | 29°782  | 29°520                                       | 29°677                    | 29°711                     | +035                        | 92°8              | 75°4             | 89°6                            | 78°5                            | 84°1                    | +0°5                        | 82                       | —5                          | 8°2                        | +0°3                                | 7°27  |
|                          | Chittagong ...                                | Chittagong ...           | 29°759  | 29°530                                       | 29°676                    | 29°765                     | +036                        | 92°7              | 71°0             | 85°7                            | 76°1                            | 80°9                    | —0°2                        | 80                       | —7                          | 8°3                        | +1°2                                | 15°94 |
| EAST BENGAL.             | Chittagong Hill Tracts                        | Demagri ...              | Observations not received.                    |  |                           |                            |                             |                   |                  |                                 |                                 |                         |                             |                          |                             |                            |                                     |       |
|                          | Backergunj ...                                | Barrisal ...             | 29°806  | 29°548                                       | 29°702                    | 29°714                     | +040                        | 93°8              | 75°4             | 87°5                            | 78°2                            | 82°9                    | +2°0                        | 85                       | —                           | 8°1                        | —                                   | 7°53  |
|                          | Noakholly ...                                 | Noakholly ...            | 29°789  | 29°547                                       | 29°660                    | 29°734                     | +033                        | 91°0              | 73°3             | 86°1                            | 77°1                            | 81°6                    | +0°6                        | 85                       | —                           | 4°3                        | —                                   | 22°55 |
|                          | Furreedpore ...                               | Furreedpore ...          | 29°813  | 29°536                                       | 29°636                    | 29°724                     | +041                        | 91°5              | 74°9             | 87°1                            | 78°1                            | 82°6                    | +0°1                        | 82                       | —                           | 3°4                        | —                                   | 7°08  |
|                          | Dacca ...                                     | Dacca ...                | 29°807  | 29°503                                       | 29°638                    | 29°721                     | +041                        | 92°6              | 74°1             | 88°3                            | 78°9                            | 83°6                    | +0°6                        | 81                       | —6                          | 6°9                        | —0°9                                | 11°24 |
|                          | Tipperah ...                                  | Commillah ...            | 29°790  | 29°550                                       | 29°700                    | 29°736                     | +038                        | 94°3              | 74°8             | 88°1                            | 76°1                            | 82°2                    | +1°1                        | 80                       | —                           | 5°5                        | —                                   | 12°04 |
|                          | Mymensingh ...                                | Mymensingh ...           | 29°772  | 29°507                                       | 29°632                    | 29°740                     | +054                        | 92°3              | 76°1             | 87°8                            | 77°8                            | 82°8                    | +0°4                        | 82                       | —                           | 7°5                        | —                                   | 9°31  |
|                          | Bogra ...                                     | Bogra ...                | 29°751  | 29°497                                       | 29°620                    | 29°683                     | —                           | 92°8              | 75°8             | 88°1                            | 77°9                            | 83°0                    | —                           | 85                       | —                           | 9°2                        | —                                   | 5°08  |
|                          | Pubna ...                                     | Serajgunj ...            | 29°772  | 29°533                                       | 29°667                    | 29°714                     | +034                        | 93°1              | 74°7             | 88°3                            | 78°6                            | 83°5                    | +0°7                        | 83                       | —                           | 6°9                        | —                                   | 5°60  |
|                          | Rajahahye ...                                 | Rampore Beaulah.         | 29°729  | 29°476                                       | 29°623                    | 29°653                     | +043                        | 92°3              | 60°7             | 88°7                            | 74°4                            | 81°6                    | —1°0                        | 80                       | —                           | 4°5                        | —                                   | 8°53  |
| NORTH BENGAL.            | Maldah ...                                    | Maldah ...               | 29°637  | 29°403                                       | 29°530                    | —                          | —                           | 93°9              | 76°7             | 89°3                            | 78°6                            | 83°9                    | —                           | 80                       | —                           | 5°2                        | —                                   | 5°01  |
|                          | Dinagopore ...                                | Dinagopore ...           | 29°680  | 29°475                                       | 29°583                    | 29°703                     | +060                        | 93°6              | 74°6             | 89°4                            | 78°1                            | 83°2                    | 0                           | 83                       | —                           | 5°9                        | —                                   | 20°09 |
|                          | Rungpore ...                                  | Rungpore ...             | 29°607  | 29°481                                       | 29°589                    | 29°714                     | +034                        | 94°3              | 74°7             | 88°8                            | 78°0                            | 83°4                    | +0°4                        | 83                       | —                           | 4°9                        | —                                   | 18°43 |
|                          | Julpigoree and Cooch Behar.                   | Julpigoree ...           | 29°547  | 29°334                                       | 29°444                    | 29°732                     | +067                        | 92°5              | 73°3             | 87°0                            | 75°6                            | 81°3                    | —0°0                        | 80                       | —                           | 7°8                        | —                                   | 23°85 |
|                          | Darjeeling Hill Tracts...                     | Darjeeling ...           | 28°611  | 28°373                                       | 28°944                    | —                          | +022                        | 71°1              | 54°1             | 64°5                            | 56°5                            | 60°5                    | —0°0                        | 96                       | +3                          | 9°2                        | +0°6                                | 28°90 |
|                          | Purneah and North Bhagulpore.                 | Purneah ...              | 29°097  | 29°480                                       | 29°587                    | 29°713                     | +002                        | 92°2              | 73°6             | 87°2                            | 77°3                            | 82°3                    | —2°0                        | 86                       | +1                          | 6°2                        | —1°0                                | 11°33 |
|                          | Mosufferpore ...                              | Mosufferpore ...         | Observations suspended.                       |  |                           |                            |                             |                   |                  |                                 |                                 |                         |                             |                          |                             |                            |                                     |       |
|                          | Durbhunga ...                                 | Durbhunga ...            | 29°630  | 29°410                                       | 29°519                    | 29°687                     | +053                        | 93°4              | 75°5             | 87°8                            | 79°0                            | 83°4                    | —0°5                        | 85                       | +1                          | 7°4                        | +1°2                                | 15°29 |
|                          | Chumparun ...                                 | Motihari ...             | 29°548  | 29°336                                       | 29°441                    | 29°608                     | +034                        | 94°7              | 73°8             | 88°5                            | 77°5                            | 83°1                    | —0°4                        | 79                       | —                           | 8°4                        | —                                   | 13°25 |
|                          | Saran ...                                     | Chupra ...               | 29°558  | 29°368                                       | 29°467                    | 29°602                     | +022                        | 94°5              | 73°6             | 88°6                            | 78°5                            | 83°6                    | —0°5                        | 83                       | —                           | 7°1                        | —                                   | 6°08  |
| SOUTH BENGAL.            | Shahabad ...                                  | Dehree* ...              | 29°483  | 29°230                                       | 29°351                    | 29°635                     | +043                        | 90°0              | 73°0             | 85°8                            | 78°2                            | 82°0                    | —0°3                        | 79                       | —                           | 5°1                        | —                                   | 7°09  |
|                          | Shahabad ...                                  | Ruxar ...                | 29°513  | 29°321                                       | 29°416                    | 29°637                     | —017                        | 93°9              | 73°8             | 88°6                            | 78°6                            | 83°6                    | —0°1                        | 78                       | —                           | 7°2                        | —                                   | 8°54  |
|                          | Arrah ...                                     | Arrah ...                | 29°544  | 29°342                                       | 29°448                    | 29°645                     | +014                        | 91°4              | 74°1             | 88°8                            | 78°4                            | 83°8                    | —1°3                        | 83                       | —                           | 7°4                        | —                                   | 6°19  |
|                          | Gya ...                                       | Gya ...                  | 29°559  | 29°188                                       | 29°273                    | 29°649                     | —008                        | 93°9              | 73°8             | 89°1                            | 78°1                            | 83°8                    | —0°7                        | 72                       | —9                          | 7°2                        | —1°3                                | 11°03 |
|                          | Patna ...                                     | Bankipore ...            | 29°508  | 29°380                                       | 29°493                    | 29°676                     | +024                        | 92°9              | 73°7             | 88°2                            | 79°3                            | 83°8                    | —1°0                        | 80                       | +6                          | 9°6                        | +1°7                                | 5°71  |
|                          | South Bhagulpore and Monghyr.                 | Bhagulpore ...           | 29°613  | 29°385                                       | 29°504                    | 29°667                     | +039                        | 92°9              | 74°0             | 87°8                            | 78°2                            | 83°0                    | —0°9                        | 81                       | —                           | 4°3                        | —                                   | 6°54  |
|                          | Sonthal Pergunnahs ...                        | Naya Dookma...           | 29°280  | 29°051                                       | 29°173                    | —                          | +036                        | 92°6              | 73°3             | 88°0                            | 77°0                            | 82°5                    | +0°3                        | 80                       | —                           | 5°8                        | —                                   | 8°37  |
|                          | Hazaribagh ...                                | Hazaribagh ...           | 27°780  | 27°600                                       | 27°685                    | 29°681                     | +028                        | 87°5              | 70°7             | 83°3                            | 72°3                            | 77°9                    | 0°5                         | 12                       | —3                          | 9°2                        | +0°7                                | 13°06 |
|                          | Loharongka and Manbhoom.                      | Manchee ...              | 27°653  | 27°408                                       | 27°557                    | 29°671                     | +017                        | 86°5              | 60°4             | 82°8                            | 71°2                            | 77°0                    | 0                           | 84                       | —                           | 9°0                        | —                                   | 12°76 |
|                          | Singbhoom ...                                 | Chalbassa ...            | 29°008  | 28°805                                       | 28°912                    | —                          | +034                        | 92°2              | 74°2             | 88°7                            | 76°0                            | 82°4                    | +0°3                        | 77                       | —                           | 7°7                        | —                                   | 14°04 |
| ASSAM.                   | Sibsagar ...                                  | Sibsagar ...             | 29°521  | 29°321                                       | 29°436                    | 29°760                     | +032                        | 94°1              | 74°5             | 88°1                            | 77°2                            | 83°2                    | —0°0                        | 80                       | +2                          | 9°3                        | +0°5                                | 14°16 |
|                          | Dhubri ...                                    | Dhubri ...               | 29°708  | 29°493                                       | 29°613                    | 29°720                     | +035                        | 90°7              | 75°3             | 86°0                            | 77°5                            | 82°1                    | —0°0                        | 85                       | —2                          | 7°3                        | —0°1                                | 11°05 |
|                          | Silchar ...                                   | Silchar ...              | 29°785  | 29°557                                       | 29°669                    | 29°785                     | +018                        | 90°1              | 74°3             | 90°0                            | 76°1                            | 83°2                    | +0°3                        | 83                       | —3                          | 8°9                        | +1°3                                | 17°41 |

\* Mean for 30 days.

† Mean for 27 days.

l for the month of August 1887.

| DISTRICT OBSERVATIONS. |              |                      |                       |                                   |                      |              |            |                            |                                   |                            | Representative stations.                      | DISTRICT.          | METEOROLOGICAL DIVISION. |
|------------------------|--------------|----------------------|-----------------------|-----------------------------------|----------------------|--------------|------------|----------------------------|-----------------------------------|----------------------------|---|--------------------|--------------------------|
| RAINFALL.              |              |                      |                       |                                   |                      |              |            |                            |                                   |                            |   |                    |                          |
| Of month.              |              |                      |                       |                                   | Since 15th May 1887. |              |            |                            |                                   |                            |   |                    |                          |
| Mean of district.      | Normal mean. | Variation from mean. | Number of rainy days. | Normal mean number of rainy days. | Mean of district.    | Normal mean. | Variation. | Mean number of rainy days. | Normal mean number of rainy days. |                            |   |                    |                          |
| 9'91                   | 11'85        | -1'94                | 19'3                  | 18'9                              | 27'79                | 34'43        | -8'64      | 48'1                       | 52'0                              | Gopalpore ...              | Poorce ...                                    | ORISSA.            |                          |
| 9'53                   | 10'06        | -1'12                | 19'5                  | 18'3                              | 34'17                | 34'36        | -0'09      | 51'1                       | 52'7                              | False Point ...            | Cuttack ...                                   |                    |                          |
| 8'04                   | 11'48        | -2'54                | 16'7                  | 18'2                              | 32'52                | 35'45        | -2'93      | 45'7                       | 52'6                              | Cuttack ...                | Balasore ...                                  |                    |                          |
| 11'01                  | 14'50        | -3'49                | 10'7                  | 20'3                              | 39'58                | 44'04        | -2'36      | 53'4                       | 58'7                              | Balasore ...               | South-West Midnapore and South 24-Pergunnahs. |                    |                          |
| 10'98                  | 14'15        | -3'27                | 15'3                  | 17'8                              | 41'20                | 38'01        | +3'19      | 50'0                       | 51'5                              | Saugor Island ...          | Midnapore ...                                 | SOUTH-WEST BENGAL. |                          |
| 8'02                   | 13'21        | -4'59                | 16'5                  | 21'0                              | 31'20                | 38'29        | -7'09      | 55'2                       | 64'3                              | Midnapore ...              | 24-Pergunnahs, Howrah, and Hooghly.           |                    |                          |
| 8'50                   | 12'51        | -8'81                | 14'7                  | 18'7                              | 36'31                | 34'06        | +2'25      | 52'7                       | 54'3                              | Calcutta ...               | Burdwan ...                                   |                    |                          |
| 10'30                  | 14'00        | +2'29                | 17'0                  | 20'2                              | 42'87                | 38'74        | +4'13      | 55'3                       | 58'7                              | Burdwan ...                | Bankoora ...                                  |                    |                          |
| 10'00                  | 13'27        | -2'07                | 15'3                  | 20'6                              | 37'63                | 38'14        | -0'51      | 58'5                       | 59'9                              | Bankoora ...               | West Burdwan and Beerbhoom.                   | EAST BENGAL.       |                          |
| 10'06                  | 11'96        | -1'30                | 16'9                  | 18'8                              | 44'54                | 34'31        | +10'13     | 61'6                       | 55'5                              | Ranigunj ...               | Moorsheebad ...                               |                    |                          |
| 8'22                   | 12'24        | -4'02                | 15'6                  | 18'3                              | 29'57                | 35'86        | -6'29      | 54'4                       | 59'1                              | Berhampore ...             | Nuddea ...                                    |                    |                          |
| 7'07                   | 12'29        | -4'23                | 16'1                  | 19'1                              | 27'04                | 39'40        | -11'46     | 55'6                       | 61'0                              | Krishnagar ...             | Jessore and Khoolna ...                       |                    |                          |
| 22'79                  | 23'40        | -0'70                | 21'0                  | 23'6                              | 73'58                | 60'33        | +16'30     | 75'0                       | 76'6                              | Jessore ...                | Chittagong ...                                | NORTH BENGAL.      |                          |
| 12'47                  | 16'50        | -4'09                | 22'5                  | 24'9                              | 44'03                | 58'46        | -14'33     | 77'0                       | 77'7                              | Chittagong ...             | Chittagong Hill Tracts ...                    |                    |                          |
| 10'44                  | 16'00        | -5'56                | 17'0                  | 24'1                              | 39'24                | 57'97        | -18'73     | 64'8                       | 76'5                              | Chittagong Hill Tracts ... | Backergunj ...                                |                    |                          |
| 21'03                  | 24'88        | -2'95                | 21'5                  | 24'8                              | 54'52                | 82'09        | -27'57     | 65'5                       | 76'4                              | Barrisal ...               | Noakholy ...                                  |                    |                          |
| 7'59                   | 12'35        | -5'06                | 14'7                  | 19'8                              | 27'23                | 41'08        | -14'43     | 46'3                       | 64'0                              | Noakholy ...               | Furreedpore ...                               | NORTH BENGAL.      |                          |
| 7'95                   | 13'01        | -5'06                | 18'3                  | 21'7                              | 30'44                | 44'53        | -14'09     | 63'9                       | 67'1                              | Furreedpore ...            | Dacca ...                                     |                    |                          |
| 12'05                  | 16'52        | -4'47                | 17'0                  | 22'2                              | 33'60                | 52'45        | -18'85     | 57'6                       | 70'0                              | Dacca ...                  | Tipperah ...                                  |                    |                          |
| 9'33                   | 14'23        | -4'90                | 15'2                  | 20'2                              | 45'04                | 48'12        | -2'18      | 54'2                       | 64'0                              | Commillah ...              | Mymensingh ...                                |                    |                          |
| 7'05                   | 12'00        | -4'07                | 13'0                  | 18'2                              | 44'25                | 41'53        | +2'72      | 52'6                       | 57'0                              | Mymensingh ...             | Bogra ...                                     | NORTH BENGAL.      |                          |
| 6'45                   | 12'34        | -5'89                | 14'0                  | 17'8                              | 30'78                | 37'08        | -7'20      | 56'5                       | 57'5                              | Bogra ...                  | Pabna ...                                     |                    |                          |
| 10'75                  | 12'19        | -1'44                | 12'0                  | 19'0                              | 35'05                | 37'29        | -1'64      | 45'5                       | 55'2                              | Surajgunj ...              | Rajshahye ...                                 |                    |                          |
| 6'00                   | 12'51        | -6'51                | 16'5                  | 20'7                              | 34'94                | 30'08        | +4'14      | 63'5                       | 61'5                              | Rampore Beaulah ...        | Maldah ...                                    |                    |                          |
| 12'75                  | 11'45        | +1'30                | 18'8                  | 19'7                              | 55'02                | 40'36        | +14'66     | 59'6                       | 57'0                              | Maldah ...                 | Dinapore ...                                  | NORTH BENGAL.      |                          |
| 12'80                  | 12'24        | +0'56                | 17'3                  | 16'3                              | 65'18                | 54'10        | +11'08     | 58'3                       | 55'0                              | Dinapore ...               | Dinapore ...                                  |                    |                          |
| 27'98                  | 23'57        | +4'01                | 23'0                  | 26'5                              | 94'49                | 81'90        | +12'59     | 76'8                       | 72'0                              | Bankpore ...               | Bankpore ...                                  |                    |                          |
| 29'76                  | 28'09        | +1'07                | 26'5                  | 24'5                              | 94'75                | 94'09        | +0'06      | 84'6                       | 81'8                              | Jalpigoree ...             | Jalpigoree and Cooch Behar.                   |                    |                          |
| 15'86                  | 13'55        | +2'31                | 19'0                  | 17'8                              | 51'42                | 41'19        | +10'23     | 55'8                       | 50'9                              | Darjeeling ...             | Darjeeling Hill Tracts ...                    | NORTH BENGAL.      |                          |
| 12'01                  | 9'90         | +2'05                | 16'7                  | 15'5                              | 36'76                | 29'88        | +6'88      | 48'3                       | 40'7                              | Purneah ...                | Purneah and North Bhagulpore.                 |                    |                          |
| 14'17                  | 10'54        | +3'03                | 16'7                  | 15'4                              | 41'33                | 31'16        | +10'17     | 53'4                       | 41'0                              | Mozufferpore ...           | Mozufferpore ...                              |                    |                          |
| 9'02                   | 12'08        | -2'46                | 13'5                  | 14'4                              | 31'76                | 33'10        | -1'35      | 41'0                       | 39'4                              | Durbhunga ...              | Durbhunga ...                                 |                    |                          |
| 9'21                   | 10'31        | -1'10                | 13'0                  | 14'7                              | 29'11                | 30'29        | -2'18      | 42'3                       | 40'8                              | Motihari ...               | Thunparan ...                                 | NORTH BENGAL.      |                          |
| 10'75                  | 14'23        | -0'40                | 12'8                  | 15'6                              | 27'57                | 29'80        | -1'23      | 37'6                       | 44'1                              | Chupra ...                 | Saran ...                                     |                    |                          |
| 9'30                   | 11'80        | -2'50                | 14'0                  | 14'6                              | 29'30                | 30'90        | -1'60      | 42'3                       | 40'7                              | Dehree ...                 | Shahabad ...                                  |                    |                          |
| 6'85                   | 10'00        | -3'84                | 12'5                  | 15'0                              | 28'37                | 30'20        | -1'83      | 42'6                       | 43'0                              | Buxar ...                  | Arrah ...                                     |                    |                          |
| 9'02                   | 11'10        | -2'17                | 13'4                  | 10'7                              | 33'47                | 31'12        | +2'35      | 46'2                       | 47'8                              | Gya ...                    | Gya ...                                       | SOUTH BENGAL.      |                          |
| 10'76                  | 11'06        | -1'20                | 16'3                  | 18'0                              | 41'59                | 35'73        | +5'86      | 57'8                       | 54'5                              | Bankipore ...              | Patna ...                                     |                    |                          |
| 11'89                  | 13'32        | -1'43                | 15'8                  | 20'5                              | 36'42                | 30'42        | +0'20      | 51'8                       | 57'8                              | Bhagulpore ...             | South Bhagulpore and Monghyr.                 |                    |                          |
| 11'50                  | 13'10        | -1'00                | 20'4                  | 20'4                              | 35'78                | 34'92        | +0'86      | 50'0                       | 53'7                              | Naya Dookna ...            | South Bhagulpore and Monghyr.                 |                    |                          |
| 14'17                  | 13'81        | +0'36                | 20'0                  | 22'2                              | 43'15                | 38'68        | +4'47      | 57'0                       | 64'9                              | Hazaribagh ...             | Hazaribagh ...                                | SOUTH BENGAL.      |                          |
| .....                  | .....        | .....                | .....                 | .....                             | .....                | .....        | .....      | .....                      | .....                             | Ranchee ...                | Lohardugga and Manbhum.                       |                    |                          |
| .....                  | .....        | .....                | .....                 | .....                             | .....                | .....        | .....      | .....                      | .....                             | Chaibasa ...               | Sonchroom ...                                 |                    |                          |
| .....                  | .....        | .....                | .....                 | .....                             | .....                | .....        | .....      | .....                      | .....                             | Salsagar ...               | .....   |                    |                          |
| .....                  | .....        | .....                | .....                 | .....                             | .....                | .....        | .....      | .....                      | .....                             | Dhubri ...                 | .....   | SOUTH BENGAL.      |                          |
| .....                  | .....        | .....                | .....                 | .....                             | .....                | .....        | .....      | .....                      | .....                             | Shilchar...                | .....   |                    |                          |

Table of Rainfall recorded at Stations

| Meteorological division. | District.    | Station.                 | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12    | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|--------------------------|--------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|
| ORISSA                   | Poonoo       | Poonoo                   | 0.61 | ...  | ...  | ...  | ...  | ...  | 0.71 | ...  | 0.69 | ...  | ...  | 0.33  | 0.10 | ...  | ...  | 0.01 | 0.25 | 0.31 | 0.43 | ...  |
|                          |              | Khurda                   | 0.13 | 0.16 | 0.09 | 0.77 | 0.33 | 0.02 | 0.05 | 0.54 | 0.21 | 0.30 | 0.04 | 0.11  | ...  | ...  | 0.02 | 0.13 | 0.56 | 0.32 | 0.43 | 0.14 |
|                          |              | Banpur                   | 0.06 | ...  | ...  | 1.50 | 1.04 | 1.20 | 0.95 | 0.07 | 0.10 | 0.33 | ...  | ...   | ...  | ...  | ...  | 0.33 | 0.30 | 1.60 | 0.30 | 0.43 |
|                          |              | False Point              | 0.88 | ...  | 0.13 | ...  | ...  | 0.24 | ...  | 0.20 | 0.12 | 0.11 | 0.46 | 0.04  | ...  | ...  | ...  | ...  | 0.19 | 0.24 | 0.61 | 0.80 |
|                          |              | Gop                      | 0.00 | ...  | 0.10 | 0.09 | ...  | ...  | 0.10 | 0.40 | 0.09 | 0.04 | 0.30 | ...   | ...  | ...  | 2.50 | 0.10 | 0.20 | 0.30 | 0.30 | ...  |
|                          |              | Pipli                    | ...  | ...  | 1.50 | 0.00 | ...  | 2.70 | ...  | 0.08 | ...  | ...  | 0.20 | ...   | ...  | ...  | ...  | 0.01 | 0.20 | 0.50 | 0.80 | ...  |
|                          | Cuttack      | Jagatsingapore           | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |              | Banki                    | 0.11 | 0.03 | ...  | 0.08 | 1.75 | 1.15 | 1.23 | 0.47 | ...  | 0.14 | 0.02 | ...   | 0.13 | ...  | 0.17 | 0.04 | 0.46 | 0.60 | 0.60 | 0.20 |
|                          |              | Cuttack                  | 0.24 | 0.01 | 0.45 | ...  | 0.68 | 0.11 | 0.85 | 0.05 | 0.12 | ...  | ...  | ...   | 0.08 | 0.02 | 0.12 | 0.33 | 0.32 | 0.17 | 0.40 | 0.05 |
|                          |              | Kendrapara               | 0.92 | ...  | 0.30 | 0.03 | 0.01 | 0.02 | 1.32 | 0.18 | 1.11 | 0.11 | 0.34 | 0.04  | ...  | ...  | 0.46 | ...  | 0.13 | 0.30 | 0.06 | 0.34 |
|                          |              | Jajpore                  | 0.57 | 0.32 | ...  | ...  | ...  | 0.44 | ...  | 0.70 | ...  | ...  | ...  | ...   | ...  | ...  | 0.46 | ...  | 0.13 | 0.30 | 0.06 | 0.34 |
| NORTH-WEST BENGAL        | Balasore     | Dharmasalla              | 0.30 | ...  | ...  | 0.16 | ...  | 0.05 | 0.04 | ...  | ...  | ...  | ...  | ...   | ...  | ...  | 0.05 | 0.20 | 0.10 | 0.20 | 0.31 | 0.01 |
|                          |              | Salipore                 | 0.60 | ...  | 0.50 | ...  | 0.20 | ...  | 1.00 | 0.10 | ...  | 1.50 | ...  | ...   | ...  | 0.05 | 0.20 | 0.10 | 0.20 | 0.31 | 0.01 | 0.32 |
|                          |              | Chandball                | 0.00 | 0.10 | ...  | ...  | ...  | 0.10 | ...  | 0.05 | 0.01 | 0.10 | ...  | ...   | ...  | ...  | 0.30 | 0.10 | 0.30 | 0.10 | ...  | ...  |
|                          |              | Bhuddruck                | 0.55 | 0.61 | ...  | ...  | ...  | 0.21 | ...  | 2.25 | ...  | ...  | 0.77 | ...   | 0.05 | ...  | 0.08 | ...  | ...  | 0.32 | 1.57 | 0.31 |
|                          |              | Sorah                    | 2.80 | 0.15 | ...  | 0.74 | ...  | ...  | ...  | 0.60 | 0.90 | ...  | ...  | ...   | ...  | ...  | 0.30 | ...  | ...  | ...  | 0.50 | 0.05 |
|                          | Midnapore    | Balasore                 | 0.70 | ...  | ...  | 0.85 | ...  | ...  | ...  | ...  | ...  | ...  | 0.25 | 0.20  | ...  | ...  | ...  | ...  | ...  | ...  | 0.14 | 0.14 |
|                          |              | Jellapore                | 0.28 | ...  | ...  | 0.12 | ...  | 0.70 | 0.20 | 0.28 | 0.50 | 0.13 | 0.10 | ...   | ...  | ...  | ...  | 0.42 | 0.30 | 0.30 | 0.50 | 0.50 |
|                          |              | Baripada                 | 1.50 | 0.16 | 0.03 | 0.04 | 0.11 | ...  | 0.20 | 0.70 | 0.10 | 0.03 | 0.40 | ...   | ...  | ...  | 0.11 | 0.73 | 1.58 | 0.13 | 0.13 | 0.27 |
|                          |              | Contai                   | 3.62 | 0.02 | ...  | ...  | ...  | 1.04 | 0.10 | ...  | 1.10 | 0.23 | 0.09 | ...   | ...  | ...  | ...  | 0.48 | ...  | ...  | 0.40 | 0.12 |
|                          |              | Saugor Island            | 1.92 | 0.12 | 0.25 | ...  | ...  | 0.27 | ...  | 2.75 | 0.11 | 0.03 | ...  | ...   | ...  | 0.40 | ...  | 0.60 | ...  | ...  | 0.40 | ...  |
| NORTH-WEST BENGAL        | 24-Pergunnah | Tumlook                  | 3.30 | ...  | ...  | ...  | ...  | ...  | 0.50 | 0.30 | 0.70 | 0.11 | 0.03 | ...   | ...  | ...  | ...  | 0.17 | ...  | ...  | ...  | ...  |
|                          |              | Midnapore                | 2.81 | 0.89 | 0.17 | ...  | 0.21 | ...  | 0.23 | 1.13 | 0.10 | 0.11 | 0.03 | 0.17  | ...  | ...  | ...  | 0.14 | 0.04 | ...  | ...  | 0.31 |
|                          |              | Ghatol                   | 0.74 | 1.31 | ...  | 0.22 | ...  | 0.20 | ...  | 2.03 | ...  | ...  | ...  | ...   | ...  | ...  | 0.80 | 0.14 | 0.42 | ...  | 0.41 | 0.76 |
|                          |              | Devgang                  | 3.20 | ...  | 0.21 | ...  | ...  | 0.26 | 1.12 | ...  | ...  | ...  | 0.07 | ...   | ...  | ...  | 0.80 | 0.14 | 0.42 | ...  | 0.41 | 0.76 |
|                          |              | Heria                    | 2.20 | 0.04 | ...  | ...  | ...  | 0.17 | ...  | ...  | 1.60 | 0.21 | 0.02 | ...   | ...  | ...  | ...  | 0.07 | 0.17 | ...  | 0.21 | ...  |
|                          | Howrah       | Bhagwanpore              | 1.51 | 0.08 | 0.07 | ...  | ...  | 0.42 | ...  | ...  | 0.57 | 0.29 | 0.15 | ...   | ...  | ...  | ...  | 0.40 | 0.11 | ...  | ...  | ...  |
|                          |              | Garbeta                  | 3.64 | 2.50 | 1.18 | ...  | 0.55 | 0.30 | ...  | 2.30 | 0.30 | 1.50 | 0.14 | 0.15  | ...  | ...  | ...  | 0.64 | ...  | 0.24 | ...  | ...  |
|                          |              | Diamond Harbour          | 4.05 | 0.04 | ...  | ...  | 0.10 | 0.01 | ...  | ...  | ...  | 0.42 | 0.09 | ...   | ...  | ...  | 0.04 | ...  | 0.40 | 0.03 | 0.53 | 0.29 |
|                          |              | Canwing Town             | 3.51 | 2.30 | ...  | ...  | 0.35 | 0.45 | ...  | ...  | 0.05 | ...  | ...  | ...   | 0.11 | ...  | 0.60 | ...  | 0.21 | 0.28 | ...  | 0.10 |
|                          |              | Alipore Jail             | 2.21 | ...  | 0.42 | ...  | ...  | 0.44 | 0.19 | 0.18 | 1.15 | 0.84 | 0.06 | 0.04  | ...  | ...  | ...  | 0.42 | 0.26 | 0.15 | 0.18 | ...  |
| NORTH-WEST BENGAL        | Hooghly      | Barrackpore              | 2.81 | 0.82 | ...  | 0.91 | ...  | ...  | 0.12 | ...  | 0.38 | ...  | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |              | Dum-Dum                  | 2.17 | ...  | 0.10 | ...  | ...  | 0.21 | 0.09 | 0.51 | ...  | ...  | ...  | ...   | ...  | ...  | 1.03 | 0.25 | ...  | 0.23 | 0.42 | 0.71 |
|                          |              | Baraset                  | 0.61 | 0.36 | ...  | ...  | ...  | 0.11 | 0.75 | ...  | 1.48 | 0.30 | 0.05 | 0.10  | ...  | ...  | 1.40 | ...  | ...  | 0.65 | 0.07 | 0.14 |
|                          |              | Buseerhat                | 0.86 | 0.87 | ...  | ...  | ...  | 1.37 | ...  | 1.03 | ...  | ...  | ...  | 0.19  | ...  | 0.16 | ...  | ...  | ...  | ...  | 0.18 | 0.07 |
|                          |              | Howrah                   | 2.10 | 0.13 | 0.05 | 0.02 | ...  | 0.20 | 0.01 | 2.11 | 0.76 | ...  | 0.09 | ...   | ...  | ...  | ...  | 0.02 | 0.20 | 0.33 | 0.37 | 0.13 |
|                          | Burdwan      | Mohesra-ka (Ouloubertah) | 2.09 | 0.21 | ...  | ...  | ...  | ...  | 0.08 | ...  | 0.41 | ...  | ...  | ...   | ...  | ...  | ...  | ...  | 0.23 | 0.23 | ...  | 0.11 |
|                          |              | Serampore                | 2.21 | 0.23 | ...  | 0.05 | ...  | ...  | 1.30 | 0.12 | ...  | 0.71 | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | 0.21 | 0.08 |
|                          |              | Hooghly                  | 2.10 | 0.12 | ...  | 0.44 | ...  | 0.07 | 0.05 | 0.44 | 0.12 | 0.15 | 0.11 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | 1.00 | ...  |
|                          |              | Johannabad               | 3.10 | 2.20 | ...  | ...  | ...  | 0.18 | ...  | 0.12 | 0.15 | 0.13 | ...  | ...   | ...  | ...  | ...  | 0.15 | ...  | ...  | ...  | ...  |
|                          |              | Guina                    | 0.50 | 0.40 | ...  | 0.51 | 0.04 | 0.63 | 0.06 | 0.20 | 0.21 | ...  | ...  | ...   | ...  | ...  | ...  | ...  | 0.37 | ...  | ...  | ...  |
| NORTH-WEST BENGAL        | Bankura      | Burdwan                  | 2.47 | 0.53 | 0.39 | 0.14 | 0.11 | 0.91 | 0.04 | 0.21 | 0.00 | 0.03 | 0.11 | 0.03  | ...  | ...  | ...  | ...  | ...  | 0.03 | ...  | ...  |
|                          |              | Ontwa                    | 2.37 | 0.25 | 1.48 | ...  | ...  | 1.34 | 0.15 | ...  | 0.31 | 0.32 | 0.14 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |              | Rane-kaung               | 3.07 | 2.26 | 0.16 | 0.05 | ...  | 2.80 | 0.27 | 0.79 | 0.04 | 1.18 | 0.13 | 0.08  | ...  | ...  | ...  | ...  | ...  | 0.05 | ...  | 0.66 |
|                          |              | Mankur                   | 3.35 | 1.89 | ...  | 0.13 | ...  | 0.84 | ...  | 0.75 | 0.16 | 2.00 | 0.17 | ...   | ...  | ...  | ...  | 0.27 | ...  | ...  | 0.35 | ...  |
|                          |              | Bankura                  | 5.02 | 4.50 | ...  | 0.05 | 0.09 | 1.08 | 0.18 | 0.31 | 0.32 | 1.00 | 0.74 | 0.30  | ...  | ...  | ...  | 0.05 | ...  | 0.25 | ...  | 0.02 |
|                          | Nuddea       | Bishenpore               | 3.50 | 6.40 | 0.07 | ...  | 0.40 | 1.22 | 0.13 | ...  | 2.28 | 1.84 | 0.77 | 0.16  | ...  | ...  | ...  | 0.04 | 0.41 | ...  | ...  | ...  |
|                          |              | Malihra                  | 5.09 | 2.67 | 0.05 | ...  | ...  | 1.26 | 0.47 | ...  | 2.12 | 0.19 | 0.04 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |              | Khatra                   | 3.54 | 3.16 | 0.30 | ...  | 2.02 | 0.62 | 0.43 | 0.09 | 0.32 | 0.20 | 0.15 | 0.11  | ...  | ...  | ...  | 0.23 | ...  | 0.00 | 0.25 | 0.21 |
|                          |              | Indus                    | 7.30 | 0.43 | 0.41 | ...  | 0.72 | 0.32 | ...  | 0.11 | ...  | 0.31 | 0.03 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |              | Kotaipore                | 6.75 | 0.60 | 0.40 | ...  | 2.04 | 0.40 | 0.03 | ...  | 0.30 | 0.44 | 0.18 | ...   | ...  | ...  | ...  | ...  | ...  | 0.40 | ...  | ...  |
| NORTH-WEST BENGAL        | Kherbhoom    | Anda                     | 3.20 | 4.10 | 1.05 | 0.15 | 0.05 | 0.40 | ...  | 2.50 | 0.30 | 0.44 | 0.18 | ...   | ...  | ...  | ...  | ...  | ...  | 0.40 | ...  | ...  |
|                          |              | Gangajalhati             | 6.69 | 3.60 | ...  | ...  | 2.72 | ...  | 2.23 | ...  | 1.32 | ...  | 0.74 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | 0.16 | ...  |
|                          |              | Raipore                  | 5.07 | 4.75 | ...  | ...  | 0.19 | 0.50 | 2.40 | ...  | 0.15 | ...  | 0.75 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | 0.37 | ...  |
|                          |              | Sonamukhi                | 3.04 | 1.60 | 0.34 | ...  | ...  | 0.36 | 0.15 | 0.44 | ...  | 2.00 | 0.05 | 0.15  | ...  | ...  | ...  | ...  | ...  | ...  | 0.07 | ...  |
|                          |              | Bh. Soory                | 1.56 | 1.24 | 0.12 | 0.09 | ...  | 1.35 | 0.12 | 0.13 | ...  | 1.31 | 0.14 | ...   | 0.03 | ...  | ...  | 0.08 | ...  | ...  | 0.11 | 0.11 |
|                          | Khoolna      | Hetanpore                | 4.05 | 0.79 | 0.49 | ...  | 2.02 | 0.28 | 0.08 | ...  | 0.23 | ...  | 0.23 | ...   | ...  | ...  | ...  | 0.27 | ...  | ...  | 0.24 | 1.21 |
|                          |              | Kampore Hant             | ...  | 0.55 | 0.39 | 0.22 | ...  | 0.94 | ...  | 0.40 | 1.92 | 0.31 | 0.09 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.29 |
|                          |              | Rolpur                   | 0.45 | 0.04 | 0.17 | ...  | 1.32 | 0.07 | 0.11 | 0.85 | 0.55 | ...  | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |              | Kanachhat                | 0.90 | 0.49 | ...  | 1.41 | ...  | 0.02 | 0.21 | 0.30 | 0.40 | 0.31 | 0.04 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | 0.20 | 0.08 |
|                          |              | Kishnachur               | 0.39 | 0.37 | 0.03 | ...  | ...  | 0.17 | ...  | 0.67 | 0.09 | 0.24 | ...  | 0.01  | ...  | ...  | ...  | ...  | ...  | ...  | 0.18 | 0.08 |
| NORTH-WEST BENGAL        | Jesore       | Choodanga                | 1.30 | 0.60 | ...  | ...  | 1.14 | ...  | 1.11 | 1.40 | 0.50 | ...  | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | 0.10 | 0.10 |
|                          |              | Meherpore                | 1.27 | 0.30 | 0.27 | 0.22 | 2.82 | 0.21 | 0.38 | ...  | 1.12 | 0.22 | ...  | 0.02  | ...  | 0.03 | ...  | ...  | 1.78 | ...  | 0.08 | 0.75 |
|                          |              | Kooshtia                 | 0.10 | 1.41 | ...  | 0.34 | 1.25 | 0.41 | 2.64 | ...  | 0.84 | 0.11 | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | 0.10 | 0.10 |
|                          |              | Satkhira                 | 0.13 | 1.00 | ...  | ...  | 0.40 | 3.80 | 0.12 | 0.09 | 1.05 | 0.30 | 0.06 | 0.03  | ...  | ...  | ...  | ...  | 0.01 | 1.00 | 0.05 | 1.40 |
|                          |              | Bagirhat                 | 1.50 | 0.48 | 0.25 | 0.24 | 0.15 | ...  | 0.50 | 2.20 | 0.09 | ...  | ...  | ...   | ...  | ...  | ...  | ...  | ...  | 0.13 | ...  | 0.07 |
|                          | Moorshedabad | Khoolna                  | 0.40 | 0.70 | 0.11 | ...  | 0.26 | 0.22 | ...  | 1.03 | 1.38 | 0.05 | ...  | ...   | ...  | ...  | ...  | 0.18 | ...  | 0.41 | 0.15 | 0.20 |
|                          |              | Narail                   | 0.27 | 1.04 | 0.37 | 0.08 | 0.16 | 2.31 | 0.08 | 0.07 | 0.00 | ...  | ...  | ...   | ...  | ...  | ...  | ...  | 0.05 | ...  | ...  | 0.51 |
|                          |              | Jessore                  | 0.10 | 0.57 | 0.02 | 0.18 | 0.16 | 1.18 | 0.33 | 0.01 | 1.11 | 0.30 | ...  | ...</ |      |      |      |      |      |      |      |      |

Bengal in August 1887.

|   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | 31   | Number of rainy days. | Average number of rainy days. | Total rainfall for the month. | Average rainfall for the month. | Heaviest rainfall during the month. | Total rainfall from 1st January 1887 up to 31st August 1887. | Average rainfall from 1st January up to 31st August 1887. | Station.                 | District.      | Meteorological division. |
|---|------|------|------|------|------|------|------|------|------|-----------------------|-------------------------------|-------------------------------|---------------------------------|-------------------------------------|--|---|--------------------------|----------------|--------------------------|
| 3 | 0.05 | 0.03 | ...  | 0.28 | 0.20 | 0.03 | ...  | 0.71 | 0.83 | 0.20                  | 18                            | 18.0                          | 8.07                            | 10.82                               | 0.93   | 19.20   | Poores                   | Poores         | ORTHA.                   |
| 3 | 0.13 | 0.40 | ...  | ...  | ...  | 0.40 | ...  | ...  | ...  | ...                   | 25                            | 21.6                          | 7.03                            | 12.43                               | 1.20   | 20.55   | Khurdah.                 | ...            | ...                      |
| 3 | 0.46 | 5.16 | 0.11 | ...  | ...  | 0.43 | ...  | ...  | ...  | ...                   | 16                            | 15.6                          | 12.80                           | 11.06                               | 8.50   | 31.80   | Banpur.                  | ...            | ...                      |
| 3 | 1.10 | 0.16 | ...  | ...  | ...  | 0.23 | ...  | 0.10 | 0.70 | ...                   | 18                            | 10.0                          | 10.82                           | 13.38                               | 5.16   | 40.94   | False Point.             | ...            | ...                      |
| 3 | 0.30 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...                   | 12                            | ?                             | 5.08                            | ?                                   | 1.10   | 18.35   | Gop.                     | ...            | ...                      |
| 3 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...                   | 12                            | ?                             | 12.05                           | ?                                   | 2.70   | ?   | Pipli.                   | ...            | ...                      |
| 3 | 2.80 | 0.04 | ...  | ...  | ...  | 0.55 | ...  | ...  | ...  | ...                   | 19                            | 23.0                          | 10.87                           | 8.10                                | 2.80   | 36.34   | Jagatsingapore.          | Outlack.       | ...                      |
| 3 | 2.32 | 0.07 | ...  | ...  | ...  | 0.02 | 1.48 | 0.04 | 1.04 | 0.30                  | 23                            | 22.7                          | 10.50                           | 11.13                               | 2.32   | 45.20   | Bunki.                   | ...            | ...                      |
| 3 | 1.55 | 0.84 | ...  | ...  | ...  | 0.11 | ...  | ...  | 0.13 | 0.13                  | 22                            | 16.4                          | 8.40                            | 12.54                               | 1.55   | 44.11   | Cuttack.                 | ...            | ...                      |
| 3 | 2.44 | 0.71 | ...  | ...  | ...  | 0.49 | ...  | ...  | 0.40 | 0.40                  | 14                            | 15.2                          | 8.61                            | 10.70                               | 2.44   | 44.68   | Kundrapara.              | ...            | ...                      |
| 3 | 1.10 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...                   | 10                            | ?                             | 4.81                            | ?                                   | 1.10   | 33.10   | Jinipore.                | ...            | ...                      |
| 3 | 2.12 | 0.05 | ...  | ...  | ...  | 0.15 | ...  | ...  | ...  | ...                   | 15                            | ?                             | 7.70                            | ?                                   | 2.12   | 37.02   | Dharmasalla.             | ...            | ...                      |
| 3 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...                   | ...                           | ...                           | ...                             | ...                                 | ...  | ...   | Salipore.                | ...            | ...                      |
| 3 | 1.40 | ...  | ...  | 0.25 | 0.10 | 0.30 | ...  | ...  | 0.25 | ...                   | 16                            | 16.3                          | 5.06                            | 11.06                               | 1.30   | 29.37   | Chandimali               | Balasore.      | ...                      |
| 3 | 2.00 | 0.45 | ...  | ...  | ...  | 0.21 | ...  | 1.21 | 0.19 | 1.00                  | 17                            | 16.3                          | 12.00                           | 10.82                               | 2.25   | 47.16   | Bhuddruck.               | ...            | ...                      |
| 3 | 1.20 | 0.20 | ...  | ...  | ...  | 0.40 | 0.20 | ...  | ...  | ...                   | 12                            | 17.8                          | 8.08                            | 11.03                               | 2.80   | 39.75   | Sorah.                   | ...            | ...                      |
| 3 | ...  | 0.45 | ...  | ...  | 1.75 | 0.24 | ...  | ...  | 0.30 | 0.28                  | 13                            | 20.3                          | 10.30                           | 12.43                               | 3.70   | 41.52   | Balasore.                | ...            | ...                      |
| 3 | 0.35 | 0.80 | 0.21 | ...  | ...  | 0.10 | 0.61 | 0.84 | 0.40 | ...                   | 20                            | 15.4                          | 7.70                            | 10.82                               | 0.84   | 31.34   | Jhalasore.               | ...            | ...                      |
| 3 | 0.14 | 0.38 | ...  | ...  | 0.52 | 0.54 | ...  | ...  | 0.40 | 0.10                  | 22                            | 23.3                          | 8.72                            | 11.03                               | 1.60   | 37.73   | Buripodah.               | ...            | ...                      |
| 3 | 0.58 | 0.30 | 0.27 | ...  | ...  | 1.10 | 0.80 | 0.05 | ...  | 0.10                  | 16                            | 16.9                          | 10.08                           | 13.63                               | 3.62   | 30.31   | Contal                   | Midnapore      | ...                      |
| 3 | 1.38 | 0.75 | 0.15 | ...  | ...  | 2.74 | 0.03 | ...  | 0.09 | 0.10                  | 18                            | 20.4                          | 11.97                           | 15.34                               | 2.75   | 44.89   | Saugor Island.           | ...            | ...                      |
| 3 | 1.30 | ...  | ...  | ...  | ...  | 1.00 | ...  | 0.00 | ...  | ...                   | 10                            | 15.4                          | ...                             | 13.80                               | 3.30   | 45.10   | Tumlook.                 | ...            | ...                      |
| 3 | 0.97 | ...  | 0.14 | ...  | ...  | 0.48 | 0.07 | ...  | 0.29 | 0.80                  | 18                            | 20.1                          | 11.13                           | 12.07                               | 2.81   | 46.01   | Alinaporo.               | ...            | ...                      |
| 3 | 0.08 | 0.03 | 0.45 | ...  | 0.70 | 1.02 | 0.15 | 0.05 | 0.04 | ...                   | 18                            | 19.0                          | 12.40                           | 15.40                               | 6.74   | 52.28   | Chital.                  | ...            | ...                      |
| 3 | ...  | ...  | 0.31 | ...  | ...  | 0.52 | 0.36 | 0.05 | ...  | ...                   | 16                            | ?                             | 9.85                            | ?                                   | 3.20   | 45.23   | Kakpali.                 | ...            | ...                      |
| 3 | 0.15 | ...  | 0.21 | ...  | ...  | 0.52 | 0.78 | 0.21 | 0.24 | ...                   | 16                            | ?                             | 7.83                            | ?                                   | 2.20   | 30.15   | Hera.                    | ...            | ...                      |
| 3 | 0.85 | ...  | ...  | ...  | ...  | 0.61 | 0.43 | 0.18 | 0.35 | 0.07                  | 15                            | ?                             | 6.50                            | ?                                   | 1.61   | 33.21   | Chagwanpore.             | ...            | ...                      |
| 3 | 0.04 | ...  | ...  | ...  | ...  | 0.05 | ...  | ...  | ...  | ...                   | 14                            | ?                             | 17.03                           | 13.10                               | 5.64   | 43.47   | Garbeta.                 | ...            | ...                      |
| 3 | ...  | ...  | 0.24 | ...  | ...  | 2.50 | 0.09 | ...  | ...  | 0.04                  | 16                            | 23.5                          | 10.09                           | 14.10                               | 4.05   | 45.44   | Diamond Harbour.         | 24-Pergunnahs. | ...                      |
| 3 | 0.07 | 0.44 | 0.13 | ...  | ...  | 1.21 | 0.17 | ...  | 0.20 | ...                   | 17                            | ?                             | 10.83                           | ?                                   | 3.51   | 41.50   | Canning Town             | ...            | ...                      |
| 3 | 0.65 | 0.74 | 0.18 | ...  | ...  | 1.51 | 0.04 | ...  | 0.62 | ...                   | 20                            | 23.1                          | 11.11                           | 13.40                               | 2.21   | 48.08   | Alipore Jail.            | ...            | ...                      |
| 3 | 0.38 | ...  | 0.55 | ...  | ...  | 0.09 | ...  | 0.35 | ...  | 0.65                  | 12                            | 20.6                          | 9.16                            | 12.07                               | 2.81   | 42.67   | Barrackpore.             | ...            | ...                      |
| 3 | 0.13 | ...  | 0.30 | ...  | ...  | 0.56 | ...  | ...  | ...  | ...                   | 14                            | 21.7                          | 8.40                            | 12.08                               | 2.17   | 41.47   | Dum-Dum.                 | ...            | ...                      |
| 3 | 0.14 | 0.06 | ...  | ...  | ...  | 0.60 | 0.33 | ...  | ...  | 0.02                  | 18                            | 20.9                          | 8.17                            | 11.94                               | 1.18   | 36.41   | Haram.                   | ...            | ...                      |
| 3 | 0.42 | 0.04 | 0.52 | ...  | ...  | 0.30 | ...  | ...  | ...  | ...                   | 12                            | 20.6                          | 11.71                           | 13.08                               | 4.37   | 45.03   | Buseerhat.               | ...            | ...                      |
| 3 | 0.53 | 0.28 | 0.03 | ...  | ...  | 0.80 | 0.16 | 0.07 | 0.13 | ...                   | 23                            | 24.0                          | 9.14                            | 12.57                               | 2.11   | 40.65   | Howrah                   | Howrah.        | ...                      |
| 3 | 0.20 | 0.23 | ...  | ...  | ...  | 1.24 | 0.18 | ...  | 0.05 | ...                   | 14                            | 23.3                          | 5.72                            | 13.67                               | 2.03   | 37.15   | Mohesruka (Colouheriah). | ...            | ...                      |
| 3 | 0.30 | ...  | 0.68 | ...  | ...  | 0.07 | 0.30 | ...  | 0.20 | ...                   | 14                            | 24.2                          | 7.02                            | 12.35                               | 2.21   | 38.12   | Serampore                | Hooghly.       | ...                      |
| 3 | 0.11 | 0.27 | 0.38 | ...  | ...  | 0.03 | 0.50 | ...  | 0.03 | ...                   | 17                            | 21.0                          | 5.95                            | 12.53                               | 2.10   | 42.37   | Hooghly.                 | ...            | ...                      |
| 3 | 0.09 | 0.12 | ...  | ...  | 0.05 | 2.17 | ...  | ...  | ...  | ...                   | 12                            | 20.8                          | 9.00                            | 10.03                               | 5.10   | 33.14   | Jalanabad.               | ...            | ...                      |
| 3 | 0.08 | ...  | 0.42 | ...  | ...  | 0.00 | ...  | ...  | ...  | ...                   | 12                            | 14.8                          | 5.08                            | 11.48                               | 0.98   | 34.97   | China                    | Burdwan.       | ...                      |
| 3 | 0.88 | 0.07 | 0.03 | ...  | 0.05 | 3.46 | 0.02 | ...  | 0.02 | ...                   | 21                            | 22.6                          | 11.40                           | 12.33                               | 3.46   | 41.50   | Burdwan.                 | ...            | ...                      |
| 3 | 0.09 | 0.10 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...                   | 11                            | 18.6                          | 8.04                            | 11.07                               | 2.37   | 56.35   | Cutwa.                   | ...            | ...                      |
| 3 | 0.80 | 1.39 | ...  | ...  | ...  | 0.88 | 0.12 | ...  | ...  | ...                   | 17                            | 20.6                          | 11.22                           | 13.46                               | 3.07   | 43.64   | Kanekunge.               | ...            | ...                      |
| 3 | 0.87 | ...  | ...  | 0.15 | ...  | 1.85 | ...  | ...  | ...  | ...                   | 13                            | ?                             | 12.77                           | ?                                   | 3.35   | 40.55   | Mankur.                  | ...            | ...                      |
| 3 | 1.16 | 0.09 | ...  | ...  | ...  | 0.04 | 0.27 | ...  | ...  | ...                   | 19                            | 22.4                          | 15.57                           | 12.23                               | 5.02   | 42.93   | Bankoora                 | Bankoora.      | ...                      |
| 3 | 1.83 | ...  | ...  | ...  | 0.03 | 0.21 | ...  | ...  | ...  | ...                   | 16                            | 18.6                          | 19.72                           | 14.77                               | 0.40   | 50.48   | Bishenpore.              | ...            | ...                      |
| 3 | 0.22 | 0.17 | ...  | ...  | ...  | 1.32 | ...  | ...  | ...  | ...                   | 12                            | 19.0                          | 14.05                           | 14.31                               | 5.80   | 48.30   | Malma.                   | ...            | ...                      |
| 3 | 1.07 | 0.50 | ...  | ...  | ...  | 0.48 | 0.12 | 0.10 | ...  | 0.06                  | 21                            | 20.9                          | 15.21                           | 13.68                               | 3.66   | 63.26   | Khatra.                  | ...            | ...                      |
| 3 | 0.38 | 0.21 | ...  | ...  | ...  | 0.84 | ...  | 0.10 | ...  | ...                   | 13                            | ?                             | 11.52                           | ?                                   | 7.30   | 33.82   | Indas.                   | ...            | ...                      |
| 3 | 0.19 | ...  | ...  | ...  | ...  | 2.25 | ...  | 0.04 | ...  | ...                   | 12                            | ?                             | 15.00                           | ?                                   | 0.75   | 37.97   | Katulpore.               | ...            | ...                      |
| 3 | 1.00 | 0.05 | ...  | ...  | ...  | 0.10 | ...  | ...  | ...  | ...                   | 15                            | ?                             | 15.87                           | ?                                   | 4.70   | 35.27   | Anna.                    | ...            | ...                      |
| 3 | 0.52 | 0.30 | ...  | ...  | ...  | 1.30 | ...  | ...  | ...  | ...                   | 10                            | ?                             | 19.68                           | ?                                   | 0.60   | 47.24   | Gangajalghati.           | ...            | ...                      |
| 3 | ...  | ...  | ...  | ...  | ...  | 0.60 | 0.15 | 0.12 | 0.25 | ...                   | 14                            | ?                             | 21.27                           | 16.40                               | 5.05   | 50.20   | Raipore.                 | ...            | ...                      |
| 3 | 0.58 | ...  | ...  | ...  | ...  | 0.30 | ...  | ...  | ...  | ...                   | 12                            | ?                             | 8.98                            | ?                                   | 3.04   | 33.61   | Sonamukhi.               | ...            | ...                      |
| 3 | 0.03 | 0.14 | ...  | ...  | ...  | 1.51 | 0.17 | ...  | ...  | ...                   | 17                            | 23.5                          | 9.63                            | 12.83                               | 1.50   | 45.27   | Bh. Soory                | Beerbhoom.     | ...                      |
| 3 | 0.25 | ...  | ...  | ...  | 0.75 | 1.00 | ...  | ...  | ...  | ...                   | 14                            | 17.8                          | 11.83                           | 12.34                               | 4.05   | 45.76   | Hutanpore.               | ...            | ...                      |
| 3 | 0.44 | 0.33 | ...  | ...  | ...  | 0.75 | 0.10 | ...  | ...  | ...                   | 13                            | 20.4                          | 11.97                           | 12.72                               | 1.92   | 45.97   | Kanpore Haut.            | ...            | ...                      |
| 3 | 0.12 | 0.14 | ...  | ...  | ...  | 1.51 | ...  | 0.13 | ...  | ...                   | 14                            | ?                             | 6.71                            | ?                                   | 1.51   | 30.17   | Bolpur.                  | ...            | ...                      |
| 3 | 0.50 | 0.18 | 0.59 | ...  | ...  | 0.98 | ...  | ...  | ...  | ...                   | 19                            | 19.8                          | 7.45                            | 12.01                               | 1.43   | 33.88   | Isinghat                 | Nuddes.        | ...                      |
| 3 | 0.47 | 0.09 | ...  | ...  | ...  | 0.05 | ...  | ...  | 0.05 | ...                   | 16                            | 19.4                          | 4.60                            | 10.72                               | 1.40   | 38.15   | Kishnaghat.              | ...            | ...                      |
| 3 | 1.02 | ...  | ...  | ...  | ...  | 0.07 | 0.20 | ...  | ...  | ...                   | 12                            | 17.8                          | 8.00                            | 12.00                               | 1.40   | 37.10   | Choudanga.               | ...            | ...                      |
| 3 | 0.48 | 0.43 | ...  | ...  | ...  | 0.35 | ...  | 0.06 | ...  | ...                   | 18                            | 17.5                          | 12.43                           | 12.31                               | 2.62   | 40.67   | Moh-rpore.               | ...            | ...                      |
| 3 | 0.26 | 0.23 | ...  | ...  | ...  | 0.54 | ...  | ...  | ...  | ...                   | 13                            | 19.0                          | 8.02                            | 11.06                               | 2.64   | 37.57   | Koomtea.                 | ...            | ...                      |
| 3 | 1.39 | 0.04 | ...  | ...  | ...  | ...  | ...  | 0.30 | 1.08 | ...                   | 18                            | 20.5                          | 12.20                           | 12.41                               | 3.80   | 43.30   | Satkira                  | Khoolna.       | ...                      |
| 3 | 0.92 | 0.08 | 0.15 | 0.53 | 0.17 | ...  | ...  | ...  | ...  | ...                   | 16                            | 17.3                          | 8.55                            | 12.47                               | 2.20   | 41.62   | Bakrhat.                 | ...            | ...                      |
| 3 | 1.05 | 0.22 | 0.03 | ...  | 0.11 | ...  | ...  | ...  | ...  | ...                   | 16                            | 19.9                          | 7.00                            | 12.10                               | 1.38   | 43.98   | Khoolna.                 | ...            | ...                      |
| 3 | 0.30 | ...  | 0.41 | ...  | ...  | 0.03 | ...  | ...  | 0.21 | ...                   | 16                            | 19.1                          | 0.14                            | 10.61                               | 2.31   | 25.18   | Narai.                   | Jessore.       | ...                      |
| 3 | 0.61 | 0.10 | 0.00 | 0.27 | ...  | ...  | ...  | 0.10 | ...  | ...                   | 19                            | 22.6                          | 7.27                            | 11.67                               | 1.18   | 37.09   | Jessore.                 | ...            | ...                      |
| 3 | 0.16 | 0.20 | 0.40 | ...  | ...  | ...  | ...  | ...  | 0.20 | ...                   | 15                            | 18.8                          | 7.01                            | 12.72                               | 2.06   | 32.82   | Jhenidah.                | ...            | ...                      |
| 3 | 0.03 | ...  | ...  | ...  | ...  | 0.13 | 0.13 | ...  | ...  | ...                   | 15                            | 19.8                          | 4.70                            | 9.88                                | 1.37   | 33.04   | Mugoorah.                | ...            | ...                      |
| 3 | 0.33 | 0.30 | ...  | ...  | ...  | 2.40 | ...  | 0.15 | ...  | ...                   | 14                            | 15.1                          | 10.24                           | 12.98                               | 2.40   | 37.22   | Bongoug.                 | ...            | ...                      |
| 3 | 0.30 | 0.76 | 0.07 | ...  | ...  | 0.11 | ...  | ...  | ...  | ...                   | 17                            | 18.2                          | 7.14                            | 11.53                               | 1.25   | 47.05   | Kandi                    | Moorshedabad   | ...                      |
| 3 | 0.39 | 0.07 | ...  | 0.12 | ...  | 1.51 | 0.07 | ...  | 0.02 | ...                   | 17                            | 19.5                          | 10.34                           | 10.79                               | 3.32   | 48.75   | Borhampore.              | ...            | ...                      |
| 3 | 0.24 | ...  | ...  | ...  | ...  | 0.33 | 1.54 | ...  | 0.41 | ...                   | 16                            | 19.1                          | 14.42                           | 12.67                               | 4.00   | 56.31   | Lalbah.                  | ...            | ...                      |
| 3 | 0.42 | ...  | ...  | ...  | ...  | 0.72 | 1.35 | ...  | 0.48 | 0.46                  | 18                            | 20.9                          | 10.70                           | 12.70                               | 2.15   | 53.00   | Azingunge.               | ...            | ...                      |
| 3 | 0.10 | 0.19 | ...  | ...  | ...  | 3.33 | ...  | 0.20 | ...  | ...                   | 14                            | 17.8                          | 11.81                           | 11.58                               | 3.33   | 64.22   | Jungpore.                | ...            | ...                      |
| 3 | 0.23 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.35 | 0.10                  | 11                            | 17.4                          | 9.54                            | 11.02                               | 2.60   | 55.36   | Lalga.                   | ...            | ...                      |
| 3 | 0.65 | ...  | ...  | ...  | ...  | 0.07 | 0.47 | ...  | ...  | ...                   | 12                            | ?                             | 8.38                            | ?                                   | 2.52   | 47.04   | Akripur.                 | ...            | ...                      |
| 3 | 0.60 | ...  | ...  | ...  | ...  | 1.00 | 0.25 | ...  | ...  | ...                   | 11                            | ?                             | 7.30                            | ?                                   | 1.40   | ?   | Patkahuri.               | ...            | ...                      |
| 3 | 1.77 | 0.47 | 0.17 | 1.64 | 0.42 | 0.01 | ...  | ...  | ...  | ...                   | 19                            | 23.5                          | 28.01                           |                                     |  |   |                          |                |                          |

Table of Rainfall recorded at Station

| Meteorological division. | District.             | Station.                 | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8     | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|--------------------------|-----------------------|--------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| WEST BENGAL—contd.       | Noncholly—<br>concd.  | Narainpore               | 0.91 | 1.21 | 1.11 | 0.21 | 0.22 | 3.11 | 1.50 | 0.08  | 0.90 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.31 | 0.02 |
|                          |                       | Rangpur                  | 0.30 | 1.77 | 0.12 | ...  | 0.40 | 0.15 | 0.15 | 0.24  | 1.30 | 0.53 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.08 | 0.07 |
|                          |                       | Furzedpore               | 0.46 | 0.50 | ...  | ...  | 0.44 | 0.13 | ...  | ...   | 0.24 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.02 |
|                          |                       | Furzedpore               | 0.05 | 0.43 | ...  | ...  | 0.13 | 0.08 | ...  | 0.15  | 0.10 | 1.15 | 0.03 | ...  | ...  | ...  | 1.00 | ...  | 0.78 | ...  | ...  | 0.02 |
|                          |                       | Goalundo                 | 0.20 | 0.78 | 0.72 | ...  | 0.10 | 0.12 | 1.30 | ...   | 0.11 | ...  | ...  | ...  | ...  | ...  | ...  | 0.86 | ...  | ...  | ...  | ...  |
|                          | Dacca                 | Munshikanga              | 0.00 | 0.50 | ...  | ...  | 0.18 | 0.10 | 0.10 | 0.30  | 0.71 | 0.09 | ...  | ...  | ...  | ...  | ...  | 0.20 | ...  | ...  | ...  | ...  |
|                          |                       | Dacca                    | 1.45 | 0.00 | 0.16 | 0.21 | ...  | 0.32 | 0.17 | 0.27  | 0.26 | ...  | ...  | ...  | ...  | ...  | ...  | 0.95 | ...  | ...  | 1.05 | 0.07 |
|                          |                       | Narainkanga              | 0.07 | 0.65 | 0.41 | 0.17 | ...  | 0.75 | 0.45 | 0.25  | 0.80 | 0.24 | ...  | ...  | ...  | ...  | ...  | 0.04 | ...  | ...  | ...  | ...  |
|                          |                       | Manickkanga              | 0.04 | 0.25 | 0.45 | 0.01 | 0.02 | 0.68 | 2.30 | 0.10  | 1.75 | 0.21 | ...  | ...  | ...  | ...  | ...  | 0.31 | ...  | ...  | ...  | ...  |
|                          |                       | Joydebpore               | 0.23 | 0.42 | 0.01 | 0.03 | 0.41 | 0.53 | 0.38 | 0.15  | 1.15 | 0.45 | ...  | ...  | ...  | ...  | 1.01 | 0.40 | ...  | 0.15 | 0.10 | ...  |
|                          | Hill Tipperah         | Agartala                 | 1.20 | 0.57 | ...  | ...  | 0.48 | 0.50 | 0.35 | 0.88  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.60 | ...  | ...  | 0.78 | ...  |
|                          |                       | Comilla                  | 0.14 | 3.86 | ...  | ...  | 0.60 | 1.30 | 0.80 | 0.05  | 0.05 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.05 | 0.35 | ...  | 0.07 |
|                          |                       | Chandpore                | 0.70 | 0.80 | 0.10 | 0.00 | 0.25 | 0.10 | 1.70 | 0.10  | 1.10 | 0.10 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.13 | 1.08 | 0.01 |
|                          |                       | Brahmanberia             | 0.00 | 0.40 | 0.10 | 0.70 | ...  | 0.20 | ...  | 3.67  | ...  | ...  | ...  | ...  | ...  | 1.55 | ...  | ...  | ...  | ...  | 1.01 | ...  |
|                          |                       | Ramchandrapore           | 0.00 | 0.57 | 0.40 | 0.00 | 0.07 | 0.35 | 0.40 | 0.18  | 0.06 | ...  | ...  | ...  | ...  | 0.02 | ...  | ...  | ...  | ...  | ...  | ...  |
|                          | Mymensingh            | Narainkanga              | 0.90 | 0.31 | ...  | ...  | ...  | 1.00 | 0.00 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Daukandi                 | 0.25 | 0.46 | 0.43 | 0.23 | ...  | 0.27 | 0.32 | 0.40  | 0.17 | ...  | ...  | ...  | ...  | ...  | 0.46 | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Kanai                    | 0.45 | 1.32 | ...  | ...  | 1.10 | ...  | 1.40 | 0.50  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 2.30 | ...  | 0.10 | ...  | ...  |
|                          |                       | Laksham                  | 0.25 | 1.05 | ...  | ...  | 0.92 | 0.21 | 0.15 | 0.25  | 1.47 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Kishoreganj              | 0.72 | 0.18 | 0.21 | 0.41 | 0.86 | 0.37 | 0.94 | 2.73  | 0.19 | ...  | ...  | 0.10 | ...  | ...  | ...  | ...  | ...  | ...  | 0.45 | ...  |
| NORTH BENGAL             | Pubna                 | Pubna                    | 0.14 | 0.15 | ...  | ...  | 0.08 | 2.01 | ...  | ...   | 1.76 | 0.21 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Seragunge                | 0.07 | 2.70 | 0.23 | 0.30 | 0.21 | 0.18 | ...  | 0.15  | 0.24 | 0.26 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Sherpore                 | ...  | 1.25 | 0.11 | 0.26 | ...  | ...  | ...  | ...   | 0.27 | 0.42 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Nowkhilla                | 0.05 | 0.74 | 0.80 | 0.71 | 0.32 | 0.35 | 0.07 | 0.14  | 0.11 | 0.61 | ...  | ...  | ...  | 0.21 | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Bogra                    | ...  | 1.08 | 0.21 | 0.30 | ...  | 1.42 | 0.13 | ...   | ...  | 0.24 | ...  | ...  | ...  | 0.25 | ...  | ...  | ...  | ...  | 0.10 | 0.07 |
|                          | Rajshahi              | Panchbibi                | ...  | 1.00 | 0.80 | 1.07 | 1.20 | 3.35 | 0.90 | ...   | 0.55 | 0.02 | ...  | ...  | ...  | 0.12 | ...  | ...  | ...  | ...  | 1.46 | ...  |
|                          |                       | Beaulah                  | ...  | 1.40 | 1.08 | ...  | ...  | 1.68 | ...  | 0.04  | 0.30 | 0.08 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Natore                   | ...  | 1.50 | ...  | ...  | 2.10 | ...  | ...  | 1.50  | 0.90 | 0.31 | 0.30 | ...  | ...  | ...  | 2.50 | ...  | ...  | ...  | 0.30 | 1.0  |
|                          |                       | Nagom                    | ...  | 3.23 | 0.74 | 0.30 | ...  | 1.04 | ...  | ...   | 1.68 | ...  | ...  | ...  | ...  | ...  | ...  | 0.41 | ...  | ...  | ...  | ...  |
|                          |                       | Lalpur                   | ...  | 1.36 | ...  | ...  | ...  | 0.55 | ...  | 1.05  | 0.26 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          | Maldah                | Manda                    | ...  | 3.22 | 1.23 | 1.00 | 0.42 | 2.72 | 0.05 | ...   | 1.44 | 0.47 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Maldah                   | ...  | 0.23 | 0.40 | 0.03 | 0.56 | ...  | 0.12 | 0.05  | 1.05 | 0.01 | 0.50 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Chanchal                 | ...  | 0.20 | 0.52 | 0.73 | 0.35 | 0.49 | 0.03 | 0.00  | 0.76 | 1.40 | ...  | ...  | ...  | 0.16 | 0.02 | 0.50 | ...  | ...  | 0.02 | 0.03 |
|                          |                       | Gajol                    | 1.50 | 0.70 | 0.40 | 1.00 | 0.30 | 1.20 | ...  | 0.60  | 1.50 | 0.20 | ...  | ...  | ...  | ...  | ...  | 0.70 | ...  | ...  | ...  | ...  |
|                          |                       | Sibganj                  | ...  | 0.35 | 1.35 | 1.62 | 0.60 | 0.45 | ...  | 0.80  | 0.78 | 0.83 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          | Dinapore              | Mohadebpore              | ...  | 2.65 | 0.35 | 0.10 | 0.05 | 1.24 | ...  | 0.01  | 0.05 | 0.15 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Churamoni                | 0.03 | 0.25 | 0.18 | 1.15 | 0.91 | 0.31 | ...  | 0.52  | 0.91 | 0.74 | 0.18 | ...  | 0.14 | 0.01 | 0.31 | ...  | ...  | ...  | 0.23 | 0.03 |
|                          |                       | Raigunge                 | ...  | 0.23 | 0.11 | 0.41 | 2.92 | 0.34 | 1.10 | 0.59  | 0.31 | 2.05 | 0.09 | ...  | ...  | ...  | 1.30 | 0.06 | 0.81 | ...  | 0.10 | 0.02 |
|                          |                       | Dinapore                 | 0.12 | 0.10 | 0.40 | 4.20 | 6.25 | 3.15 | ...  | 1.67  | 0.20 | 0.93 | 0.10 | 0.21 | 0.01 | 0.30 | 0.10 | 0.14 | ...  | ...  | ...  | ...  |
|                          |                       | Balourghat               | ...  | 0.31 | 0.55 | 1.61 | 0.80 | 0.27 | 0.46 | ...   | 0.22 | 1.51 | ...  | ...  | ...  | 2.23 | 0.13 | ...  | ...  | ...  | 0.18 | 0.06 |
|                          | Rangpur               | Bhawanikanga             | ...  | 0.65 | 0.62 | 0.37 | 0.30 | 1.21 | ...  | ...   | 0.12 | 0.17 | 0.17 | ...  | 0.16 | 0.23 | ...  | ...  | ...  | ...  | 0.07 | ...  |
|                          |                       | Gyandurga                | ...  | 0.08 | 0.07 | 0.70 | 0.03 | 5.90 | 2.15 | 0.27  | 1.90 | 0.17 | 0.15 | 0.31 | ...  | 0.55 | 0.80 | 0.05 | ...  | 0.01 | ...  | ...  |
|                          |                       | Kurigram                 | 2.00 | 0.48 | 0.12 | 1.10 | 5.01 | 3.04 | ...  | 0.15  | 0.07 | 0.13 | ...  | ...  | 0.98 | 0.17 | 0.37 | 1.48 | ...  | ...  | ...  | ...  |
|                          |                       | Bardhaman                | ...  | 0.17 | 0.25 | ...  | 4.18 | 0.08 | 0.37 | 1.00  | 0.42 | 0.83 | 0.14 | ...  | 0.68 | 0.80 | ...  | ...  | ...  | 0.37 | ...  | ...  |
|                          |                       | (Nilphamari),<br>Ulupore | ...  | 0.35 | 0.25 | 0.18 | 3.30 | 0.47 | ...  | ...   | ...  | 0.55 | ...  | ...  | ...  | 0.75 | ...  | ...  | ...  | ...  | ...  | 0.1  |
|                          | Jalpigoree            | Jalpigoree               | 0.57 | 0.00 | 0.89 | 0.65 | 2.37 | ...  | 0.35 | 2.25  | 0.78 | 0.84 | 2.57 | 0.31 | 0.87 | 1.06 | 0.77 | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Alipore Doar             | 0.55 | 0.20 | 0.32 | 2.85 | 3.10 | 0.92 | 2.83 | 0.50  | 1.02 | 1.41 | ...  | ...  | 0.24 | 1.00 | 0.20 | ...  | ...  | ...  | 0.07 | 0.01 |
|                          |                       | Rakacotta                | 0.58 | 0.04 | 0.68 | 2.80 | 3.79 | 0.82 | 3.34 | 0.65  | 1.54 | 1.57 | 0.26 | ...  | 2.34 | 1.00 | 0.38 | ...  | ...  | ...  | 2.36 | 1.2  |
|                          |                       | Debiyanga                | ...  | ...  | 1.30 | 0.20 | 4.40 | 0.37 | 2.30 | 0.07  | 1.00 | 2.20 | ...  | ...  | ...  | 1.25 | 0.36 | ...  | ...  | ...  | 1.15 | 0.4  |
|                          |                       | Dinhatia                 | 0.03 | 1.52 | 1.15 | 1.44 | 6.05 | 1.02 | 0.05 | 0.75  | 0.91 | 1.05 | 0.20 | ...  | 3.78 | 0.15 | ...  | ...  | ...  | ...  | ...  | ...  |
|                          | Cooch Behar           | Cooch Behar              | 0.62 | 1.03 | 0.72 | 0.45 | 2.42 | 0.83 | 1.21 | 1.20  | 1.50 | 1.12 | 0.15 | ...  | 3.07 | ...  | 0.05 | ...  | ...  | ...  | 0.45 | 0.02 |
|                          |                       | Mickligunge              | 0.10 | 0.62 | 0.91 | 2.61 | 3.60 | 0.03 | 2.79 | 0.40  | 0.43 | 1.47 | 1.04 | ...  | 5.04 | 0.04 | 1.98 | ...  | ...  | ...  | 0.12 | 0.03 |
|                          |                       | Matabhanga               | 0.09 | 0.82 | 0.62 | 4.30 | 2.81 | 0.18 | 1.40 | 1.03  | 1.02 | 1.32 | 0.52 | ...  | 2.87 | 0.14 | 0.27 | ...  | ...  | ...  | 0.84 | 0.11 |
|                          |                       | Darjeeling Hill          | ...  | 0.07 | 0.04 | 0.63 | 0.01 | 4.79 | 0.20 | 16.10 | 0.31 | 0.37 | 2.85 | 0.76 | ...  | 1.85 | 0.04 | 0.34 | ...  | ...  | 0.22 | 0.88 |
|                          |                       | Siliguri                 | 0.20 | 0.30 | 0.05 | 0.35 | 2.07 | 0.78 | 0.33 | 1.00  | 0.85 | 1.00 | 2.70 | ...  | 0.08 | 0.82 | 1.15 | ...  | ...  | ...  | 0.50 | 2.70 |
| NORTH BENGAL             | Purneah               | Darjeeling               | 0.16 | 2.42 | 1.00 | 0.50 | 3.00 | 1.02 | 0.75 | 1.20  | 2.92 | 6.15 | 1.30 | ...  | 0.28 | 0.73 | 0.37 | 0.20 | ...  | 0.23 | 0.33 | 0.3  |
|                          |                       | Kalimpong                | 1.03 | 2.13 | 0.28 | 0.23 | 1.61 | 0.70 | 1.03 | 0.43  | 1.63 | 3.20 | 0.87 | ...  | 0.15 | 0.56 | 0.75 | 0.13 | ...  | ...  | 0.58 | 0.4  |
|                          |                       | Kisengunge               | ...  | 0.09 | 0.03 | 0.81 | 0.25 | ...  | 1.75 | ...   | 0.30 | 3.00 | 1.25 | ...  | 3.55 | 2.30 | 0.00 | ...  | ...  | ...  | 1.35 | 0.08 |
|                          |                       | Arracah                  | ...  | 0.05 | 0.66 | 0.00 | 0.10 | ...  | 0.04 | 0.42  | 0.80 | 3.00 | 2.10 | ...  | 0.90 | 3.14 | 3.28 | ...  | ...  | ...  | 0.08 | ...  |
|                          |                       | Purneah                  | 0.14 | 0.10 | 0.73 | 0.01 | 0.07 | 1.04 | 0.02 | 0.17  | 0.67 | 2.11 | 0.73 | ...  | ...  | 1.15 | 0.75 | ...  | ...  | ...  | ...  | ...  |
|                          | North Bhagal-<br>pore | Gandwara                 | 0.55 | ...  | 1.50 | 0.35 | 0.10 | 0.00 | 0.65 | ...   | 0.19 | 1.35 | 0.19 | ...  | ...  | 0.35 | 0.35 | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Biharapore               | 0.22 | 0.30 | 0.47 | 1.00 | 2.22 | 0.02 | 0.52 | 0.32  | 0.50 | 1.32 | ...  | ...  | ...  | 1.28 | 1.27 | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Matiari                  | 0.34 | 0.37 | ...  | ...  | ...  | ...  | 1.00 | 0.92  | 2.88 | 1.80 | ...  | ...  | 0.60 | 4.07 | 3.70 | ...  | ...  | ...  | 0.50 | ...  |
|                          |                       | Katiaganj                | ...  | 0.16 | 0.08 | 2.40 | 2.25 | ...  | 2.58 | 0.30  | 0.40 | 1.05 | 1.52 | ...  | 1.86 | 3.13 | 0.57 | ...  | ...  | ...  | 1.32 | ...  |
|                          |                       | Maddapore                | ...  | ...  | 0.08 | 0.35 | ...  | 0.38 | ...  | 0.56  | 0.72 | 1.01 | 0.31 | ...  | ...  | 1.25 | 1.52 | ...  | ...  | ...  | ...  | ...  |
|                          | Durbhanga             | Sopool                   | ...  | 0.15 | 0.55 | 0.32 | 0.06 | 8.55 | ...  | 1.30  | 0.53 | 0.99 | 0.07 | ...  | 0.93 | 1.91 | 2.16 | 0.38 | ...  | ...  | ...  | 0.14 |
|                          |                       | Prothapganj              | 0.19 | ...  | 0.06 | 0.00 | 0.25 | 0.40 | 2.00 | 1.22  | 2.55 | 0.35 | ...  | 2.10 | 2.56 | 2.90 | 0.40 | ...  | ...  | ...  | ...  | ...  |
|                          |                       | Palpur                   | ...  | ...  | 0.50 | 0.14 | 0.01 | 2.14 | 0.05 | 0.30  | 0.10 | 0.84 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.11 | ...  |
|                          |                       | Durbhanga                | 0    |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |



**Bengal in August 1887—continued.**

| 23   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | 31   | Number of rainy days. | Average number of rainy days. | Total rainfall for the month. | Average rainfall for the month. | Heaviest rainfall during the month. | Total rainfall from 1st January 1887 up to 31st August 1887. | Average rainfall from 1st January 1887 to 31st August 1887. | Station.       | District.      | Meteorological division. |
|------|------|------|------|------|------|------|------|------|------|-----------------------|-------------------------------|-------------------------------|---------------------------------|-------------------------------------|--|---|----------------|----------------|--------------------------|
| 0.02 | 1.31 | 0.36 | 0.41 | 0.05 | ...  | ...  | 0.11 | 0.19 | ...  | 18                    | ?                             | 11.94                         | ?                               | 3.11                                | 73.01  | ?   | Harihpore...   | Nonkhally—     | EAST BENGAL—             |
| 1.14 | 2.44 | 0.40 | ...  | ...  | ...  | ...  | ...  | 0.45 | 0.50 | 16                    | ?                             | 10.82                         | ?                               | 2.18                                | 60.18  | ?   | Ramganj.       | conoid.        |                          |
| 0.43 | 1.04 | ...  | ...  | ...  | 0.37 | ...  | ...  | 0.28 | 0.12 | 13                    | 20.3                          | 4.96                          | 12.24                           | 1.04                                | 31.33  | 55.09   | Maduripore ... | Furzedpore.    |                          |
| 0.02 | 1.04 | 0.18 | ...  | ...  | 0.02 | 0.20 | ...  | ...  | ...  | 17                    | 20.7                          | 8.00                          | 12.10                           | 1.04                                | 38.52  | 51.46   | Furzedpore.    | Gaulando.      |                          |
| 0.70 | 2.26 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.19 | 14                    | 18.3                          | 3.92                          | 11.37                           | 2.25                                | 40.79  | 49.50   | ...            | ...            |                          |
| 0.27 | 1.34 | 0.70 | ...  | 0.12 | 0.11 | 0.17 | ...  | ...  | 0.71 | 16                    | 20.3                          | 6.52                          | 13.83                           | 1.24                                | 42.71  | 60.94   | Munshiganje.   | Dacca.         |                          |
| 1.08 | 0.73 | 0.08 | 0.17 | 0.19 | 0.30 | 0.08 | 0.04 | ...  | 0.10 | 21                    | 21.4                          | 9.42                          | 12.32                           | 1.65                                | 45.75  | 57.05   | Dacca.         | Dacca.         |                          |
| 0.20 | 1.72 | 0.21 | ...  | 0.30 | 0.23 | ...  | ...  | 0.05 | 0.24 | 18                    | 24.3                          | 7.20                          | 11.14                           | 1.72                                | 40.37  | 54.39   | Naraingunj.    | Naraingunj.    |                          |
| 0.61 | 0.32 | 0.09 | ...  | 0.04 | ...  | ...  | ...  | 0.32 | 0.28 | 18                    | 20.7                          | 8.04                          | 11.53                           | 2.39                                | 37.69  | 49.49   | Manickganje.   | Joydipore.     |                          |
| 0.21 | 2.76 | ...  | 0.26 | 1.04 | 1.51 | 0.21 | ...  | 0.01 | 0.01 | 21                    | ...                           | 12.49                         | ?                               | 2.76                                | 54.78  | ?   | ...            | ...            |                          |
| ...  | 1.30 | 0.12 | 0.70 | 0.07 | ...  | ...  | ...  | 1.40 | 1.75 | 14                    | 20.3                          | 11.84                         | 13.74                           | 1.75                                | 65.39  | 60.83   | Aqartola       | Hill Tipperah. |                          |
| 0.07 | 2.30 | 0.12 | 1.41 | 0.30 | 0.02 | ...  | ...  | 0.80 | 0.32 | 18                    | 21.5                          | 14.41                         | 10.45                           | 3.88                                | 52.13  | 74.54   | Oomilla        | Tipperah.      |                          |
| 1.40 | 0.90 | 0.20 | ...  | 0.00 | 0.40 | 0.20 | ...  | 0.10 | 0.20 | 18                    | 23.0                          | 9.95                          | 20.82                           | 1.70                                | 42.54  | 72.42   | Chandpore.     | ...            |                          |
| 0.30 | 0.70 | ...  | 0.27 | 0.30 | 0.10 | ...  | ...  | ...  | 0.06 | 18                    | 20.3                          | 11.94                         | 12.07                           | 3.07                                | 43.17  | 61.43   | Rashmudhoria   | ...            |                          |
| 0.21 | 0.41 | 0.12 | 0.08 | 0.03 | 0.08 | ...  | ...  | 0.37 | 0.35 | 19                    | ?                             | 6.24                          | ?                               | 1.01                                | 41.35  | ?   | Ranchdura-     | ...            |                          |
| 1.00 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.13 | ...  | 6                     | ?                             | 4.84                          | ?                               | 1.00                                | 42.83  | ?   | Nasirangar.    | ...            |                          |
| 0.57 | 1.48 | ...  | ...  | ...  | 0.57 | 0.35 | ...  | 0.27 | 0.41 | 16                    | ?                             | 6.80                          | ?                               | 1.18                                | 39.04  | ?   | Dandibandi.    | ...            |                          |
| 0.27 | 3.32 | 0.53 | ...  | 0.18 | ...  | ...  | ...  | ...  | 0.00 | 12                    | ?                             | 11.70                         | ?                               | 1.40                                | 43.15  | ?   | Kash.          | ...            |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.56 | 11                    | ?                             | 9.08                          | ?                               | 3.32                                | 25.38  | ?   | Loksham.       | ...            |                          |
| 0.12 | 0.09 | ...  | ...  | 0.18 | 0.13 | ...  | ...  | ...  | ...  | 16                    | 20.1                          | 8.54                          | 13.16                           | 2.73                                | 50.51  | 64.28   | Kishoreganje.  | Mymensingh.    |                          |
| 1.12 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.75 | 9                     | 17.2                          | 8.13                          | 12.01                           | 1.85                                | 41.74  | 49.31   | Atia (Tancil). | ...            |                          |
| 0.35 | 1.10 | 0.14 | 0.15 | 0.25 | 0.01 | ...  | ...  | ...  | ...  | 10                    | 23.1                          | 8.00                          | 14.30                           | 1.23                                | 60.23  | 71.61   | Mymensingh.    | ...            |                          |
| 0.35 | 0.91 | 0.70 | ...  | ...  | 0.29 | ...  | 0.40 | ...  | ...  | 14                    | 19.6                          | 10.33                         | 13.50                           | 2.40                                | 57.80  | 56.50   | Jamulpore.     | ...            |                          |
| 0.06 | 0.30 | 1.70 | 0.16 | 0.10 | ...  | ...  | ...  | 1.27 | 18   | 21.0                  | ...                           | 11.56                         | 16.51                           | 1.70                                | 60.30  | 64.42   | Netrokona.     | ...            |                          |
| ...  | 0.50 | 0.13 | ...  | ...  | ...  | 0.14 | ...  | ...  | ...  | 11                    | ?                             | 5.26                          | ?                               | 1.75                                |  |   |                |                |                          |

### Table of Rainfall recorded at Station

| Meteorological division. | District.            | Station.          | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17  | 18   | 19   |
|--------------------------|----------------------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|------|
| SOUTH BEHAR              | Shahabad ...         | Buxar ...         | 0.52 | 0.18 | 0.47 | 0.08 | 0.80 | ...  | 0.41 | ...  | 0.04 | 3.08 | 0.16 | 0.09 | ...  | ...  | 0.89 | ...  | ... | ...  | ...  |
|                          |                      | Dehree ...        | 0.85 | 1.37 | 0.25 | ...  | 0.13 | 1.29 | 0.61 | ...  | 0.05 | 0.73 | 0.08 | ...  | ...  | ...  | 1.59 | ...  | ... | ...  | ...  |
|                          |                      | Bluhooh ...       | 7.50 | 0.80 | ...  | 0.30 | 0.30 | 1.40 | ...  | ...  | 0.85 | 0.40 | ...  | ...  | ...  | ...  | 2.70 | ...  | ... | ...  | ...  |
|                          |                      | Sasseram ...      | 2.40 | 0.85 | 0.96 | ...  | 2.22 | 3.70 | 0.20 | 0.10 | 0.75 | 2.77 | ...  | ...  | ...  | ...  | 0.87 | 0.16 | ... | ...  | ...  |
|                          |                      | Arrah ...         | 0.44 | 0.30 | 1.35 | 0.30 | 0.05 | 0.25 | 0.55 | 0.15 | ...  | 1.07 | ...  | ...  | ...  | ...  | 0.89 | ...  | ... | ...  | ...  |
|                          |                      | Mohaniah ...      | 6.30 | ...  | 1.20 | ...  | 1.15 | 1.05 | ...  | ...  | 1.10 | 0.80 | ...  | ...  | ...  | ...  | 0.50 | ...  | ... | 0.30 | ...  |
|                          | Gya ...              | Aurangabad ...    | 0.78 | 1.73 | 0.40 | ...  | ...  | 0.61 | 0.26 | ...  | ...  | 0.74 | ...  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  |
|                          |                      | Gya ...           | 1.05 | 0.34 | 0.09 | ...  | ...  | 1.77 | 0.31 | 3.01 | 0.53 | 0.59 | 0.35 | ...  | ...  | 0.01 | 0.90 | ...  | ... | ...  | 1.06 |
|                          |                      | Nowadah ...       | 2.57 | 0.77 | 0.33 | ...  | 1.03 | 0.59 | 0.69 | 1.00 | 0.59 | 0.59 | 0.08 | ...  | 1.07 | ...  | 0.81 | ...  | ... | ...  | 0.13 |
|                          |                      | Johannabad ...    | 2.23 | 1.29 | 1.07 | 0.08 | 0.24 | 0.18 | 0.10 | 1.37 | 0.10 | 1.35 | 0.10 | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  |
|                          |                      | Arwal ...         | 1.27 | 1.34 | ...  | 0.40 | ...  | 0.34 | ...  | 0.69 | ...  | 2.29 | 1.52 | ...  | ...  | ...  | 0.83 | ...  | ... | ...  | ...  |
|                          | Patna ...            | Daudnagar ...     | 0.60 | 0.30 | ...  | 1.00 | 0.40 | ...  | 0.80 | ...  | 0.85 | 1.00 | 0.30 | ...  | ...  | ...  | 0.30 | 0.10 | ... | ...  | ...  |
|                          |                      | Sherghati ...     | 0.50 | 1.50 | 0.50 | ...  | 0.82 | 0.33 | ...  | 0.11 | 2.30 | 0.11 | 1.21 | 0.65 | ...  | ...  | 1.50 | ...  | ... | 0.80 | 0.40 |
|                          |                      | Rajauli ...       | 0.80 | 1.20 | 1.22 | 0.70 | 0.85 | ...  | 0.80 | ...  | 1.30 | 0.45 | ...  | 0.45 | ...  | 0.40 | ...  | ...  | ... | ...  | ...  |
|                          |                      | Pakri Barawan ... | 1.41 | 1.90 | ...  | 0.30 | 0.43 | ...  | 0.09 | 1.00 | 0.60 | 0.35 | ...  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  |
|                          |                      | Patna ...         | 2.18 | 0.28 | 0.22 | 0.04 | 0.19 | 0.03 | ...  | 0.03 | 0.22 | 0.11 | ...  | ...  | ...  | ...  | 0.68 | ...  | ... | ...  | ...  |
|                          | Monghyr ...          | Dinapore ...      | 2.16 | 0.20 | 0.18 | ...  | 0.18 | 0.10 | ...  | 2.70 | 0.12 | 0.23 | ...  | ...  | ...  | ...  | ...  | ...  | ... | ...  | ...  |
|                          |                      | Behar ...         | 3.57 | 1.09 | 1.00 | ...  | 0.85 | 0.55 | ...  | 0.80 | 0.18 | 0.53 | 0.29 | ...  | ...  | 0.06 | 0.45 | ...  | ... | ...  | ...  |
|                          |                      | Barh ...          | 0.40 | 0.30 | 0.15 | ...  | 0.35 | ...  | 0.05 | 0.80 | 0.40 | 0.20 | 0.05 | 0.05 | ...  | ...  | 0.50 | ...  | ... | ...  | ...  |
|                          |                      | Rickram ...       | 0.70 | 0.40 | 0.20 | 0.30 | ...  | 0.10 | 0.20 | 0.10 | ...  | 3.40 | ...  | ...  | ...  | ...  | 0.80 | ...  | ... | ...  | ...  |
|                          |                      | Hilsa ...         | 0.70 | 0.80 | 0.23 | 0.80 | 0.45 | ...  | 0.09 | ...  | ...  | 0.81 | ...  | ...  | ...  | ...  | 0.43 | ...  | ... | ...  | ...  |
|                          | South Bhagulpore ... | Bhagulpore ...    | ...  | 1.18 | 0.00 | 4.30 | ...  | 0.25 | ...  | 1.95 | 0.20 | 0.57 | 0.97 | ...  | ...  | 0.11 | 0.23 | 0.68 | ... | ...  | 0.50 |
|                          |                      | Banks ...         | 0.15 | 0.54 | 0.05 | 1.08 | ...  | 1.45 | ...  | ...  | 0.30 | 1.27 | 0.11 | ...  | ...  | 0.44 | 0.53 | ...  | ... | ...  | ...  |
|                          |                      | Kolgong ...       | 1.41 | 1.29 | 0.7  |      |      |      |      |      |      |      |      |      |      |      |      |      |     |      |      |

Rengal for the month of August 1887—concluded.

| 22   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | 31   | Number of rainy days. | Average number of rainy days. | Total rainfall for the month. | Average rainfall for the month. | Heaviest rainfall during the month. | Total rainfall from 1st January 1887 up to 31st Aug. 1887. | Average rainfall from 1st January up to 31st Aug. 1887. | Station.         | District.         | Meteorological division. |
|------|------|------|------|------|------|------|------|------|------|-----------------------|-------------------------------|-------------------------------|---------------------------------|-------------------------------------|--|---|------------------|-------------------|--------------------------|
| 0.01 | 0.03 | 0.06 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 10                    | 10.5                          | 7.50                          | 0.90                            | 8.08                                | 20.48  | 28.98   | Buxar            | Shahabad          | SOUTH BHAR.              |
| 0.05 | 0.05 | 0.10 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 10                    | 10.5                          | 7.84                          | 0.90                            | 8.08                                | 20.48  | 28.98   | Dehroo.          | ...               |                          |
| 0.15 | 0.20 | ...  | ...  | ...  | ...  | 0.40 | ...  | ...  | ...  | 11                    | 14.6                          | 14.40                         | 11.71                           | 7.50                                | 33.08  | 32.34   | Rhubooh.         | ...               |                          |
| ...  | 0.14 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 12                    | 15.8                          | 16.16                         | 11.50                           | 3.76                                | 30.21  | 31.18   | Saweram.         | ...               |                          |
| 0.05 | 0.20 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 18                    | 18.4                          | 8.93                          | 10.11                           | 1.35                                | 31.25  | 33.10   | Arrah.           | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 8                     | ?                             | 12.50                         | ?                               | 6.30                                | ?  | ?   | Mohaniah.        | ...               |                          |
| 0.28 | 0.14 | ...  | 1.81 | ...  | ...  | ...  | ...  | ...  | ...  | 10                    | 14.5                          | 7.10                          | 12.54                           | 1.81                                | 28.87  | 33.05   | Aurangabad...    | Gya               |                          |
| 0.04 | 0.34 | 0.43 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 15                    | 16.8                          | 10.89                         | 9.97                            | 5.01                                | 34.14  | 31.34   | Gya.             | ...               |                          |
| 0.22 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 14                    | 12.9                          | 9.89                          | 10.05                           | 2.57                                | 32.55  | 31.90   | Nowadah.         | ...               |                          |
| 0.12 | 0.03 | 0.45 | ...  | ...  | 0.45 | ...  | 0.04 | ...  | ...  | 17                    | 14.2                          | 9.51                          | 12.23                           | 2.25                                | 33.90  | 32.91   | Johannabad.      | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.32 | ...  | 0                     | ?                             | 8.96                          | ?                               | 2.29                                | 33.27  | ?   | Arwal.           | ...               | SOUTH BHAR.              |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.38 | ...  | 11                    | ?                             | 6.33                          | ?                               | 1.06                                | 24.04  | ?   | Laudnagar.       | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 11                    | ?                             | 6.43                          | ?                               | 2.20                                | 31.83  | ?   | Sherrghati.      | ...               |                          |
| ...  | 0.30 | 0.40 | ...  | ...  | ...  | ...  | ...  | ...  | 0.40 | 16                    | ?                             | 10.67                         | ?                               | 1.30                                | 27.93  | ?   | Rajauli.         | ...               |                          |
| ...  | 0.20 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 9                     | ?                             | 6.28                          | ?                               | 1.90                                | 17.73  | ?   | Pakri Bara-wan.  | ...               |                          |
| ...  | 0.04 | ...  | ...  | ...  | 0.08 | 0.14 | ...  | ...  | ...  | 14                    | 16.9                          | 5.25                          | 0.77                            | 2.18                                | 31.93  | 30.65   | Patna            | Patna.            |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 9                     | 13.7                          | 6.11                          | 11.27                           | 2.70                                | 33.31  | 32.17   | Dinapore.        | ...               |                          |
| 0.04 | ...  | ...  | ...  | ...  | 0.09 | ...  | ...  | ...  | ...  | 14                    | 17.4                          | 10.08                         | 10.60                           | 3.57                                | 33.65  | 33.67   | Belmar.          | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | 2.00 | ...  | ...  | ...  | ...  | 13                    | 12.1                          | 6.90                          | 9.58                            | 2.00                                | 27.96  | 30.50   | Burh.            | ...               |                          |
| 0.20 | 0.15 | 0.05 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 13                    | ?                             | 6.05                          | ?                               | 3.40                                | 28.70  | ?   | Hickram.         | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | 0.06 | 0.05 | ...  | ...  | ...  | 11                    | ?                             | 5.33                          | ?                               | 0.81                                | 35.24  | ?   | Hilsa.           | ...               | SOUTH BHAR.              |
| ...  | ...  | ...  | ...  | ...  | 0.30 | ...  | ...  | ...  | ...  | 13                    | 15.1                          | 12.01                         | 0.80                            | 4.30                                | 42.98  | 31.38   | Hogonsenai       | ...               |                          |
| ...  | 0.47 | ...  | ...  | ...  | 0.32 | ...  | ...  | ...  | ...  | 14                    | 17.8                          | 6.97                          | 10.02                           | 1.43                                | 42.01  | 32.79   | Monghyr.         | Monghyr.          |                          |
| 0.58 | 0.12 | ...  | ...  | ...  | 0.10 | ...  | ...  | ...  | ...  | 16                    | 15.0                          | 10.59                         | 11.41                           | 2.35                                | 36.88  | 34.64   | Jamui.           | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 3                     | ?                             | 7.05                          | ?                               | 0.60                                | ?  | ?   | Gogri.           | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 7                     | ?                             | 5.31                          | ?                               | 1.33                                | 21.61  | ?   | Sheikpura.       | ...               |                          |
| 0.10 | 0.75 | ...  | ...  | ...  | 0.32 | ...  | ...  | ...  | ...  | 10                    | 17.9                          | 6.72                          | 10.62                           | 2.70                                | 39.39  | 35.73   | Bhagulpore       | South Bhagulpore. |                          |
| 0.32 | 0.21 | ...  | ...  | ...  | 2.59 | ...  | ...  | ...  | ...  | 14                    | 17.7                          | 8.81                          | 11.13                           | 2.89                                | 34.46  | 34.06   | Banks.           | ...               |                          |
| 0.12 | ...  | 0.12 | ...  | ...  | 0.02 | ...  | ...  | ...  | ...  | 12                    | ?                             | 6.76                          | ?                               | 1.47                                | 44.11  | ?   | Kolgong.         | ...               |                          |
| 0.18 | 0.39 | 0.16 | ...  | ...  | 0.58 | 0.46 | 0.28 | ...  | ...  | 19                    | 15.5                          | 8.37                          | 0.87                            | 1.35                                | 51.84  | 40.39   | Rajmohal         | ...               | SOUTH BHAR.              |
| 0.32 | 0.58 | ...  | ...  | ...  | 2.23 | 0.25 | ...  | ...  | ...  | 15                    | 16.1                          | 6.77                          | 11.43                           | 3.13                                | 49.27  | 34.76   | Gidda.           | ...               |                          |
| 0.26 | 0.75 | ...  | ...  | ...  | 3.80 | 1.21 | ...  | ...  | ...  | 16                    | 17.9                          | 12.82                         | 3.86                            | 5.64                                | 43.31  | 34.31   | Pakour.          | ...               |                          |
| 0.19 | 0.13 | 0.42 | 0.80 | ...  | 0.59 | 0.00 | ...  | ...  | ...  | 20                    | 23.2                          | 8.37                          | 13.35                           | 1.65                                | 39.43  | 42.70   | Nya Dookma.      | ...               |                          |
| 0.75 | 0.11 | ...  | ...  | ...  | 0.08 | 0.07 | ...  | ...  | ...  | 14                    | 19.5                          | 10.51                         | 11.84                           | 2.36                                | 44.75  | 39.33   | Deoghur          | ...               |                          |
| 0.30 | 0.77 | ...  | ...  | ...  | 0.06 | 0.14 | 0.12 | ...  | ...  | 14                    | 18.9                          | 9.99                          | 12.60                           | 3.13                                | 36.74  | 39.76   | Jamtara.         | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ?                     | ?                             | ?                             | ?                               | ?                                   | ?  | ?   | Simra.           | ...               |                          |
| ...  | 0.16 | ...  | ...  | ...  | 3.00 | ...  | ...  | ...  | ...  | 8                     | ?                             | 8.24                          | ?                               | 3.00                                | 27.15  | ?   | Namihat.         | ...               |                          |
| 0.40 | 0.09 | ...  | ...  | ...  | 0.48 | 0.10 | ...  | ...  | ...  | 18                    | 23.2                          | 11.77                         | 12.34                           | 3.10                                | 35.47  | 33.26   | Pachamba         | ...               | CENTRAL NAEPUR.          |
| 0.57 | 0.56 | 1.23 | ...  | ...  | ...  | 0.05 | 0.20 | ...  | ...  | 18                    | 23.5                          | 11.99                         | 12.70                           | 3.24                                | 40.00  | 37.84   | (Giridi).        | ...               |                          |
| ...  | 1.23 | 0.35 | ...  | ...  | 0.08 | 0.32 | ...  | ...  | ...  | 11                    | 17.0                          | 8.07                          | 11.03                           | 2.50                                | 33.63  | 37.84   | Hazaribagh.      | ...               |                          |
| 0.38 | 0.96 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 15                    | 18.5                          | ...                           | ...                             | 4.19                                | ...  | ...   | Santagurah.      | ...               |                          |
| 0.40 | 0.50 | 0.10 | ...  | ...  | 0.20 | 0.40 | ...  | ...  | 0.20 | 17                    | 20.7                          | 15.60                         | 15.04                           | 3.80                                | 50.80  | 48.51   | Mahudi Hills.    | ...               |                          |
| 1.00 | 0.07 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 11                    | ?                             | 11.25                         | ?                               | 3.25                                | 35.94  | ?   | Jhoomurah Hills. | ...               |                          |
| 0.02 | 0.13 | ...  | ...  | ...  | ...  | 0.24 | ...  | ...  | ...  | 14                    | ?                             | 10.02                         | ?                               | 3.21                                | 40.43  | ?   | Barhi.           | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | 0.40 | ...  | ...  | ...  | 13                    | ?                             | 17.52                         | ?                               | 3.80                                | 61.47  | ?   | Chatra.          | ...               |                          |
| 0.80 | ...  | ...  | ...  | ...  | ...  | 1.00 | 2.20 | 0.30 | ...  | 11                    | ?                             | 14.80                         | ?                               | 3.00                                | 48.33  | ?   | Karaydeha.       | ...               |                          |
| ...  | ...  | 1.00 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ?                     | ?                             | ?                             | ?                               | ?                                   | ?  | ?   | Kamghar.         | ...               | CENTRAL NAEPUR.          |
| 0.35 | 0.49 | 0.01 | 0.08 | 0.01 | 0.01 | ...  | 0.18 | 0.01 | ...  | 25                    | ?                             | 17.05                         | ?                               | 3.50                                | 47.01  | ?   | Lohardugga       | ...               |                          |
| 0.23 | 0.90 | ...  | ...  | ...  | 0.21 | 2.14 | ...  | 0.25 | ...  | 16                    | 22.2                          | 13.21                         | 13.01                           | 3.94                                | 50.40  | 38.14   | Ranchi.          | ...               |                          |
| 0.38 | ...  | 0.20 | ...  | ...  | ...  | 0.31 | ...  | ...  | ...  | 15                    | 17.6                          | 10.81                         | 11.56                           | 2.75                                | 42.04  | 35.78   | Palamow.         | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | 0.07 | 0.02 | ...  | ...  | 12                    | ?                             | 13.84                         | ?                               | 3.00                                | 37.43  | ?   | Silli.           | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | 1.00 | 2.50 | ...  | ...  | 0                     | ?                             | 10.70                         | ?                               | 2.50                                | 32.27  | ?   | Balamah.         | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | 1.23 | 0.13 | ...  | ...  | ...  | 8                     | ?                             | 13.29                         | ?                               | 6.53                                | 48.61  | ?   | Hosainabad.      | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ?                     | ?                             | ?                             | ?                               | ?                                   | ?  | ?   | Garuah.          | ...               |                          |
| 1.40 | 0.34 | 0.05 | ...  | ...  | 0.32 | 0.04 | 0.36 | ...  | 0.03 | 20                    | 23.2                          | 14.17                         | 13.60                           | 3.56                                | 45.71  | 45.33   | Chyobassa        | ...               | CENTRAL NAEPUR.          |
| 1.33 | ...  | ...  | ...  | ...  | 0.08 | 0.21 | ...  | ...  | 0.35 | 12                    | ?                             | 9.31                          | ?                               | 4.10                                | 35.38  | ?   | Chakradhar.      | ...               |                          |
| 0.63 | 0.25 | ...  | ...  | ...  | 0.50 | ...  | ...  | ...  | ...  | 16                    | ?                             | 17.41                         | ?                               | 3.72                                | 47.60  | ?   | Chatila.         | ...               |                          |
| 0.69 | ...  | ...  | ...  | ...  | 1.19 | ...  | ...  | 0.48 | ...  | 13                    | ?                             | 8.77                          | ?                               | 2.00                                | 34.96  | ?   | Baharagura.      | ...               |                          |
| 2.14 | 0.03 | ...  | ...  | ...  | 1.70 | 0.05 | ...  | ...  | ...  | 13                    | 21.7                          | 14.69                         | 13.84                           | 5.05                                | 38.79  | 38.50   | Purulia          | ...               |                          |
| 0.61 | 0.16 | ...  | ...  | 0.06 | 0.08 | 0.10 | ...  | ...  | ...  | 16                    | 20.1                          | 7.28                          | 13.26                           | 3.05                                | 26.29  | 34.16   | Gobindpore.      | ...               |                          |
| ...  | 0.21 | ...  | ...  | ...  | 0.32 | 0.05 | ...  | ...  | ...  | 13                    | ?                             | 8.93                          | ?                               | 4.39                                | 31.05  | ?   | Raghunathpore.   | ...               |                          |
| 1.15 | 0.23 | ...  | ...  | ...  | 2.90 | 0.10 | ...  | ...  | ...  | 14                    | ?                             | 14.20                         | ?                               | 4.42                                | 36.70  | ?   | Barabhoom.       | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ?                     | ?                             | ?                             | ?                               | ?                                   | ?  | ?   | Jhaida.          | ...               |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ?                     | ?                             | ?                             | ?                               | ?                                   | ?  | ?   | Char.            | ...               |                          |

**SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVA-  
TIONS TAKEN IN ASSAM, DURING THE MONTH OF AUGUST 1887.**

THE normal meteorological conditions in Bengal during August resemble those of July to a very great extent, and the month is therefore nearly as important as July from a meteorological point of view. The south-west monsoon winds continue to blow over the province with almost undiminished force during the greater part of August, though towards the end of the month, or commencement of September, wind velocities begin to fall off. The normal rainfall in August is distinctly, though slightly, smaller than in July, and this would tend to show that the monsoon current even in August commences to weaken. The greater part of the rainfall in Bengal in August is undoubtedly brought up by the Bay of Bengal current, but a considerable part of the rainfall at the western stations of the province is also due to the Bombay branch of the current, which, interacting in these districts with the Bengal branch, causes ascensional air motion, and consequently increased precipitation of rain. The Bay of Bengal branch alone gives the heaviest rainfall to the southern, eastern, and northern districts, but the interaction just mentioned increases the rainfall in the western districts, and thus supplements the action of the Bengal current, and tends to produce greater uniformity of rainfall over the whole province.

The actual amount of rainfall in August will no doubt depend mainly on the strength and volume of the Bay of Bengal monsoon current, the heaviest rainfalls usually occurring in the eastern and northern districts, and the amount slowly diminishing towards the western districts; but the actual distribution will be affected by the causes which have been discussed in the previous monthly summaries. One of the causes which will produce marked variations from the normal distribution of rainfall will be the formation and passage of areas of barometric depression or small cyclonic storms, which bring large amounts of rain to the districts through which they pass. The formation of such storms is a prominent characteristic of many rainy seasons, though they are to a certain extent absent in others: and as the line of country through which they pass varies very considerably, they are prominent causes in modifying the distribution of rain in particular years. A second cause which modifies the normal distribution of the rainfall is the varying strengths of the two currents, and the amount and position of their interaction, and it will be seen that, if from any cause a larger amount of interaction than usual takes place over the western districts of the province, the rainfall will be increased by a corresponding amount.

The normal distribution of rainfall during the month is comparatively simple. The two localities in which rainfall is heaviest, and where the amount exceeds 20 inches, include, first, the Chittagong, Noakholly, and Backergunge districts; and second, the Julpigoree, Cooch Behar, and Darjeeling districts. The area which receives a rainfall of between 20 and 15 inches starts from Sangor Island and runs nearly parallel to the sea coast, then turns to the north, runs parallel to the Tipperah and Sylhet hills, and through the centre of the Rungpore district to Kissengunge in the Purneah district. The greater part of Chutia Nagpur, and of South-West, Central, East and North Bengal receives a rainfall of from 12 to 15 inches, while the greater part of Behar receives only from 10 to 12 inches. The central districts of Behar receive the smallest amounts of rain, the average being generally rather less than 10 inches.

*Meteorology of the month.*—During the last week of July a small cyclonic storm which had formed at the head of the Bay had advanced inland through South-West Bengal and had filled up and disappeared near Sutna on the 28th of July. In the rear of the storm a very strong current set in from the Bay of Bengal, and at the commencement of August conditions were decidedly favourable for general rainfall in Bengal. The strength of the monsoon current blowing over Bengal at the commencement of August may be shown by the fact that from the 1st to the 2nd the average wind velocity at Sangor Island was no less than 30 miles an hour. This velocity, however, was exceptionally high, and it speedily became smaller; but for the first ten or twelve days of the month a fairly strong monsoon current continued to blow over the province, and the only feature of change or of interest was the alternate increase and falling off in the strength of the two branches of the monsoon current—for some days the current from the Bay of Bengal holding entire possession of the province, when it would be then partially driven back by the westerly current from the Arabian sea, only to be again re-established a few days subsequently. About the 12th of August, however, it became evident that both branches of the monsoon current were becoming decidedly weaker as rain-bearing currents, and on this day the area of rainfall rapidly contracted, and the greater part of the province received little or no rain. A partial break in the rains then set in, which lasted only three or four days in some districts, and about a week in others, and during this period a feeble cyclonic storm was formed in the north of the Bay, which only crossed the west coast to the south of Gopalpur on the 19th. This storm naturally formed a prominent feature in the meteorology of this part of the month, and during its formation and advance towards the west coast the monsoon winds were mainly deflected towards it, and rain to a great extent ceased in Bengal, and it was only after the feeble storm had advanced inland that it again became possible for the

monsoon winds to blow over Bengal. Rain therefore became pretty general in Orissa, South-West Bengal, and East Bengal on the 19th and 20th, but the general rainfall only reached North Bengal and the greater part of Behar and Chutia Nagpur on the 21st and 22nd. The monsoon current blowing over Bengal was, however, not very strong, and as usual the two branches of the current alternately strengthened and weakened, giving rise to a certain amount of interaction between them for some days, till on the 26th a distinct cyclonic circulation of winds set up over South-East Bengal, and this was accompanied by the formation of an exceedingly feeble area of low pressure. On the 27th the very feeble depression had moved in a westerly direction and was in South-West Bengal, and was moving into Chutia Nagpur; it was still accompanied by a feeble circulation of winds and by rather heavy rain, and amounts exceeding two inches were received at a considerable number of stations in South Bengal and in Chutia Nagpur, while rather heavy rain also set in over the northern districts on the same day. On the 28th the depression had disappeared in a westerly direction, and a moderate south-easterly and southerly current from the Bay of Bengal set in over the whole province, but the rainfall was confined to a few light showers up till the 30th, when, though the general conditions had scarcely altered, heavy and rather general rain commenced in the northern districts of the province, and on this day Protabgunge, in the North Bhagulpur district, received 7·35 inches, and Buxa 4·21 inches, and over the southern districts moderate showers were rather numerous. This heavy rain in the north of Bengal on the 30th set up a slight cyclonic circulation of winds, which was distinctly noticeable on the 31st, and pressure also became slightly low over the central and northern parts of the province, and with these favourable conditions for rainfall, particularly heavy rain was received over a considerable part of North Bengal. On this day Julpigoree reported the excessive fall of 11·47 inches, Mickligunge one of 7·75 inches, Fallacotta 7·51 inches, Protabgunge 5·11 inches and Kaliagunge 4 inches; while moderately heavy showers became pretty numerous over the whole province. At the close of the month therefore conditions were again rather favourable for rainfall over the whole of Bengal.

*Barometric depressions of the month.*—It will be seen from the foregoing summary that only one barometric depression of any importance was formed, while the second, which lasted only on the 26th and 27th, was exceedingly feeble. The second was formed in South-East Bengal, and moved in a westerly direction through South-West Bengal and Chutia Nagpur, and it had practically disappeared from the province on the 28th. The first was decidedly more important, as it produced a distinct break in the rains in Bengal. Its history may be briefly described as follows:—

*Barometric depression of the 14th to the 20th of August.*—On the 13th the conditions over Bengal and the sea area to the south of it were those of an ordinary very light monsoon, except that pressure was decidedly low along the coast of Madras from Gopalpore to Masulipatam. Winds also were rather more strongly easterly along the west coast than is usual. Conditions remained almost unchanged for the following two days at the stations in the northern half of the Bay and in Bengal, but the strength of the monsoon blowing in the south of the Bay began to increase very considerably. On the 16th winds became north-easterly at many stations in Bengal, and also along the Orissa coast and at Akyab, while to the south winds were westerly. It was therefore clearly evident on this day that a distinct depression had formed in the centre of the Bay. On the 17th the centre of the feeble storm was off the South Orissa coast, but it had not strengthened to any material extent, though there was a distinct cyclonic circulation of winds accompanying it. On the 18th it had approached rather nearer the land, but it still remained a feeble storm, and on the morning of the 19th it was crossing the South Orissa coast a little to the south of Gopalpore, and the centre of the storm on this day was a little distance inland. The storm afterwards drifted into the Central Provinces, where, after a day or two, it filled up. It was a remarkably persistent storm, though the barometric depression at its centre was feeble, and though the winds in connection with it were comparatively light; but at sea it gave rise to somewhat squally weather and rough sea.

*Strength of the monsoon current during August.*—The only actual measure of the strength of the monsoon current is obtained by recording the wind velocity. This record is manifestly important though imperfect, for it only deals with one of two important factors, for the monsoon current may not only vary in velocity, but also in depth or volume, and probably of the two, the latter will be the more important factor in influencing the rainfall. The estimation of the second of these factors is impossible, and thus the actual strength of the monsoon current blowing can only be judged by the measurement of the wind velocity. At the end of August the strength of the monsoon undoubtedly begins to diminish, but, on the other hand, if the wind velocities measured during August are equal to or above the normal, there is a reasonable probability that the strength of the monsoon (i.e., both velocity and depth) is fully equal to the normal, and that the monsoon will continue to blow, and to give rain for the normal period. In the following table the actual and normal wind velocities are given at the typical coast stations at the head of the Bay, and also at five or six of the most important inland stations of the province. The average of the whole of the eleven stations shows that the actual daily wind velocity has been 129 miles against the normal 126 miles. Out of the eleven stations, however, seven show a velocity distinctly smaller than usual, while at Saugor Island and Hazaribagh velocities have been much above the normal. If these two stations are left out of the calculation (as

there is evidently something abnormal in them), both in the determination of the mean for the month and the normal, the mean velocity for August has only been 98 miles against the normal 103 miles. These facts would distinctly point to the probability that the monsoon current blowing in August was decidedly weaker than usual, and this is borne out by the diminished rainfall. Another fact which has been noticeable throughout the month is the strong westerly element which has frequently been present in the wind directions. This being the case and the monsoon being weaker than usual, there is perhaps a possibility that the present monsoon, as derived from the Bay of Bengal, will close rather earlier than usual.

*Average daily wind velocity in miles for August.*

| STATIONS.         | Normal. | Actual for August 1887. | STATIONS.                          | Normal. | Actual for August 1887. |
|-------------------|---------|-------------------------|------------------------------------|---------|-------------------------|
| Akyab ...         | 75.6    | 72                      | Cuttack ...                        | 70.5    | 52                      |
| Chittagong ...    | 144.8   | 112                     | Burdwan ...                        | 88.5    | 75                      |
| Dacca ...         | 148.1   | 138                     | Berhampore ...                     | 98.8    | 94                      |
| Jessore ...       | 98.7    | 89                      | Patna ...                          | 78.4    | 79                      |
| Calcutta ...      | 123.7   | 125                     | Hazaribagh ...                     | 179.0   | 221                     |
| Saugar Island ... | 278.0   | 366                     | Average of the eleven stations ... | 125.8   | 129.3                   |

**Pressure.**—The variations of pressure have as a rule not been very large during the month. At the commencement of August pressure was in excess of the normal by amounts varying from about 0.03" to 0.05". The largest excess pressures at this time were recorded in Orissa and South-West Bengal, and the smallest in Assam. For the second week in the month the excess pressure rather increased to about 0.06", but the seat of maximum excess was transferred to the northern parts of the province and to Sibsaugor, while at the extreme western stations the excess was decidedly smaller. For the third week the pressures were largely influenced by the existence of the depression in the Bay, and thus while in Orissa pressure was nearly normal, at Purneah an excess pressure of 0.114" was registered, and at Dacca one of 0.072". In Assam also the mean pressure was above the normal by 0.043". Conditions as to pressure then became far more nearly normal, and for the greater part of the remainder of the month pressure was generally slightly below the normal. For the whole province, taking into consideration only those stations at which observations have been recorded for some years, and which therefore yield reliable averages, it may be said that the mean pressure for the month has been above the normal by 0.035 inch. This excess pressure has been smallest in the southern and south-western districts, and largest in the northern districts, and particularly along the foot of the hills, where at Purneah it equals 0.062 inch and at Durbhunga 0.053 inch. In Assam pressure has also been pretty uniformly in excess, the mean pressure showing 0.028 inch in excess of the normal.

**Temperature.**—As is usual during the monsoon period, the variations of temperature have generally been small and of little importance, though during the break in the rains in the middle of the month temperature rose rather considerably. In the first week the mean temperature of Bengal was 0.7° in defect of the normal, while in Assam the defect was 0.8°. In the second week temperature was again below the normal, the defect averaging about 1.4° to 1.5° both in Bengal and Assam. In the third week temperature had become in excess generally by about 1°, and the excess continued, though in smaller amounts, up till the close of the month. For the whole month the average temperature in Bengal has been very slightly in defect of the normal, the defect equalling about a tenth of a degree. In Assam the mean defect has been rather larger, and it averages 0.3°.

**Rainfall.**—The comparison of the actual rainfall of the various great divisions of the province during August with the normal is most accurately and conveniently shown in the form of a percentage. The figures representing the rainfall for the month calculated in this way are included in the table below under the heading of August. This table really gives a condensed summary of the rainfall statistics of the present year up to date for each meteorological division, the first eight columns giving the actual average rainfalls in each division in each month expressed as a percentage of the normal, while the ninth column gives the actual rainfall for the first eight months of the year expressed as a percentage of the

rainfall for the period. The figure 100 in this table will therefore represent a normal fall; a number larger than 100 an excess fall, and so on :—

| Meteorological Divisions. | January. | February. | March. | April. | May. | June. | July. | August. | Actual rainfall of first eight months expressed as a percentage of the normal fall for the period. |
|---------------------------|----------|-----------|--------|--------|------|-------|-------|---------|--|
| Orissa                    | 119      | NIL.      | 137    | 60     | 193  | 66    | 91    | 83      | 91   |
| South-West Bengal         | 303      | 2         | 253    | 56     | 139  | 83    | 105   | 76      | 96   |
| East Bengal               | 613      | 14        | 306    | 34     | 71   | 70    | 80    | 71      | 80   |
| North Bengal              | 530      | 8         | 374    | 114    | 158  | 139   | 63    | 97      | 115  |
| North Behar               | 381      | NIL.      | 127    | 109    | 177  | 135   | 59    | 111     | 107  |
| South Behar               | 411      | NIL.      | 263    | 188    | 423  | 70    | 83    | 83      | 167  |
| Chutia Nagpur             | 500      | NIL.      | 10     | 111    | 331  | 73    | 93    | 90      | 160  |

That is to say, in August North Behar has received a rainfall decidedly in excess of the normal, Chutia Nagpur and North Bengal have received falls nearly equal to the normal, South Behar and Orissa falls in decided defect, and South-West Bengal and East Bengal falls rather largely in defect of the normal.

In actual amounts North Bengal has received, the largest average fall, equalling 13·74 inches, and North Behar the next largest amount, 12·79 inches; East Bengal and Chutia Nagpur have received average falls between 11 and 12 inches, and Orissa, South Behar, and South-West Bengal amounts between nine and ten inches. These figures, however, represent only the average falls over the seven large divisions into which the province is divided for meteorological purposes, and the actual falls at different stations have varied much more largely than this. Thus the fall has varied between about fifty and five inches at various stations, for while Buxa in the Darjeeling Hills district has received 50·72 inches, Gyabanda in the Rungpore district has received 4·85 inches, Sherepore in the Bogra district 3·95 inches, Kishnaghur 4·6 inches, Magoora 4·79 inches, Maldah 4·76 inches, and Dhurmsalla in the Cuttack district 4·81 inches. These stations indeed appear to have been centres of particularly scanty rainfall throughout the month. These figures will indicate that the distribution of the rainfall during August has been very irregular, decidedly more irregular than is the case in most years. The Bombay branch of the monsoon, as has been previously indicated, has been decidedly strong, and the Bay of Bengal branch has therefore had a more easterly set, or has been deflected towards the east more than usual. At the same time the amount of interaction between the two branches has been more marked than usual over the western parts of the province. In the actual distribution of the rainfall in this month there appear to be no less than three areas of large precipitation, the first along the line of the hills to the north of the province, where falls of 30 inches and upwards are frequent; the second in South-East Bengal, where the falls rise to about 20 to 25 inches; and the third in the west of the province, where the falls are from 15 to 18 inches, and from these three centres rainfall diminishes in quantity towards the centre of the province.

Compared with the normal fall for the month, it is seen that there are two large and one small tract of excess rainfall, but that the whole of the remainder of the province, constituting probably about three-quarters of the whole, has been in very decided defect. The one large area of excess precipitation comprises the whole of Chutia Nagpur except the Hazaribagh district, the western stations in Orissa, Ranigunge, and the whole of the Bankoora district. The second large area runs along the line of the hills to the north of North Bengal and North Behar, and includes the greater part of Behar to the north of the Ganges, but does not include Chumparun, and also includes the Dinagepur and Rungpur districts; but, on the other hand, parts of the Rungpur and Darjeeling districts are in defect. The third area of excess precipitation comprises a small part of the Moorshedabad and Sonthal Pergunnahs districts. The excess falls generally vary up to about three inches, but in some cases they exceed five inches. The whole of the remainder of the province is in defect, a large part being in defect by amounts larger than three and in some cases five inches. The following are the principal areas of defect :—the greater part of the Patna district and part of the Gya district, and the following districts :—the South Bhagulpore, Maldah, Pubna, Bogra, Mymensingh, Dacca, part of Comilla, Furreedpur, Backergunge, Jessore, Khoolua, part of Nuddea, Burdwan, Birbhoom, Hooghly, Howrah, part of Midnapore, Pooree and Cuttack. In the Furreedpore, Dacca, Bogra, Pubna, and Maldah districts the average falls scarcely equal half the normal amount.

The following table gives full data for the comparison of the actual and the normal rainfall of the month of August in all districts of the province. The figures are derived from the average and actual rainfall of the rain-recording stations in each district, due allowance or weight being made for the area which each station represents. This gives a more accurate average than the arithmetical means given in the weekly and monthly meteorological tables. The first column gives the normal or average district rainfall as determined from the rainfall observations of the past 15 years. The second column gives the actual district rainfall as determined from the weighted actual rainfalls of the month at the reporting stations in each district. The third column expresses the ratio of the actual district rainfall at the past month to the normal rainfall as a percentage. The fourth column gives the same information as the third column in a slightly different form. It states as a percentage



how much the district rainfall of the month varied in excess or defect from the normal rainfall, and is hence the difference between the numbers in the third column and 100:—

Percentage Table for August 1887.

| Division.         | District.              | Normal district rainfall, August 1887. | Actual district rainfall, August 1887. | Percentage of actual to normal rainfall. | Percentage, excess (+) defect (—) |
|-------------------|------------------------|--|--|--|-----------------------------------|
| Orissa            | Pooree ...             | 11.33                                  | 8.63                                   | 76                                       | — 24                              |
|                   | Cuttack ...            | ...                                    | ...                                    | ...                                      | ...                               |
|                   | Balasore ...           | 11.36                                  | 10.13                                  | 89                                       | — 11                              |
| South-West Bengal | Midnapore ...          | 12.75                                  | 10.93                                  | 86                                       | — 14                              |
|                   | 24-Pergunnahs ...      | 13.29                                  | 10.18                                  | 77                                       | — 23                              |
|                   | Howrah ...             | 13.17                                  | 7.21                                   | 55                                       | — 45                              |
|                   | Hooghly ...            | 13.75                                  | 7.54                                   | 55                                       | — 45                              |
|                   | Burdwan ...            | 12.08                                  | 9.69                                   | 80                                       | — 20                              |
|                   | Bankoora ...           | 13.31                                  | 16.45                                  | 124                                      | + 24                              |
|                   | Beerbhoom ...          | 13.05                                  | 10.80                                  | 83                                       | — 17                              |
|                   | Nuddea ...             | 11.88                                  | 8.29                                   | 70                                       | — 30                              |
|                   | Khoolna ...            | 12.36                                  | 9.44                                   | 76                                       | — 24                              |
|                   | Jessore ...            | 11.55                                  | 6.96                                   | 60                                       | — 40                              |
| East Bengal       | Moorshedabad ...       | 11.66                                  | 10.66                                  | 91                                       | — 9                               |
|                   | Chittagong ...         | 22.83                                  | 21.06                                  | 92                                       | — 8                               |
|                   | Backergunge ...        | 15.63                                  | 10.57                                  | 68                                       | — 32                              |
|                   | Noakhully ...          | 23.15                                  | 22.38                                  | 97                                       | — 3                               |
|                   | Furzedpore ...         | 12.02                                  | 6.87                                   | 57                                       | — 43                              |
|                   | Dacca ...              | 12.28                                  | 8.36                                   | 68                                       | — 32                              |
|                   | Comilla ...            | 16.30                                  | 12.62                                  | 77                                       | — 23                              |
|                   | Mymensingh ...         | 14.16                                  | 9.41                                   | 66                                       | — 34                              |
| North Bengal      | Pubna ...              | 12.00                                  | 6.45                                   | 54                                       | — 46                              |
|                   | Bogra ...              | 11.84                                  | 6.93                                   | 59                                       | — 41                              |
|                   | Rajshahye ...          | 11.46                                  | 10.61                                  | 93                                       | — 7                               |
|                   | Maldah ...             | 12.00                                  | 6.00                                   | 50                                       | — 50                              |
|                   | Dinapore ...           | 11.84                                  | 12.75                                  | 108                                      | + 8                               |
|                   | Rungpore ...           | 12.38                                  | 13.65                                  | 110                                      | + 10                              |
|                   | Cooch Behar ...        | 20.34                                  | 25.71                                  | 126                                      | + 26                              |
|                   | Julpigoree ...         | 26.23                                  | 31.03                                  | 118                                      | + 18                              |
| North Behar       | Darjeeling ...         | 24.14                                  | 22.24                                  | 92                                       | — 8                               |
|                   | Purneah ...            | 14.86                                  | 16.34                                  | 110                                      | + 10                              |
|                   | North Bhagulpore ...   | 11.92                                  | 15.36                                  | 129                                      | + 29                              |
|                   | Durbhunga ...          | 10.76                                  | 15.07                                  | 140                                      | + 40                              |
|                   | Mozufferpore ...       | 10.08                                  | 12.35                                  | 123                                      | + 23                              |
|                   | Chumparun ...          | 12.34                                  | 9.31                                   | 75                                       | — 25                              |
|                   | Saran ...              | 10.12                                  | 8.97                                   | 89                                       | — 11                              |
| South Behar       | Shahabad ...           | 11.12                                  | 11.62                                  | 104                                      | + 4                               |
|                   | Gya ...                | 11.07                                  | 9.47                                   | 86                                       | — 14                              |
|                   | Patna ...              | 10.11                                  | 7.33                                   | 73                                       | — 27                              |
|                   | Monghyr ...            | 10.79                                  | 9.43                                   | 87                                       | — 13                              |
|                   | South Bhagulpore ...   | 10.91                                  | 7.91                                   | 73                                       | — 27                              |
|                   | Southal Pergunnahs ... | 12.13                                  | 10.35                                  | 85                                       | — 15                              |
| Chutia Nagpur     | Hazaribagh ...         | ...                                    | ...                                    | ...                                      | ...                               |
|                   | Lohardugga ...         | 11.61                                  | 11.08                                  | 95                                       | — 5                               |
|                   | Singbhoom ...          | 13.60                                  | 14.17                                  | 104                                      | + 4                               |
|                   | Manbhoom ...           | 12.58                                  | 13.21                                  | 102                                      | + 2                               |



The following table gives the summary of the temperature and rainfall data of each of the seven Meteorological Divisions of the province for the month of August 1887 :—

| METEOROLOGICAL<br>DIVISIONS.          | TEMPERATURE.                   |                               |                         |                        |                       |  |           | RAINFALL.       |            |                          |                                 |            |                      |                 |
|---------------------------------------|--------------------------------|-------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|--------------------------|---------------------------------|------------|----------------------|-----------------|
|                                       | Highest observed during month. | Lowest observed during month. | Averages for month.     |                        |                       | Average mean of month above or below normal mean of month. | Of month. |                 |            | Rainy days.              |                                 |            | Since 15th May 1887. |                 |
|                                       |                                |                               | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average.  | Normal average. | Variation. | Average number in month. | Normal average number in month. | Variation. | Average.             | Normal average. |
|                                       |                                |                               |                         |                        |                       |  |           |                 |            |                          |                                 |            |                      |                 |
| Orissa.   ...   ...   ...   ...   ... | 95·4                           | 74·3                          | 88·0                    | 78·4                   | 83·2                  | +0·2   | 9·38      | 11·30           | —1·92      | 18·2                     | 18·4                            | —0·2       | 32·00                | 34·96           |
| South-West Bengal   ...   ...   ...   | 95·1                           | 74·1                          | 88·8                    | 78·1                   | 83·5                  | +0·1   | 9·46      | 12·03           | —3·07      | 15·8                     | 19·8                            | —4·0       | 35·20                | 37·03           |
| East Bengal   ...   ...   ...   ...   | 94·3                           | 71·0                          | 87·2                    | 77·5                   | 82·4                  | +0·  | 11·71     | 16·16           | —4·45      | 17·7                     | 22·3                            | —4·6       | 41·31                | 55·73           |
| North Bengal   ...   ...   ...   ...  | 94·3                           | 66·7                          | 88·4                    | 77·3                   | 82·8                  | —0·1   | 13·74     | 14·17           | —0·43      | 17·3                     | 18·9                            | —1·6       | 57·04                | 59·93           |
| North Behar   ...   ...   ...   ...   | 94·7                           | 73·6                          | 88·0                    | 78·1                   | 83·1                  | —0·9   | 12·79     | 11·53           | +1·27      | 16·7                     | 15·9                            | +0·8       | 39·99                | 34·14           |
| South Behar   ...   ...   ...   ...   | 94·4                           | 73·0                          | 88·0                    | 78·3                   | 83·2                  | +0·6   | 9·44      | 11·42           | —1·98      | 14·0                     | 16·3                            | —2·3       | 32·33                | 31·71           |
| Ohutia Nagpur   ...   ...   ...   ... | 87·5*                          | 69·4*                         | 83·1*                   | 71·8*                  | 77·5*                 | —0·3   | 11·96     | 13·31           | —1·35      | 16·0                     | 20·6                            | —4·6       | 36·74                | 36·14           |
| Assam   ...   ...   ...   ...   ...   | 96·1                           | 74·3                          | 88·6                    | 77·0                   | 82·8                  | —0·3   |           |                 |            |                          |                                 |            |                      |                 |

\* Chyebassa not included.

METEOROLOGICAL OFFICE, BENGAL ;  
The 13th September 1887.

ALEXANDER PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal.

## Meteorological Report of the Province of B

| DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                            |                     |                      |                                |                     |               |                           |                                   |                                 |                                     |
|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|----------------------------|---------------------|----------------------|--------------------------------|---------------------|---------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|
|                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                      |                     | TEMPERATURE.         |                                |                     |               |                           |                                   |                                 |                                     |
|                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction.      | Mean wind velocity. | Highest during week. | Date.                          | Lowest during week. | Date.         | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. |
| Pooree                 | Gopalpore               | 29.734                          | 29.784                     | +0.052               | SSW                        | 219.0               | 57.2                 | 3rd, 4th, 7th, 8th & 9th Sept. | 79.8                | 8th Sept.     | 80.0                      | 80.0                              | 83.0                            | +0.4                                |
|                        | False Point             | 29.777                          | 29.798                     | +0.010               | Variable                   | 237.0               | 90.0                 | 8th                            | 77.0                | 9th           | 80.0                      | 78.0                              | 84.0                            | +1.2                                |
| Cuttack                | Cuttack                 | 29.710                          | 29.791                     | +0.082               | Calm                       | 48.0                | 97.4                 | 9th                            | 77.9                | 8th           | 81.8                      | 79.3                              | 85.0                            | +2.0                                |
| Balasore               | Balasore                | 29.726                          | 29.785                     | +0.044               | N                          | 131.3               | 90.4                 | 9th                            | 77.7                | 4th, 8th, 9th | 88.9                      | 78.4                              | 83.7                            | +2.2                                |
| South-West Midnapore   | Saugor Island           | 29.771                          | 29.797                     | +0.054               | S                          | 278.0               | 90.7                 | 7th                            | 79.0                | 7th           | 80.5                      | 80.8                              | 85.2                            | +2.1                                |
| Midnapore              | Midnapore               | 29.000                          | 29.820                     | +0.084               | S.N                        | 97.8                | 92.8                 | 8th                            | 77.3                | 5th, 8th, 9th | 90.7                      | 77.9                              | 84.3                            | +2.0                                |
| 4-Pargunnahs           | Calcutta                | 29.770                          | 29.792                     | +0.065               | S.N                        | 88.0                | 90.5                 | 8th, 9th                       | 77.7                | 3rd           | 88.4                      | 79.3                              | 83.8                            | +1.8                                |
| Howrah                 | Burdwan                 | 29.694                          | 29.794                     | +0.064               | Westerly                   | 82.0                | 93.0                 | 9th                            | 74.4                | 3rd           | 90.7                      | 80.0                              | 85.1                            | +1.7                                |
| Bankoora               | Bankoora                | 29.471                          | —                          | —                    | SE                         | 20.0                | 95.1                 | 9th                            | 77.3                | 3rd, 5th, 6th | 90.9                      | 78.0                              | 84.8                            | —                                   |
| Seerghoom              | Raneegunge              | 29.466                          | 29.773                     | +0.086               | Northerly                  | 60.7                | 94.5                 | 9th                            | 76.3                | 5th           | 90.0                      | 78.0                              | 84.8                            | +2.7                                |
| West Burdwan           | Berhampore              | 29.728                          | 29.796                     | +0.054               | Variable                   | 87.8                | 92.2                 | 9th                            | 78.3                | 3rd, 4th, 5th | 80.3                      | 79.0                              | 84.0                            | +0.8                                |
| Barasat                | Krishnagur              | 29.735                          | 29.803                     | —                    | S                          | 83.9                | 93.3                 | 9th                            | 77.7                | 3rd, 5th, 7th | 80.9                      | 78.3                              | 84.1                            | —                                   |
| Jessore                | Jessore                 | 29.773                          | 29.807                     | +0.056               | Variable                   | 53.5*               | 93.8*                | 9th                            | 77.9*               | 5th           | 91.9*                     | 79.8*                             | 85.0                            | +2.0                                |
| Chittagong             | Chittagong              | 29.734                          | 29.824                     | +0.024               | Variable                   | 65.0                | 91.6                 | 8th                            | 75.5                | 3rd           | 87.8                      | 77.0                              | 82.7                            | +1.0                                |
| Chittagong Hill Tracts | Demagiri                | —                               | —                          | —                    | Observations not received. |                     |                      |                                |                     |               |                           |                                   |                                 |                                     |
| Chokergunge            | Barrisal                | 29.780                          | 29.798                     | +0.059               | S                          | 102.0               | 92.8                 | 9th                            | 76.8                | 4th           | 80.0                      | 70.4                              | 84.2                            | +3.7                                |
| Chokholly              | Noakholly               | 29.767                          | 29.811                     | —                    | Calm                       | 11.3                | 91.5                 | 9th                            | 75.8                | 3rd           | 88.1                      | 73.8                              | 83.5                            | —                                   |
| Furzedpore             | Furzedpore              | 29.791                          | 29.830                     | +0.102               | N                          | 99.0                | 90.5                 | 9th                            | 77.9                | 3rd           | 87.9                      | 80.0                              | 84.0                            | +2.5                                |
| Dacca                  | Dacca                   | 29.770                          | 29.798                     | +0.045               | S                          | 99.0                | 93.1                 | 9th                            | 79.2                | 4th—6th       | 80.5                      | 80.3                              | 84.0                            | +1.0                                |
| Comillah               | Comillah                | 29.774                          | 29.809                     | +0.038               | SE                         | 71.6                | 95.3                 | 9th                            | 74.8                | 3rd           | 89.4                      | 77.2                              | 83.3                            | +3.0                                |
| Mymensingh             | Mymensingh              | 29.768                          | 29.827                     | +0.052               | Calm                       | 70.0                | 92.3                 | 9th                            | 76.1                | 3rd           | 88.5                      | 78.2                              | 83.4                            | +1.0                                |
| Bogra                  | Bogra                   | 29.708                          | 29.771                     | —                    | Calm                       | 80.3                | 92.3                 | 9th                            | 71.3                | 3rd           | 87.6                      | 77.1                              | 82.4                            | —                                   |
| Serajpore              | Serajpore               | 29.751                          | 29.797                     | +0.055               | Southerly                  | 74.1                | 90.6                 | 7th, 9th                       | 75.7                | 3rd           | 87.8                      | 78.8                              | 83.3                            | +1.5                                |
| Rampore Beaulah        | Rampore Beaulah         | 29.708                          | 29.776                     | +0.050               | S                          | 76.2                | 92.3                 | 9th                            | 73.6                | 3rd           | 88.9                      | 76.4                              | 82.7                            | +1.0                                |
| Maldah                 | Maldah                  | 29.610                          | —                          | —                    | Calm                       | —                   | 91.8                 | 8th, 9th                       | 73.1                | 7th           | 87.8                      | 75.6                              | 81.7                            | —                                   |
| Dinapore               | Dinapore                | 29.669                          | 29.790                     | +0.052               | Variable                   | 85.0                | 93.1                 | 9th                            | 71.6                | 5th           | 85.8                      | 76.7                              | 81.3                            | +1.3                                |
| Rungpore               | Rungpore                | 29.693                          | 29.821                     | +0.065               | Calm                       | 51.0                | 92.8                 | 8th                            | 71.2                | 6th           | 86.5                      | 74.8                              | 80.7                            | +1.8                                |
| Julpigoree             | Julpigoree              | 29.518                          | 29.806                     | +0.091               | SE                         | 79.4                | 93.0                 | 9th                            | 64.8                | 5th           | 81.6                      | 73.0                              | 79.2                            | +2.7                                |
| Darjeeling Hill Tracts | Darjeeling              | 29.607                          | —                          | +0.028               | Calm                       | 24.0                | 86.6                 | 9th                            | 62.6                | 5th           | 63.2                      | 64.4                              | 58.8                            | +2.1                                |
| Purneah                | Purneah                 | 29.658                          | 29.815                     | +0.011               | Calm                       | 15.4                | 91.2                 | 9th                            | 70.6                | 5th           | 83.0                      | 74.7                              | 79.2                            | +4.9                                |
| Mozufferpore           | Mozufferpore            | —                               | —                          | —                    | Observations suspended.    |                     |                      |                                |                     |               |                           |                                   |                                 |                                     |
| Durbhunga              | Durbhunga               | 29.622                          | 29.791                     | +0.088               | ESE                        | 103.0               | 91.9                 | 9th                            | 74.5                | 5th           | 83.1                      | 77.0                              | 81.4                            | +2.2                                |
| Motihari               | Motihari                | 29.547                          | 29.776                     | +0.056               | Southerly                  | 171.5               | 93.2                 | 9th                            | 73.3                | 5th           | 80.2                      | 75.0                              | 80.9                            | +2.4                                |
| Chupra                 | Chupra                  | 29.517                          | 29.744                     | +0.025               | Variable                   | 3.5                 | 95.0                 | 3rd                            | 75.0                | 5th—7th       | 80.3                      | 77.2                              | 83.3                            | +0.6                                |
| Dehree                 | Dehree                  | 29.458                          | 29.814                     | +0.091               | Easterly                   | 116.0               | 90.4                 | 9th                            | 73.0                | 6th           | 80.5                      | 76.9                              | 81.7                            | +0.4                                |
| Buxar                  | Buxar                   | 29.538                          | 29.781                     | +0.061               | Northerly                  | 101.2               | 92.9                 | 9th                            | 75.3                | 3rd           | 87.5                      | 77.5                              | 82.5                            | +0.7                                |
| Arrah                  | Arrah                   | 29.501                          | 29.759                     | +0.049               | E                          | 48.1                | 91.9                 | 9th                            | 76.1                | 7th           | 87.6                      | 77.4                              | 82.5                            | +1.2                                |
| Gya                    | Gya                     | 29.333                          | 29.760                     | +0.012               | Calm                       | 34.0                | 91.9                 | 9th                            | 75.3                | 6th           | 83.0                      | 78.2                              | 83.6                            | +0.5                                |
| Banspore               | Banspore                | 29.601                          | 29.785                     | +0.058               | Calm                       | 54.0                | 92.9                 | 9th                            | 70.7                | 4th—7th       | 82.7                      | 75.0                              | 82.8                            | +1.0                                |
| Bhagalpore             | Bhagalpore              | 29.613                          | 29.776                     | +0.059               | Northerly                  | 69.0                | 90.4                 | 9th                            | 75.0                | 5th           | 80.3                      | 77.0                              | 82.1                            | +0.9                                |
| Doonka                 | Doonka                  | 29.273                          | —                          | —                    | Calm                       | 3.0                 | 91.1                 | 9th                            | 74.8                | 3rd           | 88.9                      | 77.3                              | 83.1                            | —                                   |
| Hazuribagh             | Hazuribagh              | 27.791                          | 29.788                     | +0.068               | South-westerly             | 176.0               | 80.3                 | 9th                            | 71.7                | 4th           | 86.6                      | 73.1                              | 70.4                            | +1.2                                |
| Ranchi                 | Ranchi                  | 27.663                          | 29.773                     | +0.057               | Calm                       | 114.6               | 88.0                 | 9th                            | 70.4                | 4th           | 81.8                      | 71.6                              | 78.2                            | +1.1                                |
| Chyghassa              | Chyghassa               | 29.013                          | —                          | —                    | Southerly                  | 26.7                | 92.3                 | 9th                            | 75.3                | 8th           | 90.2                      | 76.5                              | 83.4                            | —                                   |
| Sisongar               | Sisongar                | 29.567                          | 29.840                     | +0.012               | SE                         | 55.0                | 94.1                 | 9th                            | 70.0                | 3rd, 5th      | 88.7                      | 77.3                              | 83.0                            | +0.2                                |
| Dhubri                 | Dhubri                  | 29.703                          | 29.821                     | +0.080               | ENE                        | 130.0               | 89.2                 | 8, 9                           | 71.3                | 5th           | 83.4                      | 76.2                              | 79.3                            | +3.3                                |
| Silchar                | Silchar                 | 29.720                          | 29.825                     | +0.008               | ENE                        | 48.0                | 90.5                 | 9th                            | 75.3                | 3rd           | 94.6                      | 77.1                              | 84.3                            | +1.8                                |

week ending Friday, the 9th September 1887.

| DISTRICT OBSERVATIONS.                    |  |                    |              |                     |                    |              |                 |       |        |                               |                              |                  |                           | Representative station. | DISTRICT. | METEOROLOGICAL DIVISION. |
|---|--|--------------------|--------------|---------------------|--------------------|--------------|-----------------|-------|--------|-------------------------------|------------------------------|------------------|---------------------------|-------------------------|-----------|--------------------------|
| Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | OF WEEK.           |              | RAINFALL.           |                    |              |                 |       |        |                               |                              |                  |                           |                         |           |                          |
|   |  |                    |              | Since 1st of month. |                    |              | Since May 15th. |       |        | Average number of rainy days. | Normal number of rainy days. |                  |                           |                         |           |                          |
|   |  | Mean for district. | Normal mean. | Variation.          | Mean for district. | Normal mean. | Variation.      |       |        |                               |                              |                  |                           |                         |           |                          |
| 5.0                                       | 0.06                                   | —                  | —            | —                   | —                  | —            | —               | —     | —      | —                             | —                            | Gopalpore        | Poorce                    | ORISSA.                 |           |                          |
| 5.6                                       | 0.07                                   | —                  | 2.72         | —                   | 3.44               | —            | —               | 37.85 | —      | 3.9                           | —                            | False Point      | —                         |                         |           |                          |
| 6.6                                       | 0.30                                   | —                  | 2.62         | —                   | 3.31               | —            | —               | 38.00 | —      | 3.7                           | —                            | Cuttack          | Cuttack                   |                         |           |                          |
| 5.0                                       | 0.85                                   | —                  | 2.64         | —                   | 3.54               | —            | —               | 37.70 | —      | 3.8                           | —                            | Balasore         | Balasore                  | ORISSA.                 |           |                          |
| 6.6                                       | 0.04                                   | 0.73               | 3.75         | 1.19                | 4.54               | -3.35        | 40.76           | 40.48 | -5.72  | 2.3                           | 4.3                          | Saugor Island    | South-West Midnapore      |                         |           |                          |
| 4.1                                       | 2.46                                   | 0.87               | 2.23         | 1.61                | 2.94               | -1.33        | 42.80           | 40.95 | +1.85  | 2.0                           | 3.9                          | Midnapore        | South 24-Pergunnahs       |                         |           |                          |
| 8.7                                       | 0.75                                   | 0.27               | 3.28         | 0.89                | 3.58               | -2.69        | 32.11           | 42.20 | -10.09 | 1.7                           | 4.6                          | Calcutta         | Midnapore                 | SOUTH-WEST BENGAL.      |           |                          |
| 7.4                                       | 2.62                                   | 0.90               | 2.12         | 1.67                | 2.73               | -1.06        | 37.97           | 36.79 | +1.18  | 1.7                           | 3.8                          | Burdwan          | 34-Pergunnahs...          |                         |           |                          |
| 4.7                                       | 0.80                                   | 0.58               | 2.28         | 0.86                | 3.27               | -2.41        | 43.73           | 42.96 | +1.67  | 2.0                           | 4.1                          | Bankoora         | Howrah                    |                         |           |                          |
| 4.5                                       | 2.64                                   | 2.18               | 3.13         | 2.90                | 4.08               | -1.18        | 40.53           | 42.12 | -1.59  | 2.3                           | 4.6                          | Raneegunge       | Burdwan                   | SOUTH-WEST BENGAL.      |           |                          |
| 8.0                                       | 3.00                                   | 4.47               | 3.01         | 4.73                | 3.73               | +1.00        | 40.19           | 34.16 | +11.03 | 3.3                           | 4.3                          | Berhampore       | Beerbhoom                 |                         |           |                          |
| 7.3                                       | 0.03                                   | 0.72               | 2.07         | 1.42                | 3.23               | -1.81        | 31.00           | 39.08 | -8.08  | 2.0                           | 3.9                          | Krishnachur      | West Burdwan              |                         |           |                          |
| 8.0                                       | 0.06                                   | 0.46               | 2.98         | 1.35                | 3.58               | -2.23        | 29.29           | 43.12 | -13.83 | 1.5                           | 4.2                          | Jessore          | Moorshedabad              | SOUTH-WEST BENGAL.      |           |                          |
| 3.1                                       | 1.35                                   | —                  | 4.07         | —                   | 6.40               | —            | —               | 95.76 | —      | —                             | —                            | Chittagong       | Nuddea                    |                         |           |                          |
| 3.1                                       | 0.58                                   | 1.06               | 4.04         | 2.31                | 4.86               | -2.55        | 41.55           | 62.70 | -21.15 | 2.5                           | 5.0                          | Demagiri         | Jessore                   |                         |           |                          |
| 2.6                                       | 1.14                                   | 3.29               | 5.00         | 4.01                | 7.04               | -3.03        | 58.55           | 89.02 | -30.47 | 3.0                           | 4.9                          | Barrisal         | Khoolna                   | EAST BENGAL.            |           |                          |
| 3.0                                       | 0.45                                   | 0.29               | 3.27         | 0.56                | 3.90               | -3.34        | 27.90           | 45.20 | -17.30 | 1.0                           | 4.2                          | Noakholly        | Backergunge               |                         |           |                          |
| 3.7                                       | 1.17                                   | 1.06               | 4.20         | 1.39                | 5.26               | -3.87        | 32.16           | 49.78 | -17.62 | 2.0                           | 4.7                          | Furteedpore      | Noakholly                 |                         |           |                          |
| 3.0                                       | 0.27                                   | 0.14               | 3.76         | 1.91                | 4.81               | -3.80        | 34.47           | 57.81 | -23.34 | 1.3                           | 4.8                          | Dacca            | Furteedpore               | EAST BENGAL.            |           |                          |
| 3.7                                       | 2.35                                   | —                  | 3.58         | —                   | 1.47               | —            | —               | 52.65 | —      | —                             | —                            | Commillah        | Dacca                     |                         |           |                          |
| 3.3                                       | 6.63                                   | 14.56              | 2.59         | 7.05                | 3.05               | +4.00        | 51.76           | 44.54 | +7.21  | 3.3                           | 3.3                          | Mymensingh       | Commillah                 |                         |           |                          |
| 3.9                                       | 1.23                                   | 1.26               | 3.28         | 2.39                | 3.92               | -1.53        | 39.17           | 41.94 | -2.77  | 2.5                           | 3.8                          | Bogra            | Chittagong Hill Tracts    | EAST BENGAL.            |           |                          |
| 3.1                                       | 6.01                                   | 3.86               | 3.46         | 5.46                | 4.26               | +1.20        | 41.08           | 41.58 | -0.50  | 3.0                           | 3.9                          | Senajunge        | Backergunge               |                         |           |                          |
| 3.7                                       | 10.34                                  | 0.59               | 3.76         | 7.06                | 4.18               | +2.88        | 41.95           | 43.29 | -1.34  | 3.0                           | 4.6                          | Rampore Beaulah  | Barrisal                  |                         |           |                          |
| 3.1                                       | 5.46                                   | 4.88               | 3.46         | 6.01                | 4.22               | +1.79        | 61.03           | 45.13 | +15.90 | 3.0                           | 3.9                          | Maddah           | Neakholly                 | EAST BENGAL.            |           |                          |
| 3.0                                       | 5.93                                   | 7.47               | 3.07         | 8.45                | 4.69               | +3.76        | 73.63           | 58.87 | +14.76 | 3.0                           | 3.8                          | Dinapore         | Furteedpore               |                         |           |                          |
| 3.0                                       | 11.21                                  | 11.74              | 5.20         | 15.50               | 7.71               | +7.79        | 109.99          | 89.55 | +20.44 | 3.0                           | 3.5                          | Rangpore         | Dinapore                  |                         |           |                          |
| 3.3                                       | 6.88                                   | 7.31               | 5.00         | 10.72               | 6.06               | +4.66        | 105.52          | 95.21 | +10.31 | 5.0                           | 5.1                          | Jalpigoree       | Rangpore                  | EAST BENGAL.            |           |                          |
| 3.6                                       | 3.00                                   | 3.22               | 3.70         | 6.85                | 4.48               | +2.37        | 58.20           | 45.39 | +12.81 | 3.0                           | 3.8                          | Cooch Behar      | Jalpigoree                |                         |           |                          |
| 3.1                                       | 2.98                                   | 2.19               | 3.73         | 3.03                | 4.07               | -0.77        | 44.19           | 34.83 | +9.36  | 2.3                           | 3.1                          | Darjeeling       | Darjeeling Hill Districts |                         |           |                          |
| 3.1                                       | 1.03                                   | 1.92               | 2.71         | 2.86                | 3.63               | -0.77        | 44.19           | 34.83 | +9.36  | 2.3                           | 3.1                          | Purneah          | Purneah                   | NORTH BENGAL.           |           |                          |
| 3.1                                       | 3.05                                   | 2.75               | 1.06         | 7.68                | 2.80               | +4.88        | 39.44           | 35.95 | +3.49  | 3.0                           | 2.4                          | North Bhagulpore | Mozufferpore              |                         |           |                          |
| 3.3                                       | 1.98                                   | 4.50               | 1.36         | 4.74                | 1.88               | -2.86        | 32.61           | 32.17 | +0.44  | 2.0                           | 2.8                          | Mozufferpore     | Darbhanga                 |                         |           |                          |
| 3.1                                       | 3.40                                   | —                  | —            | —                   | —                  | —            | —               | —     | —      | —                             | —                            | Dehree           | Darbhanga                 | NORTH BENGAL.           |           |                          |
| 3.1                                       | 1.95                                   | 1.40               | 1.85         | 2.30                | 2.26               | +0.04        | 29.87           | 30.95 | -1.08  | 2.5                           | 3.4                          | Chumparan        | Chumparan                 |                         |           |                          |
| 3.0                                       | 2.55                                   | —                  | —            | —                   | —                  | —            | —               | —     | —      | —                             | —                            | Saran            | Saran                     |                         |           |                          |
| 3.6                                       | 1.00                                   | 1.34               | 2.20         | 2.35                | 2.98               | -0.63        | 32.01           | 33.49 | -1.48  | 4.0                           | 3.0                          | Buxar            | Shahabad                  | SOUTH BENGAL.           |           |                          |
| 3.4                                       | 0.87                                   | 2.39               | 2.08         | 2.98                | 2.55               | +0.43        | 31.38           | 32.63 | -1.25  | 3.5                           | 3.3                          | Arrah            | Shahabad                  |                         |           |                          |
| 3.4                                       | 3.77                                   | 3.53               | 2.53         | 3.68                | 3.08               | +0.60        | 37.12           | 34.19 | +2.93  | 3.4                           | 3.6                          | Gya              | Gya                       |                         |           |                          |
| 3.9                                       | 4.30                                   | 3.10               | 3.12         | 3.43                | 3.91               | -0.48        | 45.02           | 39.81 | +5.21  | 3.7                           | 4.2                          | Patna            | Patna                     | FOUR BENGAL.            |           |                          |
| 3.3                                       | 1.59                                   | 3.01               | —            | —                   | 3.96               | —            | —               | 40.19 | —      | —                             | —                            | Bankipore        | South Bhagulpore          |                         |           |                          |
| 3.9                                       | 1.00                                   | 1.88               | 3.48         | 2.54                | 3.04               | -0.50        | 38.32           | 37.96 | +0.36  | 2.8                           | 4.3                          | Bhagulpore       | Monghyr                   |                         |           |                          |
| 3.9                                       | 0.86                                   | 0.24               | 2.06         | 0.32                | 3.44               | -3.12        | 43.47           | 42.16 | +1.31  | 2.0                           | 4.6                          | Dumka            | Sonthal Pergunnahs        | FOUR BENGAL.            |           |                          |
| 3.9                                       | 1.03                                   | —                  | —            | —                   | —                  | —            | —               | —     | —      | —                             | —                            | Hazratnagar      | Hazratnagar               |                         |           |                          |
| 3.1                                       | 3.69                                   | —                  | —            | —                   | —                  | —            | —               | —     | —      | —                             | —                            | Lohardugga       | Lohardugga                |                         |           |                          |
| 3.1                                       | 0.34                                   | —                  | —            | —                   | —                  | —            | —               | —     | —      | —                             | —                            | Raichee          | Manthoom                  | ASSAM.                  |           |                          |
| 3.1                                       | 1.03                                   | —                  | —            | —                   | —                  | —            | —               | —     | —      | —                             | —                            | Chyebnasa        | Singbhoom                 |                         |           |                          |
| 3.1                                       | 3.69                                   | —                  | —            | —                   | —                  | —            | —               | —     | —      | —                             | —                            | Sibsagar         | Singbhoom                 |                         |           |                          |
| 3.1                                       | 0.34                                   | —                  | —            | —                   | —                  | —            | —               | —     | —      | —                             | —                            | Dhubri           | Assam                     | ASSAM.                  |           |                          |
| 3.1                                       | 3.69                                   | —                  | —            | —                   | —                  | —            | —               | —     | —      | —                             | —                            | Silchar          | Assam                     |                         |           |                          |

## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 9th of September 1887.

| Meteorological division. | District.               | Station.               | RAINFALL.                |                        |                        |                         |                           |                          |                        | TOTAL.                |                   | Total rain-fall since 1st of month. | Average total rain-fall from 1st of month. | Total rain-fall since 15th May 1887. | Average from 1st to 15th May 1887. |
|--------------------------|-------------------------|------------------------|--------------------------|------------------------|------------------------|-------------------------|---------------------------|--------------------------|------------------------|-----------------------|-------------------|-------------------------------------|--|--------------------------------------|------------------------------------|
|                          |                         |                        | Saturday, 3rd September. | Sunday, 4th September. | Monday, 5th September. | Tuesday, 6th September. | Wednesday, 7th September. | Thursday, 8th September. | Friday, 9th September. | Number of rainy days. | Rainfall of week. |                                     |  |                                      |                                    |
| NORTH-BENGAL.            | Pooree                  | Pooree                 | .....                    | .....                  | 0.21                   | .....                   | .....                     | 0.08                     | .....                  | 2                     | 0.29              | 0.44                                | 3.35                                       | 18.17                                | .....                              |
|                          |                         | Khurda                 | .....                    | .....                  | 0.26                   | .....                   | 0.24                      | .....                    | .....                  | 1                     | 0.07              | 0.87                                | 3.39                                       | .....                                | .....                              |
|                          |                         | Banpur                 | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.07              | 0.87                                | 3.29                                       | .....                                | .....                              |
|                          | Cuttack                 | Falso Point            | 0.07                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.07              | 0.87                                | 3.72                                       | 38.10                                | .....                              |
|                          |                         | Gop                    | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.07              | 0.87                                | 3.72                                       | 38.10                                | .....                              |
|                          |                         | Pipli                  | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.07              | 0.87                                | 3.72                                       | 38.10                                | .....                              |
|                          |                         | Jagatsingapore         | .....                    | 0.10                   | 0.35                   | 0.15                    | .....                     | .....                    | .....                  | 4                     | 0.70              | 1.14                                | 2.37                                       | .....                                | .....                              |
|                          |                         | Banki                  | .....                    | 0.13                   | .....                  | 0.05                    | 0.25                      | .....                    | .....                  | 3                     | 0.70              | 1.14                                | 4.75                                       | .....                                | .....                              |
|                          | Balasore                | Kendrapara             | 0.40                     | .....                  | 0.04                   | 0.24                    | 0.75                      | .....                    | 0.02                   | 4                     | 1.17              | 1.17                                | 3.37                                       | 43.41                                | .....                              |
|                          |                         | Jajpore                | .....                    | .....                  | .....                  | 0.22                    | 0.75                      | .....                    | 0.20                   | 3                     | 1.17              | 1.17                                | 2.04                                       | 41.28                                | .....                              |
|                          |                         | Dharmasalla            | .....                    | 0.27                   | .....                  | .....                   | 1.64                      | .....                    | .....                  | 2                     | 1.91              | 1.91                                | 8.12                                       | 81.03                                | .....                              |
|                          |                         | Salipore               | .....                    | .....                  | 0.25                   | 1.12                    | .....                     | .....                    | .....                  | 2                     | 1.91              | 1.91                                | 8.12                                       | 81.03                                | .....                              |
| MID-WEST BENGAL.         | Midnapore               | Chandbali              | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 1.00              | 1.00                                | 2.81                                       | .....                                | .....                              |
|                          |                         | Bhuddruck              | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 1.00              | 1.00                                | 3.05                                       | .....                                | .....                              |
|                          |                         | Sornh                  | .....                    | 1.00                   | .....                  | .....                   | 0.18                      | .....                    | .....                  | 1                     | 1.00              | 1.00                                | 3.51                                       | 33.03                                | .....                              |
|                          | 24-Pergunnahs           | Balasore               | .....                    | 0.55                   | .....                  | 0.23                    | .....                     | .....                    | .....                  | 1                     | 1.00              | 1.00                                | 3.91                                       | .....                                | .....                              |
|                          |                         | Jellapore              | .....                    | .....                  | .....                  | 0.05                    | .....                     | .....                    | .....                  | 1                     | 1.00              | 1.00                                | 4.52                                       | .....                                | .....                              |
|                          |                         | Baripodah              | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 1.00              | 1.00                                | 3.43                                       | .....                                | .....                              |
|                          |                         | Contai                 | 0.39                     | 2.03                   | .....                  | .....                   | 1.02                      | .....                    | .....                  | 3                     | 1.44              | 1.91                                | 4.61                                       | 37.19                                | .....                              |
|                          |                         | Saugor Island          | .....                    | .....                  | .....                  | .....                   | 0.04                      | .....                    | .....                  | 1                     | 0.04              | 0.26                                | 4.04                                       | 43.56                                | .....                              |
|                          | Howrah                  | Tumlook                | .....                    | .....                  | .....                  | .....                   | .....                     | 0.60                     | .....                  | 1                     | 0.60              | 0.78                                | 3.34                                       | 44.40                                | .....                              |
|                          |                         | Midnapore              | 0.07                     | .....                  | .....                  | .....                   | 0.60                      | 0.31                     | .....                  | 3                     | 0.98              | 1.28                                | 2.63                                       | 39.10                                | .....                              |
|                          |                         | Ghatatal               | .....                    | .....                  | .....                  | .....                   | 0.63                      | 0.16                     | .....                  | 2                     | 1.00              | 1.82                                | 2.94                                       | 45.87                                | .....                              |
|                          |                         | Kukrahati              | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | Nil                   | Nil               | 0.38                                | 2.85                                       | .....                                | .....                              |
|                          |                         | Haria                  | 0.10                     | 0.09                   | .....                  | .....                   | .....                     | .....                    | .....                  | 3                     | 0.28              | 0.30                                | 28.50                                      | .....                                | .....                              |
| SOUTH-BENGAL.            | Burdwan                 | Bhagwanpore            | .....                    | .....                  | .....                  | .....                   | 0.14                      | .....                    | .....                  | 1                     | 0.14              | 0.98                                | 3.77                                       | 53.77                                | .....                              |
|                          |                         | Garbeta                | 0.74                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.74              | 1.40                                | 3.27                                       | 32.78                                | .....                              |
|                          |                         | Diamond Har-           | .....                    | 0.00                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.74              | 1.40                                | 3.27                                       | 32.78                                | .....                              |
|                          | Hooghly                 | hour                   | 0.05                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 3                     | 0.75              | 1.43                                | 4.06                                       | 41.62                                | .....                              |
|                          |                         | Canning Town           | 0.11                     | .....                  | .....                  | .....                   | .....                     | 0.32                     | 0.10                   | 3                     | 1.92              | 2.34                                | 3.74                                       | 37.04                                | .....                              |
|                          |                         | Alipore Jail           | .....                    | .....                  | .....                  | .....                   | 0.13                      | .....                    | .....                  | 1                     | 0.13              | 0.57                                | 4.47                                       | 59.46                                | .....                              |
|                          |                         | Barrackpore            | .....                    | .....                  | .....                  | .....                   | .....                     | 0.10                     | .....                  | 1                     | 0.10              | 0.71                                | 2.05                                       | 31.03                                | .....                              |
|                          |                         | Dum-Dum                | 0.13                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.13              | 0.95                                | 4.13                                       | 30.51                                | .....                              |
|                          | Bankura                 | Barasat                | 0.54                     | .....                  | .....                  | .....                   | 0.09                      | .....                    | .....                  | 3                     | 1.25              | 1.31                                | 3.74                                       | 27.71                                | .....                              |
|                          |                         | Buseerhat              | 0.11                     | .....                  | .....                  | .....                   | .....                     | 0.62                     | .....                  | 1                     | 0.11              | 0.11                                | 4.00                                       | 38.30                                | .....                              |
|                          |                         | Howrah                 | 0.10                     | .....                  | 0.07                   | .....                   | 0.01                      | 0.08                     | .....                  | 4                     | 0.20              | 0.53                                | 4.01                                       | 30.48                                | .....                              |
|                          |                         | Moheeruka (Ootoberia.) | .....                    | 0.09                   | .....                  | .....                   | 0.40                      | .....                    | 0.08                   | 3                     | 0.63              | 1.69                                | 5.14                                       | 32.05                                | .....                              |
|                          |                         | Hooghly                | .....                    | .....                  | .....                  | .....                   | 0.04                      | .....                    | .....                  | 1                     | 0.04              | 0.43                                | 3.40                                       | 26.87                                | .....                              |
| SOUTH-BENGAL.            | Burdwan                 | Hooghly                | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | Nil                   | Nil               | 0.78                                | 2.93                                       | 34.08                                | 41                                 |
|                          |                         | Jehanabad              | 0.04                     | .....                  | 0.04                   | .....                   | .....                     | .....                    | .....                  | 2                     | 0.08              | 1.75                                | 3.02                                       | 29.60                                | 38                                 |
|                          |                         | Culina                 | .....                    | 0.54                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.54              | 0.70                                | 2.18                                       | 28.60                                | 40                                 |
|                          | Bankura                 | Burdwan                | 0.04                     | 0.20                   | 1.42                   | .....                   | .....                     | .....                    | .....                  | 3                     | 1.60              | 3.71                                | 2.97                                       | 37.97                                | 35                                 |
|                          |                         | Cutwa                  | .....                    | 0.51                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.51              | 3.71                                | 2.97                                       | 37.97                                | 35                                 |
|                          |                         | Raneesingee            | 0.04                     | .....                  | 1.00                   | .....                   | .....                     | .....                    | .....                  | 2                     | 1.04              | 2.87                                | 3.13                                       | 47.37                                | 37                                 |
|                          |                         | Mankur                 | 0.71                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.71              | 0.71                                | 3.24                                       | 41.53                                | 40                                 |
|                          |                         | Bankura                | 0.50                     | .....                  | .....                  | .....                   | 0.01                      | .....                    | .....                  | 3                     | 0.51              | 0.60                                | 2.07                                       | 38.90                                | 41                                 |
|                          | Beerbhoon               | Bishenpore             | .....                    | 0.50                   | 0.47                   | .....                   | .....                     | 0.11                     | .....                  | 3                     | 1.08              | 1.04                                | 3.05                                       | 44.91                                | 41                                 |
|                          |                         | Malaria                | 0.43                     | .....                  | 0.15                   | .....                   | .....                     | .....                    | .....                  | 2                     | 0.58              | 0.68                                | 2.05                                       | 44.55                                | 40                                 |
|                          |                         | Khatra                 | .....                    | .....                  | .....                  | .....                   | 0.17                      | .....                    | .....                  | 1                     | 0.17              | 0.65                                | 4.12                                       | 44.47                                | 41                                 |
|                          |                         | Indas                  | 0.29                     | 3.25                   | 0.16                   | .....                   | .....                     | .....                    | .....                  | 3                     | 3.70              | 4.33                                | 2.79                                       | 30.82                                | .....                              |
|                          |                         | Kotalpore              | .....                    | 1.32                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 1.32              | 2.79                                | 3.17                                       | 31.47                                | .....                              |
| SOUTH-BENGAL.            | Nudda                   | Gangajalhati           | 0.12                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | Nil                   | Nil               | Nil                                 | 3.17                                       | .....                                | .....                              |
|                          |                         | Esipore                | 0.30                     | 1.67                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.12              | 0.60                                | 3.17                                       | 31.47                                | .....                              |
|                          |                         | Sonamukhi              | 0.30                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 2.17              | 2.85                                | 4.50                                       | 45.06                                | .....                              |
|                          | Nudda                   | Bh. Soory              | 0.07                     | 0.31                   | 0.04                   | 0.87                    | .....                     | .....                    | .....                  | 1                     | 0.30              | 0.30                                | 3.17                                       | 31.47                                | .....                              |
|                          |                         | Hetampore              | .....                    | 2.12                   | .....                  | .....                   | .....                     | .....                    | .....                  | 4                     | 2.70              | 3.20                                | 4.33                                       | 41.06                                | 43                                 |
|                          |                         | Rampore Haut           | 2.24                     | .....                  | 0.53                   | .....                   | .....                     | .....                    | .....                  | 1                     | 2.12              | 2.94                                | 4.00                                       | 42.14                                | 41                                 |
|                          |                         | Boipore                | 0.23                     | 0.00                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 2.77              | 2.77                                | 4.70                                       | 37.26                                | 39                                 |
|                          |                         | .....                  | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.34              | 0.53                                | 3.17                                       | 31.47                                | .....                              |
|                          | Khoorna                 | Banaghat               | 0.23                     | .....                  | .....                  | 0.23                    | .....                     | .....                    | .....                  | 2                     | 0.45              | 0.76                                | 2.79                                       | 36.70                                | 38                                 |
|                          |                         | Kishnaghat             | .....                    | 0.08                   | 0.04                   | 0.11                    | .....                     | .....                    | .....                  | 3                     | 0.53              | 0.92                                | 3.13                                       | 39.34                                | 30                                 |
|                          |                         | Choodanga              | .....                    | .....                  | 1.23                   | .....                   | .....                     | .....                    | .....                  | 1                     | 1.23              | 1.67                                | 3.43                                       | 39.73                                | 30                                 |
|                          |                         | Moherpore              | .....                    | .....                  | 0.44                   | 0.10                    | .....                     | .....                    | .....                  | 2                     | 0.54              | 1.88                                | 2.98                                       | 36.21                                | 37                                 |
|                          |                         | Kooshtea               | 0.25                     | .....                  | 0.90                   | .....                   | .....                     | .....                    | .....                  | 2                     | 1.15              | 2.25                                | 3.59                                       | 30.85                                | 42                                 |
| SOUTH-BENGAL.            | Jessore                 | Kooshtea               | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 1.15              | 2.25                                | 3.59                                       | 30.85                                | 42                                 |
|                          |                         | Bakkhira               | .....                    | 0.02                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.02              | 0.15                                | 0.78                                       | 34.04                                | 44                                 |
|                          |                         | Bagirhat               | 0.60                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.60              | 1.05                                | 4.25                                       | 37.37                                | 40                                 |
|                          | Chittagong              | Khoorna                | 0.49                     | .....                  | 0.58                   | .....                   | .....                     | .....                    | 0.08                   | 3                     | 1.15              | 2.46                                | 3.92                                       | 31.00                                | 43                                 |
|                          |                         | Narail                 | 0.04                     | 0.10                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.14              | 0.43                                | 3.36                                       | 17.89                                | 38                                 |
|                          |                         | Jessore                | 0.06                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.06              | 2.79                                | 3.42                                       | 35.07                                | 44                                 |
|                          |                         | Jenidah                | .....                    | 0.48                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.48              | 0.76                                | 3.50                                       | 28.11                                | 43                                 |
|                          |                         | Magoorah               | 0.05                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.05              | 1.72                                | 3.94                                       | 28.80                                | 40                                 |
|                          | Moorshedabad            | Bongong                | .....                    | 0.30                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.30              | 0.82                                | 1.80                                       | 31.08                                | 40                                 |
|                          |                         | Kandi                  | 0.70                     | 0.45                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 1.15              | 1.35                                | 3.81                                       | 32.78                                | 39                                 |
|                          |                         | Berhampore             | 1.75                     | 0.43                   | 0.60                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.78              | 3.12                                | 3.09                                       | 41.55                                | 38                                 |
|                          |                         | Lalbagh                | 2.18                     | 1.51                   | 0.81                   | .....                   | .....                     | .....                    | .....                  | 3                     | 4.50              | 5.10                                | 3.32                                       | 52.17                                | 36                                 |
|                          |                         | Azimnagar              | 2.15                     | 3.13                   | 0.99                   | .....                   | .....                     | .....                    | .....                  | 3                     | 5.80              | 6.30                                | 3.67                                       | 50.88                                | 36                                 |
| SOUTH-BENGAL.            | Chittagong              | Jungipore              | 2.83                     | 1.75                   | 0.50                   | 1.52                    | .....                     | .....                    | .....                  | 4                     | 6.00              | 6.84                                | 4.32                                       | 56.47                                | 37                                 |
|                          |                         | Lakola                 | 3.10                     | 0.74                   | 1.72                   | .....                   | .....                     | .....                    | .....                  | 3                     | 5.68              | 5.68                                | 4.18                                       | 55.39                                | 35                                 |
|                          |                         | Akhrigani              | 1.10                     | 1.45                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 2.55              | 3.06                                | 3.06                                       | 40.54                                | .....                              |
|                          | Chittagong Hill Tracts. | Patkaluri              | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                               | .....                                      | .....                                | .....                              |
|                          |                         | Cox's Bazar            | .....                    | .....                  | .....                  | 0.13                    | .....                     | 0.40                     | 1.10                   | 3                     | 1.63              | 4.43                                | 7.87                                       | 01.39                                | 116.21                             |
|                          |                         | Chittagong             | 0.20                     | 0.23                   | 0.01                   | 0.23                    | 0.02                      | 0.06                     | .....                  | 3                     | 1.63              | 4.43                                | 5.91                                       | 78.21                                | .....                              |
|                          |                         | Kutubdia               | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                               | .....                                      | .....                                | .....                              |
|                          |                         | Sathanya               | 0.05                     | .....                  | .....                  | 0.03                    | .....                     | .....                    | .....                  | .....                 | .....             | .....                               | .....                                      | .....                                | .....                              |
|                          | Mackergunge             | Rangamati              | 1.04                     | 0.03                   | .....                  | 1.87                    | 0.10                      | 0.06                     | 0.40                   | 6                     | 3.63              | 4.01                                | 4.05                                       | 52.90                                | 64.61                              |
|                          |                         | Muna                   | .....                    | .....                  | .....                  | .....                   | 0.14                      | 0.18                     | 1.25                   | 3                     | 1.67              | 1.94                                | 4.15                                       | 41.00                                | 61.32                              |
|                          |                         | Patkaluri              | 0.92                     | .....                  | .....                  | .....                   | 0.10                      | .....                    | 1.15                   | 3                     | 2.17              | 3.73                                | 5.14                                       | 47.67                                | 71.96                              |
| SOUTH-BENGAL.            | Bhola                   | Perospore              | 0.50                     | .....                  | .....                  | 0.53                    | .....                     | .....                    | 0.58                   | 3                     | 1.59              | 3.28                                | 4.55                                       | 44.25                                | 55.09                              |
|                          |                         | Burrisal               | 0.14                     | 0.19                   | .....                  | .....                   | .....                     | .....                    | 0.08                   | 3                     | 0.41              | 2.23                                | 4.61                                       | 36.23                                | 54.34                              |
|                          |                         | Bhola                  | .....                    | 0.07                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.07              | 0.29                                | 5.14                                       | 38.02                                | 60.49                              |

Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 9th of September 1887—contd

| Serial No. | District.         | Station.       | RAINFALL.                |                        |                        |                         |                           |                          |                        | TOTAL.                |                   | Total rainfall since 1st of month. | Average total rainfall from 1st of month. | Total rainfall since 15th May 1887. | Average rainfall from 15th May to date. |
|------------|-------------------|----------------|--------------------------|------------------------|------------------------|-------------------------|---------------------------|--------------------------|------------------------|-----------------------|-------------------|------------------------------------|---|-------------------------------------|---|
|            |                   |                | Saturday, 3rd September. | Sunday, 4th September. | Monday, 5th September. | Tuesday, 6th September. | Wednesday, 7th September. | Thursday, 8th September. | Friday, 9th September. | Number of rainy days. | Rainfall of week. |                                    |   |                                     |   |
| GAL.       | Noakhali          | Gournadi       | 0.53                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.55              | 1.84                               | ?   | 32.83                               | ?                                       |
|            |                   | Bauphal        | .....                    | .....                  | .....                  | .....                   | 0.16                      | .....                    | 0.15                   | 2                     | 0.31              | 0.43                               | ?   | 45.95                               | ?                                       |
|            |                   | Noakhali       | 0.09                     | .....                  | 0.06                   | .....                   | .....                     | .....                    | .....                  | 2                     | 1.05              | 1.90                               | 0.82                                      | 58.53                               | 88.25                                   |
|            |                   | Fenny          | 1.06                     | 0.25                   | .....                  | 1.78                    | .....                     | .....                    | 2.50                   | 4                     | 5.53              | 6.03                               | 7.25                                      | 58.53                               | 88.74                                   |
|            |                   | Harikpore      | 1.92                     | .....                  | .....                  | 0.95                    | .....                     | .....                    | .....                  | 3                     | 0.30              | 0.05                               | ?   | 44.25                               | ?                                       |
|            | Farrukhabad       | Ramganj        | 0.10                     | 0.00                   | .....                  | .....                   | 0.20                      | .....                    | .....                  | 3                     | 0.30              | 0.05                               | ?   | 44.25                               | ?                                       |
|            |                   | Madaripore     | 0.57                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.57              | 1.10                               | 2.90                                      | 26.77                               | 45.70                                   |
|            |                   | Furzedpore     | 0.18                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.18              | 0.18                               | 4.67                                      | 28.16                               | 46.39                                   |
|            | Dacca             | Goalundo       | 0.11                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.11              | 0.38                               | 4.03                                      | 28.70                               | 43.53                                   |
|            |                   | Munshiganj     | 0.03                     | 0.05                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.06              | 1.30                               | 5.15                                      | 31.89                               | 57.27                                   |
|            |                   | Dacca          | 0.00                     | 0.40                   | .....                  | .....                   | .....                     | .....                    | 1.92                   | 3                     | 2.44              | 2.70                               | 5.54                                      | 36.45                               | 49.44                                   |
|            | Hill Tipperah     | Narainpore     | 0.32                     | 0.03                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.35              | 1.52                               | 6.04                                      | 32.03                               | 50.24                                   |
|            |                   | Manickganj     | 0.29                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.29              | 4.31                               | ?   | 42.24                               | ?                                       |
|            |                   | Joydepore      | 0.45                     | 0.13                   | 0.03                   | 0.15                    | .....                     | .....                    | .....                  | 4                     | 0.79              | 0.82                               | ?   | 41.44                               | ?                                       |
|            |                   | Agartola       | .....                    | .....                  | .....                  | .....                   | 0.12                      | .....                    | .....                  | Nil                   | Nil               | 1.14                               | 3.04                                      | 34.72                               | 48.65                                   |
|            |                   | Comilla        | 0.16                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.28              | 1.93                               | 1.89                                      | 39.39                               | 44.56                                   |
| GAL.       | Mymensingh        | Chandpore      | .....                    | 0.10                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.10              | 0.74                               | 5.73                                      | 30.74                               | 66.42                                   |
|            |                   | Krishnanagar   | 0.03                     | 0.11                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.17              | 1.15                               | 4.69                                      | 33.00                               | 48.34                                   |
|            |                   | Ramchandrapore | .....                    | 0.32                   | 1.41                   | .....                   | .....                     | .....                    | .....                  | 2                     | 1.73              | 2.85                               | ?   | 31.40                               | ?                                       |
|            |                   | Nasirpore      | .....                    | 0.20                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.20              | 0.80                               | ?   | 28.56                               | ?                                       |
|            |                   | Dandkandi      | 0.48                     | 0.15                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.73              | 1.50                               | ?   | 29.80                               | ?                                       |
|            | Mymensingh        | Kosha          | 0.70                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.70              | 1.40                               | ?   | 36.72                               | ?                                       |
|            |                   | Lakshmi        | 0.15                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.15              | 0.68                               | ?   | 19.14                               | ?                                       |
|            |                   | Kishoreganj    | 0.82                     | 0.07                   | 0.61                   | .....                   | .....                     | .....                    | .....                  | 3                     | 1.50              | 4.83                               | ?   | 51.16                               | 55.06                                   |
|            |                   | Atia (Tangail) | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 3                     | 1.50              | 4.83                               | ?   | 51.16                               | 55.06                                   |
|            |                   | Mymensingh     | 1.22                     | 0.28                   | 0.15                   | .....                   | .....                     | .....                    | .....                  | 3                     | 1.65              | 2.43                               | 3.08                                      | 43.97                               | 43.97                                   |
|            | Pubna             | Jamshilpore    | .....                    | 4.15                   | 0.30                   | .....                   | .....                     | .....                    | .....                  | 2                     | 4.51              | 6.77                               | 5.05                                      | 53.41                               | 57.73                                   |
|            |                   | Netrokona      | 0.032                    | 0.30                   | 0.15                   | .....                   | .....                     | .....                    | .....                  | 3                     | 1.07              | 1.63                               | 4.88                                      | 54.51                               | 50.10                                   |
|            |                   | Schornakhal    | 0.09                     | .....                  | 0.50                   | .....                   | .....                     | .....                    | .....                  | 2                     | 1.18              | 5.86                               | ?   | 41.51                               | 68.36                                   |
|            |                   | Durgapore      | 0.50                     | .....                  | 2.00                   | 1.10                    | .....                     | .....                    | .....                  | 3                     | 3.60              | 5.60                               | ?   | 16.21                               | ?                                       |
|            |                   | Debangaj       | 4.80                     | 0.10                   | 2.51                   | .....                   | .....                     | .....                    | .....                  | 3                     | 7.50              | 10.43                              | ?   | 68.80                               | ?                                       |
|            | Nogre             | Pubna          | 0.19                     | 0.00                   | 1.81                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.00              | 2.85                               | 4.36                                      | 38.10                               | 42.51                                   |
|            |                   | Borajunga      | 0.22                     | 0.00                   | 0.21                   | .....                   | .....                     | .....                    | .....                  | 2                     | 0.43              | 1.91                               | ?   | 35.19                               | 41.32                                   |
|            |                   | Sherpore       | 2.85                     | 1.04                   | 0.30                   | .....                   | .....                     | .....                    | .....                  | 3                     | 4.19              | 6.38                               | 3.14                                      | 38.93                               | 46.63                                   |
|            |                   | Nowkhilla      | 1.60                     | 0.46                   | 0.51                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.57              | 5.52                               | 4.74                                      | 47.24                               | 40.59                                   |
|            |                   | Bogra          | 2.88                     | 1.60                   | 0.70                   | .....                   | .....                     | .....                    | .....                  | 3                     | 5.18              | 7.18                               | 3.40                                      | 60.32                               | 54.01                                   |
|            | Najshahye         | Panchibibi     | 1.67                     | 1.97                   | 2.24                   | 0.41                    | .....                     | .....                    | .....                  | 4                     | 6.30              | 8.86                               | 3.30                                      | 60.45                               | 43.55                                   |
|            |                   | Beaulah        | 1.82                     | 2.19                   | 0.50                   | .....                   | .....                     | .....                    | .....                  | 3                     | 4.51              | 7.50                               | 3.71                                      | 42.58                               | 40.28                                   |
|            |                   | Natona         | 0.50                     | .....                  | 0.10                   | 2.80                    | .....                     | .....                    | .....                  | 3                     | 3.20              | 3.42                               | 4.81                                      | 39.57                               | 43.78                                   |
|            |                   | Naogon         | 2.03                     | 2.54                   | 0.40                   | .....                   | .....                     | .....                    | .....                  | 3                     | 5.87              | 6.98                               | ?   | 51.91                               | ?                                       |
|            |                   | Lalpur         | 0.40                     | 0.16                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.66              | 1.80                               | ?   | 23.71                               | ?                                       |
|            | Maldah            | Mand           | 2.90                     | 2.16                   | 2.59                   | .....                   | .....                     | .....                    | .....                  | 3                     | 7.65              | 8.12                               | ?   | 50.37                               | ?                                       |
|            |                   | Maldah         | 0.49                     | 3.07                   | 0.79                   | .....                   | .....                     | .....                    | .....                  | 3                     | 10.32             | 10.32                              | 4.36                                      | 45.87                               | 39.46                                   |
|            |                   | Chanchal       | 1.31                     | 1.40                   | 0.15                   | .....                   | .....                     | .....                    | .....                  | 3                     | 4.46              | 3.41                               | 3.08                                      | 88.04                               | 47.16                                   |
|            |                   | Gajol          | 3.30                     | 1.50                   | 0.60                   | .....                   | .....                     | .....                    | .....                  | 3                     | 5.40              | 5.40                               | ?   | 47.10                               | ?                                       |
|            |                   | Sitaganj       | 0.56                     | 1.10                   | 0.33                   | .....                   | .....                     | .....                    | .....                  | 3                     | 4.09              | 5.56                               | ?   | 45.41                               | ?                                       |
|            | Dinapore          | Mohadebpore    | 2.20                     | 2.50                   | 1.55                   | .....                   | .....                     | .....                    | .....                  | 3                     | 6.25              | 7.45                               | 3.88                                      | 54.22                               | 43.74                                   |
|            |                   | Churamon       | 1.24                     | 1.21                   | 0.29                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.74              | 3.29                               | 5.70                                      | 51.57                               | 42.01                                   |
|            |                   | Kaungpore      | 0.44                     | 3.72                   | 0.33                   | .....                   | .....                     | .....                    | .....                  | 3                     | 4.40              | 5.67                               | 4.18                                      | 64.94                               | 51.77                                   |
|            |                   | Dinapore       | 1.42                     | 4.08                   | 0.25                   | .....                   | .....                     | .....                    | .....                  | 3                     | 5.75              | 7.76                               | 3.86                                      | 61.80                               | 48.41                                   |
|            |                   | Baloorahat     | 1.53                     | 1.87                   | 1.40                   | .....                   | .....                     | .....                    | .....                  | 3                     | 5.16              | 5.98                               | 3.48                                      | 52.63                               | 40.00                                   |
|            | Mungpore          | Bhawaniganj    | 4.45                     | 1.57                   | 3.28                   | .....                   | .....                     | .....                    | .....                  | 5                     | 9.30              | 9.80                               | 4.18                                      | 57.20                               | 47.92                                   |
|            |                   | Gyabandaj      | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 5                     | 9.30              | 9.80                               | 4.18                                      | 57.20                               | 47.92                                   |
|            |                   | Kaungpore      | 2.27                     | 1.55                   | 1.52                   | .....                   | .....                     | .....                    | .....                  | 3                     | 5.31              | 5.91                               | 4.86                                      | 71.82                               | 59.24                                   |
|            |                   | Kurigan        | 1.35                     | 3.45                   | 2.05                   | .....                   | .....                     | .....                    | .....                  | 3                     | 6.85              | 9.13                               | 4.37                                      | 71.79                               | 60.28                                   |
|            |                   | Bardagra       | 0.53                     | 6.75                   | 1.28                   | .....                   | .....                     | .....                    | .....                  | 3                     | 8.58              | 8.88                               | 5.36                                      | 93.67                               | 67.79                                   |
|            | Jalpaiguri        | Ulupore        | 4.48                     | 2.30                   | 3.15                   | .....                   | .....                     | .....                    | .....                  | 3                     | 10.13             | 11.83                              | ?   | 56.62                               | ?                                       |
|            |                   | Jalpaiguri     | 1.16                     | 11.96                  | 0.97                   | .....                   | .....                     | .....                    | .....                  | 3                     | 13.09             | 16.90                              | 7.16                                      | 116.47                              | 93.04                                   |
|            |                   | Alipore        | 3.05                     | 0.06                   | 5.33                   | .....                   | .....                     | .....                    | .....                  | 3                     | 17.44             | 21.30                              | ?   | 128.17                              | ?                                       |
|            |                   | Faltacolla     | 0.04                     | 15.00                  | 3.05                   | .....                   | .....                     | .....                    | .....                  | 3                     | 18.18             | 27.10                              | ?   | 137.27                              | ?                                       |
|            |                   | Dobganj        | 0.03                     | 10.50                  | 1.05                   | .....                   | .....                     | .....                    | .....                  | 3                     | 11.69             | 15.54                              | ?   | 89.56                               | ?                                       |
|            | Goach Behar.      | Dumatta        | 0.96                     | 6.97                   | 1.41                   | .....                   | .....                     | .....                    | .....                  | 3                     | 9.33              | 12.08                              | 7.91                                      | 93.90                               | 75.82                                   |
|            |                   | Goach Behar    | 1.40                     | 4.50                   | 1.57                   | .....                   | .....                     | .....                    | .....                  | 3                     | 7.46              | 12.51                              | 7.97                                      | 114.03                              | 96.95                                   |
|            |                   | Mickligunge    | 0.65                     | 12.50                  | 2.46                   | .....                   | .....                     | .....                    | .....                  | 3                     | 15.61             | 21.21                              | 7.72                                      | 112.90                              | 87.91                                   |
|            |                   | Matlabhanja    | 0.77                     | 8.78                   | 2.07                   | .....                   | .....                     | .....                    | .....                  | 3                     | 12.22             | 14.43                              | 7.76                                      | 109.06                              | 84.13                                   |
|            |                   | Matlabhanja    | 0.77                     | 8.78                   | 2.07                   | .....                   | .....                     | .....                    | .....                  | 3                     | 12.22             | 14.43                              | 7.76                                      | 109.06                              | 84.13                                   |
|            | Darjeeling Hill.  | Buxa           | 0.02                     | 0.82                   | 1.23                   | 0.17                    | 0.05                      | 0.04                     | .....                  | 6                     | 10.73             | 10.44                              | 10.31                                     | 146.22                              | 158.36                                  |
|            |                   | Siliguri       | 0.08                     | 4.93                   | 1.47                   | .....                   | .....                     | 0.18                     | .....                  | 4                     | 6.65              | 10.18                              | 4.65                                      | 83.43                               | 86.84                                   |
|            |                   | Darjeeling     | 0.35                     | 2.62                   | 1.57                   | 0.23                    | .....                     | 1.51                     | 0.05                   | 6                     | 6.90              | 7.67                               | 7.67                                      | 105.98                              | 91.44                                   |
|            |                   | Kalimpong      | 0.06                     | 3.10                   | 0.62                   | .....                   | .....                     | 0.82                     | .....                  | 4                     | 5.50              | 7.25                               | 5.22                                      | 74.51                               | 68.14                                   |
|            |                   | Kalimpong      | 0.06                     | 3.10                   | 0.62                   | .....                   | .....                     | 0.82                     | .....                  | 4                     | 5.50              | 7.25                               | 5.22                                      | 74.51                               | 68.14                                   |
|            | Farrukhabad       | Kimengunge     | .....                    | 2.80                   | 1.25                   | .....                   | .....                     | .....                    | .....                  | 2                     | 4.05              | 9.00                               | 5.11                                      | 75.39                               | 56.28                                   |
|            |                   | Arrah          | 0.38                     | 3.00                   | 0.23                   | .....                   | .....                     | .....                    | .....                  | 3                     | 3.61              | 8.31                               | 4.61                                      | 62.04                               | 49.87                                   |
|            |                   | Farrukhabad    | 0.73                     | 2.14                   | 0.15                   | .....                   | .....                     | .....                    | .....                  | 3                     | 3.02              | 5.86                               | 4.83                                      | 60.95                               | 46.90                                   |
|            |                   | Gondwana       | 0.83                     | 0.00                   | 0.30                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.03              | 2.90                               | ?   | ?                                   | ?                                       |
|            |                   | Madaripore     | 0.30                     | 3.00                   | .....                  | .....                   | .....                     | .....                    | .....                  | 3                     | 3.30              | 5.77                               | ?   | 73.71                               | ?                                       |
|            | North Bhagalpore. | Kaliaganj      | 0.10                     | 16.20                  | .....                  | 0.90                    | .....                     | .....                    | .....                  | 3                     | 17.20             | 23.73                              | ?   | 89.83                               | ?                                       |
|            |                   | Madaripore     | .....                    | 5.12                   | 0.55                   | 0.23                    | .....                     | .....                    | .....                  | 3                     | 5.90              | 8.77                               | ?   | 89.83                               | ?                                       |
|            |                   | Soum           | 1.07                     | 2.45                   | 0.62                   | .....                   | 0.21                      | .....                    | .....                  | 4                     | 4.15              | 9.00                               | 3.25                                      | 46.03                               | 37.42                                   |
|            |                   | Protabyang     | 0.74                     | 0.50                   | 0.05                   | .....                   | .....                     | .....                    | .....                  | 3                     | 1.29              | 1.40                               | 3.30                                      | 46.05                               | 37.43                                   |
|            |                   | Protabyang     | 1.95                     | 0.20                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 2.24              | 4.02                               | ?   | 60.40                               | ?                                       |
|            | Durrhanga         | Tajpore        | 0.11                     | 1.04                   | .....                  | 0.11                    | .....                     | .....                    | .....                  | 3                     | 1.26              | 1.00                               | 2.97                                      | 36.32                               | 34.04                                   |
|            |                   | Durrhanga      | 1.12                     | 0.51                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 1.63              | 3.61                               | 3.78                                      | 47.19                               | 33.80                                   |
|            |                   | Madhubani      | 2.15                     | 0.73                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 2.88              | 3.30                               | 4.10                                      | 49.08                               | 34.85                                   |
|            |                   | Bahera         | 1.50                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 2.88              | 3.30                               | 4.10                                      | 49.08                               | 34.85                                   |
|            |                   | Kohara         | 0.40                     | 0.50                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 1.40              | 1.40                               | ?   | 36.43                               | ?                                       |
|            | Mouffor-pore      | Sitamarhi      | 2.80                     | 1.15                   | 0.02                   | .....                   | .....                     | .....                    | .....                  | 3                     | 3.97              | 6.32                               | 3.56                                      | 50.61                               | 32.11                                   |
|            |                   | Mouffor-pore   | 1.40                     | 1.48                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 2.88              | 3.66                               | 3.40                                      | 57.91                               | 34.34                                   |
|            |                   | Hajipore       | 0.50                     | 1.70                   | 0.03                   | 0.08                    | .....                     | .....                    | .....                  | 4                     | 2.31              | 2.31                               | 2.43                                      | 53.97                               |   |

## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 9th of September 1887—cont.

| Meteorological Division. | District.        | Station.            | RAINFALL.                |                        |                        |                         |                           |                          |                        | TOTAL.                |                   | Total rainfall since 1st of month. | Average total rainfall from 1st of month. | Total rainfall since 1st of May 1887. | Average rainfall from 1st of May to date. |
|--------------------------|------------------|---------------------|--------------------------|------------------------|------------------------|-------------------------|---------------------------|--------------------------|------------------------|-----------------------|-------------------|------------------------------------|---|---------------------------------------|---|
|                          |                  |                     | Saturday, 3rd September. | Sunday, 4th September. | Monday, 5th September. | Tuesday, 6th September. | Wednesday, 7th September. | Thursday, 8th September. | Friday, 9th September. | Number of rainy days. | of rainfall week. |                                    |   |                                       |   |
| SOUTH BEHAR.             | Bhagalpur.       | Gopalganj...        | 7.65                     | 0.50                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 8.24              | 8.45                               | 1.55                                      | 31.72                                 | .....                                     |
|                          |                  | Saran...            | 3.05                     | 0.27                   | 0.00                   | .....                   | .....                     | .....                    | .....                  | 3                     | 3.41              | 3.93                               | 2.11                                      | 30.85                                 | .....                                     |
| SOUTH BEHAR.             | Shahabad.        | Chunar...           | 1.85                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 1.85              | 1.75                               | 2.17                                      | 31.24                                 | .....                                     |
|                          |                  | Buxar...            | 1.04                     | 0.02                   | 1.38                   | 0.07                    | .....                     | .....                    | .....                  | 4                     | 2.51              | 2.83                               | 2.31                                      | 30.36                                 | .....                                     |
| SOUTH BEHAR.             | Gya.             | Denree...           | 0.77                     | 0.08                   | 1.83                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.65              | 3.40                               | 2.31                                      | 32.08                                 | .....                                     |
|                          |                  | Bhuboah...          | 0.80                     | .....                  | .....                  | .....                   | .....                     | .....                    | 0.15                   | 2                     | 0.95              | 1.00                               | 2.53                                      | 32.02                                 | .....                                     |
| SOUTH BEHAR.             | Patna.           | Baswaran...         | 0.25                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 0.25              | 0.45                               | 2.16                                      | 27.84                                 | .....                                     |
|                          |                  | Arrah...            | 1.04                     | 0.95                   | 0.25                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.24              | 4.00                               | 2.25                                      | 32.50                                 | .....                                     |
| SOUTH BEHAR.             | Gya.             | Mohanla...          | 2.00                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 2.00              | 2.00                               | 2.25                                      | 32.50                                 | .....                                     |
|                          |                  | Aurangabad...       | 0.22                     | 0.19                   | 0.00                   | .....                   | .....                     | 0.18                     | .....                  | 4                     | 0.59              | 0.88                               | 2.90                                      | 29.60                                 | .....                                     |
| SOUTH BEHAR.             | Gya.             | Gya...              | 0.37                     | 0.75                   | 0.23                   | .....                   | .....                     | .....                    | .....                  | 3                     | 1.35              | 1.65                               | 2.90                                      | 33.78                                 | .....                                     |
|                          |                  | Nowadah...          | 0.16                     | 1.30                   | 0.32                   | 0.20                    | .....                     | .....                    | .....                  | 5                     | 2.16              | 3.47                               | 3.02                                      | 31.75                                 | .....                                     |
| SOUTH BEHAR.             | Patna.           | Jehanabad...        | 0.13                     | 0.84                   | 0.10                   | 0.32                    | 0.10                      | .....                    | .....                  | 4                     | 1.18              | 3.81                               | 1.95                                      | 34.27                                 | .....                                     |
|                          |                  | Arwal...            | 0.05                     | 1.01                   | .....                  | .....                   | .....                     | .....                    | .....                  | 3                     | 1.40              | .....                              | .....                                     | .....                                 | .....                                     |
| SOUTH BEHAR.             | Patna.           | Dandnagar...        | 0.30                     | .....                  | 0.25                   | 0.34                    | .....                     | .....                    | .....                  | 2                     | 0.55              | 0.55                               | 2.20                                      | 32.80                                 | .....                                     |
|                          |                  | Sherrghati...       | 0.50                     | 1.50                   | 0.00                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.00              | 2.79                               | 2.79                                      | 31.47                                 | .....                                     |
| SOUTH BEHAR.             | Patna.           | Kajali...           | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |
|                          |                  | Pakri Barawan...    | .....                    | 1.00                   | 0.35                   | 1.02                    | .....                     | .....                    | .....                  | 3                     | 3.27              | 4.67                               | 2.79                                      | 19.84                                 | .....                                     |
| SOUTH BEHAR.             | Patna.           | Patna...            | 0.28                     | 0.40                   | 0.02                   | 0.17                    | .....                     | .....                    | .....                  | 4                     | 0.87              | 1.32                               | 2.77                                      | 30.07                                 | .....                                     |
|                          |                  | Dinapore...         | 0.40                     | 0.40                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.80              | 2.50                               | 2.27                                      | 34.30                                 | .....                                     |
| SOUTH BEHAR.             | Patna.           | Behar...            | 0.09                     | 0.50                   | 0.10                   | 2.58                    | .....                     | .....                    | .....                  | 4                     | 3.27              | 3.31                               | 2.72                                      | 31.38                                 | .....                                     |
|                          |                  | Barra...            | 0.50                     | 0.70                   | 0.40                   | 3.00                    | .....                     | .....                    | .....                  | 4                     | 4.60              | 4.70                               | 2.67                                      | 29.76                                 | .....                                     |
| SOUTH BEHAR.             | Patna.           | Bickram...          | 0.20                     | 0.80                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 1.00              | 2.60                               | 2.60                                      | 29.70                                 | .....                                     |
|                          |                  | Hilaa...            | .....                    | 1.23                   | .....                  | .....                   | .....                     | .....                    | .....                  | 1                     | 1.23              | 1.30                               | 2.67                                      | 28.72                                 | .....                                     |
| SOUTH BEHAR.             | Munshyr.         | Begoonai...         | 2.65                     | 0.30                   | 0.30                   | 1.07                    | .....                     | .....                    | .....                  | 4                     | 4.52              | 4.52                               | 2.90                                      | 41.28                                 | .....                                     |
|                          |                  | Munshyr...          | 1.10                     | 0.33                   | 0.60                   | 1.45                    | .....                     | .....                    | .....                  | 4                     | 3.48              | 3.62                               | 2.90                                      | 39.03                                 | .....                                     |
| SOUTH BEHAR.             | Munshyr.         | Jamui...            | 1.53                     | 1.12                   | 0.09                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.74              | 3.10                               | 2.63                                      | 33.08                                 | .....                                     |
|                          |                  | Gogri...            | .....                    | 2.18                   | 0.50                   | 3.14                    | .....                     | .....                    | .....                  | 3                     | 5.71              | 7.91                               | 3.01                                      | 30.18                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Sheikhpura...       | 0.90                     | .....                  | .....                  | 5.05                    | 0.30                      | .....                    | .....                  | 3                     | 6.25              | 6.62                               | 2.57                                      | 25.73                                 | .....                                     |
|                          |                  | Bhagulpore...       | 3.32                     | 0.14                   | 0.36                   | .....                   | .....                     | .....                    | .....                  | 3                     | 3.82              | 3.82                               | 3.01                                      | 37.00                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Banka...            | 1.89                     | 0.83                   | 0.33                   | .....                   | .....                     | .....                    | .....                  | 3                     | 3.04              | 3.04                               | 2.92                                      | 33.01                                 | .....                                     |
|                          |                  | Kolga...            | 2.51                     | 0.34                   | 0.23                   | .....                   | .....                     | 0.88                     | .....                  | 4                     | 3.96              | 4.61                               | 4.61                                      | 40.90                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Rajmoual...         | 0.56                     | 1.31                   | 0.49                   | 0.09                    | .....                     | .....                    | .....                  | 4                     | 2.45              | 2.45                               | 4.32                                      | 30.43                                 | .....                                     |
|                          |                  | Godda...            | .....                    | 1.05                   | 0.30                   | .....                   | .....                     | .....                    | .....                  | 2                     | 1.35              | 1.00                               | 3.27                                      | 44.23                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Pasour...           | 1.05                     | 3.79                   | 0.07                   | 1.02                    | .....                     | .....                    | .....                  | 4                     | 6.83              | 7.07                               | 5.50                                      | 61.81                                 | .....                                     |
|                          |                  | Nya Doonka...       | 0.91                     | 1.20                   | 0.74                   | 0.11                    | .....                     | .....                    | .....                  | 4                     | 2.98              | 4.40                               | 4.59                                      | 38.47                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Deoghar...          | 0.45                     | 0.85                   | 0.42                   | 0.15                    | .....                     | .....                    | .....                  | 4                     | 1.87              | 2.00                               | 3.20                                      | 41.14                                 | .....                                     |
|                          |                  | Jamara...           | 2.14                     | 0.37                   | 0.44                   | 0.14                    | .....                     | .....                    | .....                  | 4                     | 3.00              | 3.00                               | 2.55                                      | 33.78                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Simra...            | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |
|                          |                  | Namhat...           | 1.40                     | 2.20                   | 0.30                   | .....                   | .....                     | .....                    | .....                  | 3                     | 3.90              | 5.30                               | 2.80                                      | 28.01                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Paenamba (Girda)... | 0.45                     | 1.45                   | 0.00                   | .....                   | .....                     | 0.40                     | .....                  | 4                     | 2.30              | 2.52                               | 3.33                                      | 35.48                                 | .....                                     |
|                          |                  | Hasaribagh...       | 0.14                     | 0.74                   | .....                  | 0.06                    | .....                     | .....                    | .....                  | 3                     | 0.94              | 2.30                               | 3.10                                      | 38.71                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Somtagarh...        | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |
|                          |                  | Manudi Hill...      | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Jhoomrah Hill...    | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |
|                          |                  | Barra...            | 1.78                     | 0.13                   | 0.31                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.22              | 3.30                               | 2.22                                      | 33.55                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Chitra...           | 0.70                     | 1.32                   | .....                  | 0.22                    | 0.20                      | .....                    | .....                  | 4                     | 2.50              | 3.8                                | 3.07                                      | 39.70                                 | .....                                     |
|                          |                  | Karagdeha...        | 0.44                     | 3.40                   | 2.44                   | .....                   | .....                     | .....                    | .....                  | 3                     | 6.28              | 9.10                               | 2.22                                      | 67.58                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Namghar...          | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |
|                          |                  | Lohardugga...       | 0.83                     | 1.32                   | .....                  | 0.85                    | .....                     | .....                    | .....                  | 3                     | 2.90              | 3.93                               | 2.90                                      | 47.95                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Kanoni...           | .....                    | 0.85                   | 0.44                   | .....                   | .....                     | .....                    | .....                  | 3                     | 1.40              | 1.47                               | 3.60                                      | 40.50                                 | .....                                     |
|                          |                  | Pamunow...          | 0.54                     | 1.05                   | .....                  | .....                   | 0.62                      | .....                    | .....                  | 3                     | 2.24              | 4.55                               | 3.27                                      | 42.24                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Bili...             | .....                    | .....                  | 2.60                   | .....                   | .....                     | .....                    | .....                  | 1                     | 2.60              | 4.04                               | 2.60                                      | 40.45                                 | .....                                     |
|                          |                  | Balumat...          | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Moumnabad...        | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |
|                          |                  | Gurwah...           | .....                    | 2.13                   | 0.43                   | .....                   | .....                     | .....                    | .....                  | 2                     | 2.56              | 2.56                               | 2.56                                      | 40.81                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Chyousa...          | 0.07                     | 0.17                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.24              | 0.24                               | 3.44                                      | 43.47                                 | .....                                     |
|                          |                  | Chakradhar...       | 0.10                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Chateilla...        | .....                    | 0.83                   | 0.15                   | .....                   | .....                     | .....                    | .....                  | 2                     | 0.98              | 1.30                               | 2.22                                      | 43.60                                 | .....                                     |
|                          |                  | Baharagura...       | .....                    | 0.39                   | .....                  | .....                   | 0.20                      | .....                    | .....                  | 2                     | 0.59              | 1.01                               | 2.22                                      | 31.02                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Purulia...          | .....                    | 0.61                   | 0.77                   | .....                   | .....                     | .....                    | .....                  | 2                     | 1.38              | 1.38                               | 2.88                                      | 39.55                                 | .....                                     |
|                          |                  | Gumbudpore...       | 0.90                     | 1.46                   | 0.04                   | .....                   | .....                     | .....                    | .....                  | 3                     | 2.40              | 2.45                               | 2.40                                      | 35.13                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Kaghanath...        | .....                    | 0.48                   | 0.36                   | .....                   | .....                     | 0.15                     | .....                  | 3                     | 0.99              | 0.97                               | 2.22                                      | 28.08                                 | .....                                     |
|                          |                  | Burrahoom...        | 0.77                     | 0.23                   | .....                  | .....                   | .....                     | .....                    | .....                  | 2                     | 0.90              | 1.41                               | 2.22                                      | 33.20                                 | .....                                     |
| SOUTH BEHAR.             | South Bhagalpur. | Jhalda...           | 0.44                     | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |
|                          |                  | Chas...             | .....                    | .....                  | .....                  | .....                   | .....                     | .....                    | .....                  | .....                 | .....             | .....                              | .....                                     | .....                                 | .....                                     |

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall column are left blank.

CALCUTTA, the 13th September 1887.

**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS.  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVA-  
TIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
9TH OF SEPTEMBER 1887.**

At the close of the previous week conditions were fairly normal for the season, and on the 2nd instant, in particular, rainfall had been general over the whole province, and at many of the northern and eastern stations the falls had been heavy. Up till the 2nd the province had been almost entirely influenced by the monsoon current blowing from the Bay of Bengal, but on this day a westerly element appeared in the wind directions, showing that the Bombay branch of the current was again commencing to make itself felt. On the 3rd conditions had not altered to any material extent; decidedly strong monsoon winds were blowing over the whole Bay, and rainfall continued fairly general over the province. At the northern stations winds, however, were a little irregular, and on the 4th a distinct circulation of winds had set up over part of Behar and North Bengal, the centre of which appeared to be near Maldah. Conditions therefore became favourable for very heavy rain in the north of the province, and the following represent some of the heaviest falls recorded on this date:—Matari in the Purneah district 16·20 inches, Fallacotta (Julpigoree district) 15·09 inches, Mickligunge (Cooch Behar district) 12·50 inches, Julpigoree 11·96 inches, Debigunge 10·6 inches, Alipore Duar 9·06 inches, Buxa 9·82 inches and Matabhanga 8·78 inches. Over the remainder of the province also rainfall was fairly general, but only moderate in amount. On the 5th the feeble wind circulation had been transferred to South Behar, and pressure commenced to rise very rapidly, the rise exceeding a tenth of an inch at many of the stations in North Bengal and Behar; moderate to heavy rain continued to fall on this day, particularly in the north of the province, but it was clear that the area of rainfall was decreasing. On the 6th a rapid and almost complete change took place in the meteorological conditions. The minimum pressure recorded in the Bay retreated southwards to Cocouada; pressure again rose rapidly in Bengal, the rise in some instances exceeding a tenth of an inch. Winds became light and variable, and at neighbouring stations were frequently of opposite directions in the interior of the province, and instead of the very strong monsoon current which had previously been blowing at the head of the Bay, a light and rather irregular current was reported, though at the same time an extremely strong monsoon current was blowing in the south of the Bay. Rainfall also to a great extent ceased in Bengal, though in Behar some heavy falls were reported. On the 7th these conditions developed further, winds became northerly at the greater number of stations in the province, pressure remained very high in Bengal and an almost complete break in the rains was established. Conditions over the centre and south of the Bay were probably decidedly disturbed at this time, and wind directions all round the Bay showed distinct indraught towards the sea area, while in the south of the Bay at Galle a particularly strong monsoon current was blowing. These conditions continued unaltered until the 9th, when an extremely rapid fall of pressure set in over the northern half of the Bay, the pressure giving way most rapidly at the eastern stations, and on this day conditions were decidedly favourable to the production of a barometric depression in the eastern part of the Bay. The depression afterwards developed on the 10th, but its history belongs to the meteorology of the following week. The break in the rains in Bengal also continued up till the close of the week, and thus from the 6th to the 9th the falls reported have been light and very local.

*Pressure.*—The most noticeable feature in the pressure of the week was the extremely rapid rise which took place on the 5th and 6th, the rise in certain districts almost equalling a fifth of an inch. The mean pressure has therefore been very considerably in excess of the normal, and the excess at some stations, such as Purneah and Durbhunga, almost equals a tenth of an inch. The mean excess is less than this, and does not generally exceed 0·06". The excess is smallest in South-East Bengal, in the neighbourhood of which pressure was comparatively low at the end of the week, and at Chittagong it has only equalled 0·024".

*Temperature.*—Was about normal, or rather above it, during the earlier part of the week, when rainfall was fairly abundant, but directly the break in the rains commenced, temperature commenced to rise with great rapidity, and at the close of the week it was largely in excess of the normal. For the whole week the mean temperature has been considerably in excess of the normal in all districts except Behar and Assam. In East Bengal the average excess has been 2·3°, in South-West Bengal 2·0°, in Orissa 1·5°, and in Chutia Nagpur 1·2°. In North Bengal the excess has been much smaller and only equals 0·2°. In Assam, on the other hand, temperature has been in defect by 0·3°, and in South Behar by 0·7°, while in North Behar the defect has been the considerable amount of 2·5°. For the whole of Bengal the mean temperature for the week has been in excess by 0·6°.

*Rainfall.*—Has been largely in excess of the normal in North Bengal, moderately above it in North Behar, and slightly above it in South Behar. It has been largely in defect in Chutia Nagpur and South-West Bengal, very largely in defect in East Bengal, while in Orissa the fall has been only about a fifth of the normal. The actual average fall in North Bengal has been the large amount of 6·44 inches, in North Behar it has averaged 3·11 inches, and in South Behar 2·48 inches. The falls in other districts have been very much smaller and in South-West and East Bengal and in Chutia Nagpur the falls have been from one to about one-and-a-half inches, while in Orissa the fall has only averaged 0·65

inch. Compared with the normal fall, and expressed as a percentage of that amount, the average falls in each of the seven meteorological districts for the week have been— in Orissa 23 per cent., in South West Bengal 42 per cent., in East Bengal 31 per cent., in North Bengal 173 per cent., in North Behar 122 per cent., in South Behar 102 per cent., and in Chutia Nagpur 58 per cent. Taking each of these districts as having an equal value in the calculation, the rainfall of the whole province has equalled 78 per cent. of the normal.

The heaviest falls have been mainly determined towards the following districts— Julpigoree, Rungpore and Maldah, and also towards Darjeeling, Sarun and Bogra; while on the other hand the following districts have been very largely in defect :—all the districts in Orissa, the Midnapore, 24-Pergunnahs, Howrah, Hooghly, Burdwan, Bankoora, Nuddea, Jessore and Khoolna districts, in South-West Bengal, all the districts in East Bengal, the Pubna district in North Bengal, and the Chyebassa district in Chutia Nagpur.

In Assam, during the week, particularly heavy rainfall has been reported at Dhubri, which has received 9.34 inches; moderate rain at Silchar, which reports 2.69 inches; and light rain at Sibsaur, which has received only 1.02 inches.

The following table gives the summary of the temperature and rainfall data of each of the eight meteorological divisions of the province for the week ending Friday, the 9th of September 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          |                 | RAINFALL.  |                         |                                |            |                      |                 |                      |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|----------------------|-----------------|----------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of August. |                 | Since 15th May 1887. |                 |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.             | Normal average. | Average.             | Normal average. |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                      |                 |                      |                 |
| Orissa                       | 87.4                          | 77.6                         | 80.2                    | 70.4                   | 84.3                  | +1.5   | 0.65     | 2.80            | -2.15      | 1.8                     | 3.8                            | -2.0       | 0.81                 | 3.44            | 32.70                | 38.35           |
| South-West Bengal            | 85.1                          | 76.3                         | 80.2                    | 70.2                   | 84.7                  | +2.0   | 1.20     | 2.83            | -1.63      | 2.0                     | 4.2                            | -2.2       | 1.81                 | 3.54            | 37.14                | 41.04           |
| East Bengal                  | 85.3                          | 74.8                         | 80.6                    | 78.8                   | 83.7                  | +2.3   | 1.26     | 4.00            | -2.74      | 2.6                     | 4.7                            | -2.1       | 2.18                 | 5.00            | 43.06                | 60.81           |
| North Bengal                 | 83.1                          | 68.8                         | 67.0                    | 76.1                   | 81.6                  | +0.2   | 6.44     | 3.72            | +2.72      | 3.0                     | 4.0                            | -1.0       | 8.30                 | 1.80            | 60.20                | 55.73           |
| North Behar                  | 85.0                          | 70.6                         | 86.1                    | 76.3                   | 81.2                  | -2.5   | 3.11     | 2.54            | +0.57      | 2.7                     | 3.2                            | -0.5       | 5.23                 | 3.26            | 45.00                | 37.48           |
| South Behar                  | 81.1                          | 73.0                         | 87.6                    | 77.6                   | 82.0                  | -0.9   | 2.48     | 2.44            | +0.04      | 3.4                     | 3.6                            | -0.2       | 3.01                 | 3.00            | 36.04                | 34.67           |
| Central Nagpur               | 80.5                          | 70.4                         | 85.2                    | 72.4                   | 78.8                  | +1.2   | 1.00     | 2.76            | -1.76      | 2.7                     | 4.3                            | -1.6       | 2.25                 | 3.34            | 39.24                | 39.40           |
| Assam                        | 80.5                          | 71.3                         | 87.9                    | 76.5                   | 82.2                  | -0.3   |          |                 |            |                         |                                |            |                      |                 |                      |                 |

\* Chyebassa not included.

METEOROLOGICAL OFFICE, BENGAL:

A. PEDLER,

The 13th September 1887.

Offg. Meteorological Reporter to the Govt. of Bengal.



Results of the Thermometrical Observations taken at the Meteorological Office,  
Chowringhee, from 4th to 10th September 1887.

| MONTH.    | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|-----------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|           |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.     |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| September | 4th   | 82.9         | 90.8     | 12.0   | 78.8     | 79.7           | .986            | 78.8       | 90        | .....   |
| "         | 5th   | 83.3         | 90.0     | 12.0   | 78.0     | 80.2           | .991            | 78.9       | 87        | .....   |
| "         | 6th   | 84.5         | 92.0     | 14.0   | 78.0     | 79.8           | .955            | 77.8       | 80        | .....   |
| "         | 7th   | 84.1         | 92.2     | 12.2   | 80.0     | 81.4           | 1.037           | 80.3       | 88        | 0.17    |
| "         | 8th   | 84.9         | 92.0     | 12.2   | 79.8     | 82.1           | 1.061           | 81.1       | 88        | 0.27    |
| "         | 9th   | 86.4         | 93.0     | 12.2   | 80.8     | 82.5           | 1.059           | 81.0       | 84        | 0.01    |
| "         | 10th  | 79.6         | 86.4     | 8.6    | 77.8     | 77.1           | .898            | 76.0       | 89        | 0.91    |

|  |     |     |     |       |
|--|-----|-----|-----|-------|
| The mean temperature of the seven days                 | ... | ... | ... | 0     |
| The extreme variation of temperature                   | ... | ... | ... | 83.7  |
| The maximum temperature                                | ... | ... | ... | 15.2  |
|  |     |     |     | 98.0  |
|  |     |     |     | %     |
| The mean relative humidity                             | ... | ... | ... | 87    |
|  |     |     |     | Inch. |
| The total fall of rain from 4th to 10th September 1887 | ... | ... | ... | 1.36  |

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ;  
The 12th September 1887.

A. PEDLER,  
for Offg. Meteorological Reporter to the Govt. of India.

## MEMORANDUM.

For the week ending 27th August 1887, the returns from the principal Municipalities in Bengal disclosed the following results:—

1. That the ratios per *mille* of population of births stood at 19· as opposed to very nearly the same proportion, viz. 18·9, during the preceding week ending 20th August, and of deaths at 28·4 against 29·1.

2. That the following Municipalities registered the highest proportions of births and deaths:—

| Births.    |     |                  | Deaths.             |     |                  |
|------------|-----|------------------|---------------------|-----|------------------|
|            |     | Ratio per mille. |                     |     | Ratio per mille. |
| Monghyr    | ... | 40·7             | Arrah               | ... | 72·9             |
| Bhagulpore | ... | 34·4             | Monghyr             | ... | 48·8             |
| Serampore  | ... | 33·3             | Gya                 | ... | 48·5             |
| Durbhanga  | ... | 32·3             | Beaulah             | ... | 44·6             |
| Beaulah    | ... | 31·5             | Bhagulpore          | ... | 39·8             |
|            |     |                  | Serampore           | ... | 39·3             |
|            |     |                  | Darjiling           | ... | 39·0             |
|            |     |                  | Chupra              | ... | 37·1             |
|            |     |                  | Burdwan             | ... | 35·1             |
|            |     |                  | Suburbs of Calcutta | ... | 30·4             |

3. That the only noticeable point in connection with the incidence of the specific death-causes in comparison with the outcome of the preceding week, is a sensible abatement in the mortality from fever; *vide* subjoined table:—

| Ratio per mille during the weeks ending— |     |     |                   |                   |  |
|--|-----|-----|-------------------|-------------------|--|
|  |     |     | 27th August 1887. | 20th August 1887. |  |
| Cholera                                  | ... | ... | 4·9               | 5·5               |  |
| Small-pox                                | ... | ... | ·1                | ·2                |  |
| Fever                                    | ... | ... | 10·4              | 11·8              |  |
| Bowel-complaints                         | ... | ... | 4·5               | 3·6               |  |
| Injury                                   | ... | ... | ·3                | ·5                |  |
| Other causes                             | ... | ... | 8·2               | 7·5               |  |

4. That while no Municipality suffered much from small-pox or presented a large number of casualties from violence, the following returned conspicuously high death-rates from the rest of the diseases specified in the above table:—

| Cholera.            |                  | Fever.  |                  | Bowel-Complaints. |                  | Other Causes.       |                  |
|---------------------|------------------|---------|------------------|-------------------|------------------|---------------------|------------------|
|                     | Ratio per mille. |         | Ratio per mille. |                   | Ratio per mille. |                     | Ratio per mille. |
| Arrah               | 19·              | Beaulah | 34·1             | Bhagulpore        | 11·8             | Gya                 | 17·8             |
| Chupra              | 22·5             | Purneah | 20·8             | Puri              | 10·5             | Monghyr             | 14·5             |
| Monghyr             | 13·5             |         |                  |                   |                  | Serampore           | 13·7             |
| Burdwan             | 6·1              |         |                  |                   |                  | Bhagulpore          | 13·6             |
| Gya                 | 4·8              |         |                  |                   |                  | Puri                | 10·5             |
| Bhagulpore          | 4·5              |         |                  |                   |                  | Suburbs of Calcutta | 10·1             |
| Suburbs of Calcutta | 2·7              |         |                  |                   |                  |                     |                  |
| Patna               | 2·3              |         |                  |                   |                  |                     |                  |

5. That the mortality in relation to *Sex*, *Class* and *Age*, stood as follows:—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |     |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |     | Ratio per mille. |
| Males   | ... | 27·8             | Christians          | ... | 26·1             | Under 1 year         | ... | 246·9            |
| Females   | ... | 29·1             | Hindus              | ... | 29·4             | 1 and under 5 years  | ... | 52·6             |
| Ratio of male deaths to every 100 female deaths | 108 |                  | Mahomedans          | ... | 26·5             | 5 " " 10 "           | ... | 13·9             |
|   |     |                  |                     |     |                  | 10 " " 15 "          | ... | 14·5             |
|   |     |                  |                     |     |                  | 15 " " 20 "          | ... | 18·8             |
|   |     |                  |                     |     |                  | 20 " " 30 "          | ... | 13·6             |
|   |     |                  |                     |     |                  | 30 " " 40 "          | ... | 17·5             |
|   |     |                  |                     |     |                  | 40 " " 50 "          | ... | 22·1             |
|   |     |                  |                     |     |                  | 50 " " 60 "          | ... | 30·0             |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 60·7             |

R. LIDDERDALE, M.D., Deputy Surgeon-General,

The 12th September 1887.

Sanitary Commissioner for Bengal.

[illegible]

[illegible]

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statements showing quantities of Goods carried during the month of July 1887.

## ORISSA CIRCLE.

## TALDUNDIAH CANAL SYSTEM.

LENGTH OF CANAL OPEN { TALDUNDIAH CANAL 27 MILES.  
MACHIGONG " 4 "

| of  | DESCRIPTION.                           | TOTAL GOVERNMENT AND PRIVATE. |                      |                    |          | PRIVATE.             |          | REMARKS. |
|-----|--|-------------------------------|----------------------|--------------------|----------|----------------------|----------|----------|
|     |  | Quantity—Tons.                |                      |                    | Value.   | Quantity.            | Value.   |          |
|     |  | Up.                           | Down.                | Total.             | Rupees.  | Tons.                | Rupees.  |          |
|     | 1. Grain ...                           | .....                         | 167                  | 167                | 3,600    | 167                  | 3,600    |          |
|     | 2. Cotton ...                          | .....                         | .....                | .....              | .....    | .....                | .....    |          |
|     | 3. Oilseeds ...                        | .....                         | 19                   | 19                 | 1,653    | 19                   | 1,653    |          |
|     | 4. Salt ...                            | .....                         | .....                | .....              | .....    | .....                | .....    |          |
|     | 5. Piece-goods ...                     | .....                         | .....                | .....              | .....    | .....                | .....    |          |
|     | 6. Metal ...                           | .....                         | 1,656                | 1,656              | 2,133    | 1,656                | 2,133    |          |
|     | 7. Building material.                  | .....                         | 1,397                | 1,397              | 2,280    | 105                  | 710      |          |
|     | 8. Miscellaneous ...                   | 1                             | 86                   | 87                 | 9,725    | 87                   | 9,725    |          |
|     | 9. Fuel ...                            | .....                         | 21                   | 21                 | 105      | 21                   | 105      |          |
| s   | 10. Timber No.                         | .....                         | 150 No               | 150 No.            | 40       | 150 No.              | 40       |          |
|     | 11. Bamboos ..                         | .....                         | .....                | .....              | .....    | .....                | .....    |          |
|     | 12. Total ...                          | 1                             | { 3,346 &<br>150 No. | 3,347 &<br>150 No. | { 19,536 | { 2,055 &<br>150 No. | { 17,966 |          |
| ts  | 13. Total of same<br>month last year } | 16                            | { 182 &<br>3,000 No. | 198 &<br>3,000 No. | { 7,659  | { 183 &<br>3,000 No. | { 7,634  |          |
| its |  |                               |                      |                    |          |                      |          |          |

|  | Up.      | Down.   | Total.    |  | Rs. A. P.             |
|--|----------|---------|-----------|--|-----------------------|
| total number of boats plying cargo No.     | 1        | 238     | 239       | Total tollage of month—<br>24 + 25 + 26 ...                | 1,087 1 6             |
| total number of boats plying passenger No. | 10       | .....   | 10        | Total tollage of same<br>month last year ...               | 334 13 0              |
| total number of empty boats ... No.        | 261      | 18      | 279       |  |                       |
| total registered tonnage, cargo ...        | 2,647    | 5,794   | 8,441     |  |                       |
| total registered tonnage, passenger ...    | 397      | 322     | 719       | Memorandum of Tollage.                                     |                       |
| on-milage ...                              | 41,293   | 88,198  | 1,29,491  |  |                       |
| estimated value of cargo. Rs               | 50       | 19,446  | 19,496    |  |                       |
| number of passengers. No.                  | 1,327    | .....   | 1,327     | 1. Balance not recovered<br>on the 1st of the<br>month ... | Rs. A. P.<br>220 10 9 |
| rafts, bamboos c. ft.                      | .....    | .....   | .....     | 2. Tollage per month ...                                   | 1,087 1 6             |
| No., bullahs No.                           | .....    | 150     | 150       |  |                       |
| estimated value of rafts. Rs.              | .....    | 40      | 40        |  |                       |
| tollage on boats ..                        | 189-13-0 | 896-8-0 | 1,086-5-0 | 3. Total ...   | 1,307 12 3            |
| compounded tollage on boats ... Rs.        | .....    | .....   | .....     |  |                       |
| tollage on rafts ..                        | .....    | 0-12-6  | 0-12-6    | 4. Amount credited in<br>the accounts of the<br>month ...  | 1,233 10 3            |
| total tollage on boats per<br>ton-mile ... | .....    | .....   | 1-60 pie  |  |                       |
|  |          |         |           | 5. Balance due at the                                      |                       |

## KENDRAPARA CANAL SYSTEM.

LENGTH OF CANAL OPEN, 75 MILES.

| Number of<br>rafts<br>or rafts. | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |                        |                      |            | PRIVATE.               |            |
|---------------------------------|--------------------------------------|-------------------------------|------------------------|----------------------|------------|------------------------|------------|
|                                 |                                      | Quantity—Tons.                |                        |                      | Value.     | Quantity.              | Value.     |
|                                 |                                      | Up.                           | Down.                  | Total.               | Rupees.    | Tons.                  | Rupees.    |
| 97                              | 1. Grain ...                         | 409                           | 305                    | 714                  | 46,580     | 714                    | 46,580     |
| .....                           | 2. Cotton ...                        | .....                         | .....                  | .....                | .....      | .....                  | .....      |
| 3                               | 3. Oilseeds ...                      | 1                             | 6                      | 7                    | 400        | 7                      | 400        |
| 26                              | 4. Salt ...                          | 73                            | 72                     | 145                  | 15,790     | 145                    | 15,790     |
| .....                           | 5. Piece-goods ...                   | .....                         | .....                  | .....                | .....      | .....                  | .....      |
| .....                           | 6. Metal ...                         | .....                         | .....                  | .....                | .....      | .....                  | .....      |
| 28                              | 7. Building materials ...            | 30                            | 249                    | 279                  | 1,610      | 218                    | 1,320      |
| 160                             | 8. Miscellaneous ...                 | 1,070                         | 371                    | 1,441                | 1,15,090   | 1,421                  | 1,14,540   |
| 8                               | 9. Fuel ...                          | 45                            | 16                     | 61                   | 210        | 54                     | 170        |
| 6                               | 10. Timber ...                       | 2                             | 46                     | 48                   | 1,350      | 48                     | 1,350      |
| 2 rafts                         | 11. Bamboos ...                      | .....                         | 1,504 No.              | 1,504 No.            | 20         | 1,504 No.              | 20         |
| 328 &<br>2 rafts                | 12. Total ...                        | 1,630                         | { 1,665 &<br>1,504 No. | 2,695 &<br>1,504 No. | { 1,81,050 | { 2,607 &<br>1,504 No. | { 1,80,170 |
| 659                             | 13. Total of same<br>month last year | 3,853                         | 2,263                  | 6,116                | 2,30,630   | 5,853                  | 2,30,630   |

|  | Up.        | Down.     | Total.     |  | Rs.      |
|--|------------|-----------|------------|--|----------|
| 14. Total number of boats plying cargo No.           | 175        | 155       | 328        | Total tollage of month—<br>24+25+26 ...                    | 3,751 8  |
| 15. Total number of boats plying passenger No.       | 38         | 37        | 75         | Total tollage of same month<br>last year ...               | 4,402 12 |
| 15½. Total number of empty boats No.                 | 156        | 129       | 285        | <i>Memorandum of Tollage.</i>                              |          |
| 16. Total registered tonnage, cargo ...              | 3,274      | 2,013     | 5,287      |  | Rs.      |
| 17. Total registered tonnage, passenger ...          | 769        | 872       | 1,641      | 1. Balance not recovered<br>on the 1st of the<br>month ... | 3,993 11 |
| 18. Ton-mileage ...                                  | 99,021     | 78,082    | 1,77,103   | 2. Tollage per month ...                                   | 3,751 8  |
| 19. Estimated value of cargo Rs.                     | 1,04,330   | 76,700    | 1,81,030   | 3. Total ...   | 7,745 3  |
| 20. Number of passengers ...                         | 816        | 1,610     | 2,426      | 4. Amount credited in the<br>accounts of the month ...     | 1,627 10 |
| 21. Rafts, bamboos No.                               | ...        | 1,504     | 1,504      | 5. Balance due at the end<br>of the month ...              | 6,117 8  |
| 22. Do., bullahs "                                   | .....      | .....     | .....      |  |          |
| 23. Estimated value of rafts. ...                    | .....      | 20        | 20         |  |          |
| 24. Tollage on boats Rs.                             | 2,142-11-5 | 1,608-0-2 | 3,750-11-7 |  |          |
| 25. Compounded tollage on<br>boats ...               | Rs. ....   | .....     | .....      |  |          |
| 26. Tollage on rafts "                               | .....      | 0-12-10   | 0-12-10    |  |          |
| 27. Total tollage on boats per<br>ton-mile ...       | .....      | .....     | 4-1 pie    |  |          |
| 28. Total tollage on rafts per<br>100 cubic feet ... | .....      | .....     | 0-0-10     |  |          |

## HIGH LEVEL CANAL, RANGE I.

LENGTH OF CANAL OPEN, 34 MILES.

| No.   | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |          |                        |  | PRIVATE.               |           | REMARKS. |
|---|---------------------------------------|-------------------------------|----------|------------------------|--|------------------------|-----------|----------|
|   |                                       | Quantity—Tons.                |          |                        | Value.   | Quantity.              | Value.    |          |
|   |                                       | Up.                           | Down.    | Total.                 | Rupees.  | Tons.                  | Rupees.   |          |
| 54  | 1. Grain ...                          | 185                           | .....    | 185                    | 8,240  | 185                    | 8,240     |          |
| 5   | 2. Cotton ...                         | .....                         | .....    | .....                  | .....  | .....                  | .....     |          |
| 40  | 3. Oilseeds ...                       | 26                            | .....    | 26                     | 2,590  | 26                     | 2,590     |          |
|   | 4. Salt ...                           | .....                         | 198      | 198                    | 16,490   | 198                    | 16,490    |          |
|   | 5. Piece-goods ...                    | .....                         | .....    | .....                  | .....  | .....                  | .....     |          |
| 4   | 6. Metal ...                          | 20                            | .....    | 20                     | 2,870  | 20                     | 2,870     |          |
| 12  | 7. Building materials ...             | 146                           | .....    | 146                    | 1,010  | 146                    | 1,010     |          |
| 79  | 8. Miscellaneous ...                  | 224                           | 157      | 381                    | 77,920   | 381                    | 77,920    |          |
| 18  | 9. Fuel ...                           | 107                           | .....    | 107                    | 290  | 107                    | 290       |          |
| fts   | 10. Timber ...                        | 260 No.                       | .....    | 260 No.                | 580  | 260 No.                | 580       |          |
|   | 11. Bamboos ...                       | .....                         | .....    | .....                  | .....  | .....                  | .....     |          |
| &<br>fts                                      | 12. Total ...                         | { 708 &<br>260 No. }          | 355      | { 1,063 &<br>260 No. } | 1,09,990   | { 1,063 &<br>260 No. } | 1,09,990  |          |
| 90  | 13. Total of same month last year ... | 1,742                         | 1,162    | 2,904                  | 74,810   | 2,864                  | 74,810    |          |
|   |                                       | Up.                           | Down.    | Total.                 |  |                        | Rs. A. P. |          |
| Total number of boats plying cargo No.        |                                       | 147                           | 65       | 212                    | Total tollage of month—<br>24 + 25 + 26 ...          |                        | 622 7 0   |          |
| Total number of boats plying passenger No.    |                                       | ...                           | 1        | 1                      | Total tollage of same month last year ...            |                        | 764 14 9  |          |
| Total number of empty boats No.               |                                       | 29                            | 71       | 100                    |  |                        |           |          |
| Total registered tonnage, cargo ...           |                                       | 1,388                         | 574      | 1,962                  |  |                        |           |          |
| Total registered tonnage, passenger ...       |                                       | .....                         | 5        | 5                      | <i>Memorandum of Tollage.</i>                        |                        |           |          |
| Ton-mileage ...                               |                                       | 17,931                        | 11,024   | 28,955                 |  |                        |           |          |
| Estimated value of cargo ...                  |                                       | 67,130                        | 42,280   | 1,09,410               | 1. Balance not recovered on the 1st of the month ... |                        | 241 2 0   |          |
| Number of passengers ...                      |                                       | .....                         | 13       | 13                     | 2. Tollage per month ...                             |                        | 622 7 0   |          |
| Rafts, bamboos C. ft.                         |                                       | .....                         | .....    | .....                  |  |                        |           |          |
| No., timbers No.                              |                                       | 260                           | .....    | 260                    | 3. Total ...   |                        | 863 9 0   |          |
| Estimated value of rafts Rs.                  |                                       | 580                           | .....    | 580                    |  |                        |           |          |
| Tollage on boats ..                           |                                       | 380-4-6                       | 217-11-0 | 597-15-6               | 4. Amount credited in the accounts of the month ...  |                        | 606 2 3   |          |
| Impounded tollage on boats Rs.                |                                       | .....                         | .....    | .....                  |  |                        |           |          |
| Tollage on rafts ..                           |                                       | 24-7-6                        | .....    | 24-7-6                 |  |                        |           |          |
| Total tollage on boats per ton-mile ...       |                                       | .....                         | .....    | 0-0-4                  |  |                        |           |          |
| Total tollage on rafts per 100 cubic feet ... |                                       | .....                         | .....    | 9-6-4                  | 5. Balance due at the end of the month ...           |                        | 257 6 9   |          |

HIGH LEVEL CANAL, RANGE II.  
LENGTH OF CANAL OPEN, 12½ MILES.

| Number of<br>boats<br>or rafts.                         | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |                    |                  |  | PRIVATE.           |          | REMARKS.  |
|---|--------------------------------------|-------------------------------|--------------------|------------------|--|--------------------|----------|-----------|
|   |                                      | Quantity—Tons.                |                    |                  | Value.   | Quantity.          | Value.   |           |
|   |                                      | Up.                           | Down.              | Total.           | Rupees.  | Tons.              | Rupees.  |           |
| 35  | 1. Grain ...                         | 126                           | 24                 | 150              | 7,499  | 150                | 7,499    |           |
| .....   | 2. Cotton ...                        | .....                         | .....              | .....            | .....  | .....              | .....    |           |
| 13  | 3. Oilseeds ...                      | .....                         | 64                 | 64               | 5,792  | 64                 | 5,792    |           |
| 7   | 4. Salt ...                          | .....                         | 48                 | 48               | 6,755  | 48                 | 6,755    |           |
| 10  | 5. Piece-goods ...                   | .....                         | 17                 | 17               | 4,780  | 17                 | 4,780    |           |
| .....   | 6. Metal ...                         | .....                         | .....              | .....            | .....  | .....              | .....    |           |
| 73  | 7. Building materials ...            | .....                         | 415                | 445              | 92   | .....              | .....    |           |
| 20  | 8. Miscellaneous ...                 | 1                             | 88                 | 89               | 13,950   | 89                 | 13,950   |           |
| 9   | 9. Fuel ...                          | .....                         | 34                 | 34               | 97   | 2                  | 6        |           |
| 11 rafts  | 10. Timber ...                       | .....                         | 258 No.            | 258 No.          | 774  | 250 No.            | 750      |           |
| .....   | 11. Bamboos ...                      | .....                         | .....              | .....            | .....  | .....              | .....    |           |
| 167 &<br>11 rafts                                       | 12. Total ...                        | 127                           | { 720 &<br>258 No. | 847 &<br>258 No. | { 39,739   | { 370 &<br>250 No. | { 39,532 |           |
| 303   | 13. Total of same<br>month last year | .....                         | ...                | 1,212            | 35,189   | 538                | 34,787   |           |
|   |                                      | Up.                           | Down.              | Total.           |  |                    |          | Rs. A. P. |
| 14. Total number of boats ply-<br>ing cargo No.         |                                      | 32                            | 135                | 167              | Total tollage of month—<br>24 + 25 + 26                |                    |          | 457 8 9   |
| 15. Total number of boats ply-<br>ing passenger No.     |                                      | .....                         | 3                  | 3                | Total tollage of same<br>month last year               |                    |          | 397 7 9   |
| 15½. Total number of empty<br>boats No.                 |                                      | 127                           | 18                 | 145              |  |                    |          |           |
| 16. Total registered tonnage<br>of cargo-boats ...      |                                      | 254                           | 1,410              | 1,694            |  |                    |          |           |
| 17. Total registered tonnage,<br>of passenger boats ... |                                      | ...                           | 18                 | 18               | Memorandum of Tollage.                                 |                    |          |           |
| 18. Ton-mileage ...                                     |                                      | 8,591                         | 14,433             | 23,024           |  |                    |          | Rs. A. P. |
| 19. Estimated value of cargo Rs.                        |                                      | 4,869                         | 34,096             | 38,965           | 1. Balance not recovered<br>on the 1st of the<br>month |                    |          | 36 14 6   |
| 20. Number of passengers ...                            |                                      | 106                           | 383                | 489              | 2. Tollage per month ...                               |                    |          | 457 8 9   |
| 21. Rafts, bamboos No.                                  |                                      | .. ..                         | .....              | .....            |  |                    |          |           |
| 22. Do., bullahs ..                                     |                                      | .....                         | 258                | 258              |  |                    |          |           |
| 23. Estimated value of rafts Rs.                        |                                      | .....                         | 774                | 774              | 3. Total ...   |                    |          | 494 7 3   |
| 24. Tollage on boats ..                                 |                                      | 109-0-3                       | 325-14-9           | 434 15-0         |  |                    |          |           |
| 25. Compounded tollage on<br>boats ... Rs.              |                                      | .....                         | .....              | .....            | 4. Amount credited in<br>the accounts of the<br>month  |                    |          | 467 3 9   |
| 26. Tollage on rafts ..                                 |                                      | .....                         | 22-9-9             | 22-9-9           |  |                    |          |           |
| 27. Total tollage on boats per<br>ton-mile ...          |                                      | .....                         | .....              | 3-5 pie          |  |                    |          |           |
| 28. Total tollage on rafts per<br>100 cubic feet ...    |                                      | ...                           | .....              | 8-12-0           | 5. Balance due at the end<br>of the month ...          |                    |          | 27 3 6    |



## HIGH LEVEL CANAL, RANGE III.

LENGTH OF CANAL OPEN, 19½ MILES.

| Number of<br>boats<br>or rafts.                   | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |         |          |  | PRIVATE.  |         | REMARKS.  |
|---|--------------------------------------|-------------------------------|---------|----------|--|-----------|---------|-----------|
|   |                                      | Quantity—Tons.                |         |          | Value.   | Quantity. | Value.  |           |
|   |                                      | Up.                           | Down.   | Total.   | Rupees.  | Tons.     | Rupees. |           |
| 7   | 1. Grain ...                         | 17                            | .....   | 17       | 972  | 17        | 972     |           |
| .....   | 2. Cotton ...                        | .....                         | .....   | .....    | .....  | .....     | .....   |           |
| 1   | 3. Oilseeds ...                      | .....                         | 2       | 2        | 208  | 2         | 208     |           |
| 4   | 4. Salt ...                          | 1½                            | 9       | 10½      | 1,252  | 10½       | 1,252   |           |
| .....   | 5. Piece-goods ...                   | .....                         | .....   | .....    | .....  | .....     | .....   |           |
| .....   | 6. Metal ...                         | .....                         | .....   | .....    | .....  | .....     | .....   |           |
| 34  | 7. Building materials ...            | .....                         | 295     | 295      | 339  | .....     | .....   |           |
| 13  | 8. Miscellaneous ...                 | .....                         | 61½     | 61½      | 10,484   | 61½       | 10,484  |           |
| .....   | 9. Fuel ...                          | .....                         | .....   | .....    | .....  | .....     | .....   |           |
| .....   | 10. Timber ...                       | .....                         | .....   | .....    | .....  | .....     | .....   |           |
| .....   | 11. Bamboos ...                      | .....                         | .....   | .....    | .....  | .....     | .....   |           |
| 59  | 12. Total ...                        | 18½                           | 367½    | 386      | 13,255   | 91        | 12,916  |           |
| 163   | 13. Total of same<br>month last year | .....                         | .....   | 734      | 22,890   | 210       | 22,890  |           |
|   |                                      | Up.                           | Down.   | Total.   |  |           |         | Rs. A. P. |
| 14. Total number of boats plying cargo No.        |                                      | 8                             | 51      | 59       | Total tollage of month—<br>24 + 25 + 26 ...          |           |         | 176 11 0  |
| 15. Total number of boats plying passenger No.    |                                      | .....                         | 5       | 5        |  |           |         |           |
| 15½. Total number of empty boats No.              |                                      | 45                            | 7       | 52       | Total tollage of same<br>month last year ...         |           |         | 256 3 0   |
| 16. Total registered tonnage of cargo boats ...   |                                      | 37                            | 735     | 772      | Memorandum of Tollage.                               |           |         |           |
| 17. Total registered tonnage, passenger ...       |                                      | .....                         | 34      | 34       |  |           |         |           |
| 18. Ton-mileage ...                               |                                      | 2,733                         | 7,378   | 10,111   | 1. Balance not recovered on the 1st of the month ... |           |         | .....     |
| 19. Estimated value of cargo Rs.                  |                                      | 12,091                        | 1,164   | 13,255   |  |           |         |           |
| 20. Number of passengers No.                      |                                      | 105                           | 485     | 590      |  |           |         |           |
| 21. Rafts, bamboos c. ft.                         |                                      | .....                         | .....   | .....    | 2. Tollage per month ...                             |           |         | 176 11 0  |
| 22. Do., bullahs ..                               |                                      | .....                         | .....   | .....    |  |           |         |           |
| 23. Estimated value of rafts Rs.                  |                                      | .....                         | .....   | .....    |  |           |         |           |
| 24. Tollage on boats ..                           |                                      | 30-7-9                        | 146-3-3 | 176-11-0 | 3. Total ...   |           |         | 176 11 0  |
| 25. Compounded tollage on boats Rs.               |                                      | .....                         | .....   | .....    | 4. Amount credited in the accounts of the month ...  |           |         | 165 1 3   |
| 26. Tollage on rafts ..                           |                                      | .....                         | .....   | .....    |  |           |         |           |
| 27. Total tollage on boats per ton-mile ...       |                                      | .....                         | .....   | 3-3 pie  |  |           |         |           |
| 28. Total tollage on rafts per 100 cubic feet ... |                                      | .....                         | .....   | .....    | 5. Balance due at the end of the month ...           |           |         | 11 9 9    |

## SOUTH-WESTERN CIRCLE.

## MIDNAPORE CANAL.

LENGTH OF CANAL OPEN, 53 MILES.

| Number of boats or rafts.                     | DESCRIPTION.                       | TOTAL GOVERNMENT AND PRIVATE. |                    |                       |  | PRIVATE.              |              | REMARKS. |
|---|------------------------------------|-------------------------------|--------------------|-----------------------|--|-----------------------|--------------|----------|
|   |                                    | Quantity—Tons.                |                    |                       | Value.   | Quantity.             | Value.       |          |
|   |                                    | Up.                           | Down.              | Total.                | Rupees.  | Tons.                 | Rupees.      |          |
| 898   | 1. Grain ...                       | 6,099                         | 771                | 6,870                 | 3,25,287   | 6,870                 | 3,25,287     |          |
| 5   | 2. Cotton ...                      | .....                         | 6                  | 6                     | 3,110  | 6                     | 3,110        |          |
| 51  | 3. Oilseeds ...                    | 248                           | 287                | 535                   | 54,097   | 535                   | 54,097       |          |
| 157   | 4. Salt ...                        | .....                         | 1,979              | 1,979                 | 1,46,304   | 1,979                 | 1,46,304     |          |
| 12  | 5. Piece-goods ...                 | 14                            | 17                 | 31                    | 64,200   | 31                    | 64,200       |          |
| 29  | 6. Metal ...                       | 47                            | 132                | 179                   | 1,34,950   | 168                   | 1,38,450     |          |
| 31  | 7. Building materials ...          | 92                            | 58                 | 150                   | 1,688  | 150                   | 1,688        |          |
| 584   | 8. Miscellaneous ...               | 867                           | 1,571              | 2,438                 | 5,56,396   | 2,438                 | 5,56,396     |          |
| 53  | 9. Fuel ...                        | 280                           | 181                | 461                   | 7,887  | 461                   | 7,887        |          |
| 13 rafts                                      | 10. Timber ...                     | 524 c. ft.                    | 140 c. ft.         | 668 c. ft.            | 1,004  | 668 c. ft.            | 1,004        |          |
| 8 "   | 11. Bamboos ...                    | 2,600 "                       | .....              | 2,600 "               | 276  | 2,600 "               | 276          |          |
| 1,820 & 21 rafts                              | 12. Total ...                      | 7,647 & 3,128 c. ft.          | 5,002 & 140 c. ft. | 12,649 & 3,268 c. ft. | 12,95,199  | 12,638 & 3,264 c. ft. | 12,93,699    |          |
| 2,079 & 42 rafts                              | 13. Total of same month last year. | 6,893 & 4,358 c. ft.          | 4,777 & 849 c. ft. | 11,670 & 5,207 c. ft. | 12,52,467  | 11,670 & 5,207 c. ft. | 12,52,467    |          |
|   |                                    | Up.                           | Down.              | Total.                |  |                       | Rs. A. P.    |          |
| 14. Total number of boats plying cargo        | No.                                | 1,156                         | 664                | 1,820                 | Total tollage of month—24+25+26 ...                  |                       | 11,591 8 0   |          |
| 15. Total number of boats plying passenger    | No.                                | 772                           | 589                | 1,361                 | Total tollage of same month last year ...            |                       | 11,123 10 3  |          |
| 15½. Total number of empty boats              | No.                                | 478                           | 917                | 1,395                 | Memorandum of Tollage.                               |                       |              |          |
| 16. Total registered tonnage, cargo           | ...                                | 17,406                        | 11,129             | 28,535                |  |                       |              |          |
| 17. Total registered tonnage, passenger       | ...                                | 3,609                         | 2,211              | 5,820                 |  |                       |              |          |
| 17½. Total registered tonnage, empty          | ...                                | 1,815                         | 4,212              | 6,027                 |  |                       |              |          |
| 18. Ton-mileage                               | ...                                | 4,58,072                      | 2,96,411           | 7,49,483              | 1. Balance not recovered on the 1st of the month ... |                       | 2,632 5 5    |          |
| 19. Estimated value of cargo                  | Rs.                                | 5,65,373                      | 7,28,546           | 12,93,919             | 2. Tollage per month ...                             |                       | 11,591 8 6   |          |
| 20. Number of passengers                      | No.                                | 8,938                         | 7,757              | 16,695                | 3. Total ...   |                       | 14,223 13 11 |          |
| 21. Rafts, bamboos                            | c. ft.                             | 2,600                         | .....              | 2,600                 | 4. Amount paid into treasury during the month ...    |                       | 9,690 9 9    |          |
| 22. Do., bullahs                              | "                                  | 528                           | 140                | 668                   | 5. Balance due at the end of the month ...           |                       | 4,533 4 2    |          |
| 23. Estimated value of rafts.                 | Rs.                                | 1,000                         | 280                | 1,280                 |  |                       |              |          |
| 24. Tollage on boats                          | "                                  | 6,998-8-3                     | 4,559-2-3          | 11,557-10-6           |  |                       |              |          |
| 25. Compounded tollage on boats               | ... Rs.                            | .....                         | .....              | .....                 |  |                       |              |          |
| 26. Tollage on rafts                          | "                                  | 32-13-0                       | 1-1-0              | 33-14-0               |  |                       |              |          |
| 27. Total tollage on boats per ton-mile       | ...                                | .....                         | .....              | 2-9 pie               |  |                       |              |          |
| 28. Total tollage on rafts per 100 cubic feet | Rs.                                | .....                         | .....              | 1-0-0                 |  |                       |              |          |

## HIDGELLER TIDAL CANAL.

LENGTH OF CANAL OPEN, 29 MILES.

| Number of<br>boats<br>or rafts. | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |                       |                       |            | PRIVATE.                |            | REMARKS. |
|---------------------------------|---------------------------------------|-------------------------------|-----------------------|-----------------------|------------|-------------------------|------------|----------|
|                                 |                                       | Quantity—Tons.                |                       |                       | Value.     | Quantity.               | Value.     |          |
|                                 |                                       | Up.                           | Down.                 | Total.                | Rupees.    | Tons.                   | Rupees.    |          |
| 424                             | 1. Grain ...                          | 3,044                         | .....                 | 3,044                 | 1,06,041   | 3,044                   | 1,06,041   |          |
| .....                           | 2. Cotton ...                         | .....                         | .....                 | .....                 | .....      | .....                   | .....      |          |
| .....                           | 3. Oilseeds ...                       | .....                         | .....                 | .....                 | .....      | .....                   | .....      |          |
| 63                              | 4. Salt ...                           | .....                         | 554                   | 554                   | 38,975     | 554                     | 38,975     |          |
| 9                               | 5. Piece-goods ...                    | .....                         | 37                    | 37                    | 25,625     | 37                      | 25,625     |          |
| 1                               | 6. Metal ...                          | 5                             | .....                 | 5                     | 100        | 5                       | 100        |          |
| 2                               | 7. Building materials ...             | .....                         | 5                     | 5                     | 60         | 5                       | 60         |          |
| 886                             | 8. Miscellaneous ...                  | 1,107                         | 699                   | 1,806                 | 1,52,205   | 1,803                   | 1,51,580   |          |
| 16                              | 9. Fuel ...                           | 36                            | 73                    | 109                   | 707        | 109                     | 707        |          |
| 1 raft                          | 10. Timber ...                        | .....                         | 65 c. ft.             | 65 c. ft.             | 240        | 65 c. ft.               | 240        |          |
| 2 rafts                         | 11. Bamboos ...                       | 75 c. ft.                     | .. ...                | 75 "                  | 14         | 75 "                    | 14         |          |
| 1,401 &<br>3 rafts              | 12. Total ...                         | { 4,192<br>75                 | 1,368 &<br>65 c. ft.  | 5,560 &<br>140 c. ft. | { 3,23,967 | 5,557 &<br>140 c. ft.   | { 3,23,342 |          |
| 1,465 &<br>2 rafts              | 13. Total of same<br>month last year. | { 3,799                       | 1,326 &<br>110 c. ft. | 5,125 &<br>110 c. ft. | { 3,47,785 | { 5,123 &<br>110 c. ft. | { 3,47,385 |          |

|  | Up.        | Down.      | Total.     |  | Rs. A. P. |
|--|------------|------------|------------|--|-----------|
| 14. Total number of boats plying cargo No.           | 632        | 719        | 1,401      | Total tollage of month—<br>24 + 25 + 26 ...                | 4,857 3 3 |
| 15. Total number of boats plying passenger No.       | 43         | 45         | 88         | Total tollage of same<br>month last year ..                | 5,169 6 9 |
| 16. Total registered tonnage,<br>cargo ...           | 8,993      | 5,817      | 14,810     | <i>Memorandum of Tollage.</i>                              |           |
| 17. Total registered tonnage,<br>passenger ...       | 236        | 252        | 488        |  |           |
| 18. Ton-milage ...                                   | 165,315    | 111,803    | [277,118   |  | Rs. A. P. |
| 19. Estimated value of cargo Rs.                     | 1,27,967   | 1,95,746   | 3,23,713   | 1. Balance not recovered<br>on the 1st of the<br>month ... | 1,099 0 6 |
| 20. Number of passengers No.                         | 304        | 329        | 633        |  |           |
| 21. Rafts, bamboos c. ft.                            | 75         | .....      | 75         | 2. Tollage per month ...                                   | 4,857 3 3 |
| 22. Do., bullahs "                                   | .....      | 65         | 65         |  |           |
| 23. Estimated value of rafts Rs.                     | 14         | 240        | 254        | 3. Total ...   | 5,956 3 9 |
| 24. Tollage on boats "                               | 2,823-14-0 | 1,839-13-0 | 4,723-11-0 |  |           |
| 25. Compounded tollage on<br>boats ...               | Rs. 71-5-3 | 61-10-0    | 132-15-3   | 4. Amount paid into<br>treasury during the<br>month ..     | 4,643 2 3 |
| 26. Tollage on rafts "                               | 0-3-0      | 0-6-0      | 0-9-0      |  |           |
| 27. Total tollage on boats per<br>ton-mile ...       | .....      | .....      | 0-0-3      |  |           |
| 28. Total tollage on rafts per<br>100 cubic feet ... | .....      | .....      | 0-6-5      | 5. Balance due at the<br>end of the month ...              | 1,313 1 6 |

**SONE CIRCLE.**  
**PATNA CANAL SYSTEM.**  
**LENGTH OF CANAL OPEN, 86½ MILES.**

| Number of boats or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |           |           |  | PRIVATE.  |            | REMARKS. |
|---------------------------|---|-------------------------------|-----------|-----------|--|-----------|------------|----------|
|                           |   | Quantity—Tons.                |           |           | Value.   | Quantity. | Value.     |          |
|                           |   | Up.                           | Down.     | Total.    | Rupees.  | Tons.     | Rupees.    |          |
| 51                        | 1. Grain ...                                  | 1                             | 620       | 621       | 35,582   | 621       | 35,582     |          |
| .....                     | 2. Cotton ...                                 | .....                         | .....     | .....     | .....  | .....     | .....      |          |
| 23                        | 3. Oilseeds ...                               | .....                         | 376       | 376       | 35,695   | 376       | 35,695     |          |
| 8                         | 4. Salt ...                                   | 92                            | .....     | 92        | 6,242  | 92        | 6,242      |          |
| 56                        | 5. Piece-goods ...                            | 154                           | 192       | 346       | 34,235   | 344       | 33,985     |          |
| .....                     | 6. Metal ...                                  | 9                             | .....     | 9         | 10,760   | 9         | 10,760     |          |
| 7                         | 7. Building materials ...                     | .....                         | 89        | 89        | 5,049  | 38        | 4,993      |          |
| 84                        | 8. Miscellaneous ...                          | 274                           | 610       | 884       | 82,957   | 884       | 82,957     |          |
| 3                         | 9. Fuel ...                                   | 16                            | 13        | 29        | 300  | 29        | 300        |          |
| 1                         | 10. Timber { boats                            | 2                             | .....     | 2         | 30   | 2         | 30         |          |
|                           | rafts   | .....                         | 4         | 4         | 47   | 4         | 47         |          |
| Rafts                     | 11. Bamboos ...                               | .....                         | 159       | 159       | 2,203  | 159       | 2,203      |          |
| 233                       | 12. Total ...                                 | 548                           | 2,063     | 2,611     | 2,13,100   | 2,559     | 2,12,794   |          |
| 333                       | 13. Total of same month last year             | 626                           | 1,518     | 2,144     | 1,85,207   | 2,140     | 1,84,837   |          |
|                           |   | Up.                           | Down.     | Total.    |  |           | Rs. A. P.  |          |
| 14.                       | Total number of boats plying cargo No.        | 82                            | 151       | 233       | Total tollage of month—24 + 25 + 26 ...              |           | 3,316 4 6  |          |
| 15.                       | Total number of boats plying passenger No.    | 5                             | 5         | 10        |  |           |            |          |
| 15½.                      | Total number of empty boats No.               | 155                           | 9         | 164       | Total tollage of same month last year ...            |           | 2,652 14 3 |          |
| 16.                       | Total registered tonnage, cargo ...           | 1,048                         | 3,245     | 4,293     |  |           |            |          |
| 17.                       | Total registered tonnage, passenger ...       | 111                           | 116       | 227       |  |           |            |          |
| 17½.                      | Total registered tonnage, empty ...           | 882                           | 34        | 916       | Memorandum of Tollage.                               |           |            |          |
| 18.                       | Ton-mileage ...                               | 1,16,421                      | 2,42,884  | 3,59,305  |  |           | Rs. A. P.  |          |
| 19.                       | Estimated value of cargo Rs.                  | 51,513                        | 1,59,337  | 2,10,850  | 1. Balance not recovered on the 1st of the month ... |           | 871 7 9    |          |
| 20.                       | Number of passengers No.                      | 384                           | 352½      | 740½      | 2. Tollage per month ...                             |           | 3,316 4 6  |          |
| 21.                       | Rafts, bamboos c. ft.                         | .....                         | 23,919    | 23,919    |  |           |            |          |
| 22.                       | Do., bullahs "                                | .....                         | 328       | 328       |  |           |            |          |
| 23.                       | Estimated value of rafts Rs.                  | .....                         | 2,250     | 2,250     | 3. Total ...   |           | 4,187 12 3 |          |
| 24.                       | Tollage on boats "                            | 817-1-0                       | 2,273-5-9 | 3,090-6-9 |  |           |            |          |
| 25.                       | Compounded tollage on boats Rs.               | 75-0-0                        | 75-0-0    | 150-0-0   |  |           |            |          |
| 26.                       | Tollage on rafts "                            | .....                         | 75-13-9   | 75-13-9   | 4. Amount credited in the accounts of the month ...  |           | 3,870 1 0  |          |
| 27.                       | Total tollage on boats per ton-mile ...       | .....                         | .....     | 1-7 pies. |  |           |            |          |
| 28.                       | Total tollage on rafts per 100 cubic feet ... | .....                         | .....     | 0-5-0     | 5. Balance due at the end of the month ...           |           | 317 11 3   |          |

## ABRAH CANAL SYSTEM.

LENGTH OF CANAL OPEN, 65 MILES.

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE.  |          | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|-------|--------|----------|-----------|----------|----------|
|                           |                                   | Quantity—Tons.                |       |        | Value.   | Quantity. | Value.   |          |
|                           |                                   | Up.                           | Down. | Total. | Rupees.  | Tons.     | Rupees.  |          |
| 116                       | 1. Grain ...                      | 20                            | 1,305 | 1,325  | 83,105   | 1,325     | 83,105   |          |
| .....                     | 2. Cotton ...                     | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| 7                         | 3. Oilseeds ...                   | .....                         | 40    | 40     | 2,750    | 40        | 2,750    |          |
| 27                        | 4. Salt ...                       | 190                           | ..... | 190    | 17,780   | 190       | 17,780   |          |
| .....                     | 5. Piece-goods ...                | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| .....                     | 6. Metal ...                      | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| 16                        | 7. Building materials ...         | 21                            | 418   | 439    | 484      | 375       | 214      |          |
| 50                        | 8. Miscellaneous ...              | 50                            | 185   | 235    | 7,684    | 217       | 7,099    |          |
| 3                         | 9. Fuel ...                       | 2                             | 18    | 20     | 260      | 20        | 260      |          |
| 2                         | 10. Timber ...                    | 2                             | 3     | 5      | 70       | 5         | 70       |          |
| Rafts                     | 11. Bamboos ...                   | .....                         | 1     | 1      | 20       | 1         | 20       |          |
| 221                       | 12. Total ...                     | 285                           | 1,970 | 2,255  | 1,12,153 | 2,173     | 1,11,298 |          |
| 491                       | 13. Total of same month last year | 512                           | 2,909 | 3,421  | 2,46,194 | 3,334     | 2,44,594 |          |

|   | Up.      | Down.   | Total.    |  | Rs. A. P. |
|---|----------|---------|-----------|--|-----------|
| 14. Total number of boats plying cargo No.        | 63       | 154     | 221       | Total tollage of month—<br>24 + 25 + 26 ...          | 1,589 7 0 |
| 15. Total number of boats plying passenger No.    | 3        | 8       | 11        |  |           |
| 15½. Total number of empty boats No.              | 116      | 23      | 139       | Total tollage of same month last year ...            | 2,407 3 9 |
| 16. Total registered tonnage, cargo ...           | 1,120    | 2,391   | 3,511     | Memorandum of Tollage.                               |           |
| 17. Total registered tonnage, passenger ...       | 329      | 327     | 656       |  |           |
| 17½. Total registered tonnage, empty ...          | 492      | 41      | 533       |  | Rs. A. P. |
| 18. Ton-mileage ...                               | 45,663   | 51,322  | 96,985    | 1. Balance not recovered on the 1st of the month ... | 129 2 9   |
| 19. Estimated value of cargo Rs.                  | 20,762   | 91,371  | 1,12,133  |  |           |
| 20. Number of passengers No.                      | 917      | 885     | 1,802     | 2. Tollage per month ...                             | 1,589 7 0 |
| 21. Rafts, bamboos c. ft.                         | .....    | 200     | 200       |  |           |
| 22. Do., bullahs ..                               | .....    | .....   | .....     |  |           |
| 23. Estimated value of rafts Rs.                  | .....    | 20      | 20        | 3. Total ...   | 1,718 9 9 |
| 24. Tollage on boats ..                           | 582-12-3 | 806-6-9 | 1,389-3-0 |  |           |
| 25. Compounded tollage on boats and steamer Rs.   | 100      | 100     | 200       | 4. Amount credited in the accounts of the month ...  | 1,659 6 0 |
| 26. Tollage on rafts ..                           | .....    | 0-4-0   | 0-4-0     |  |           |
| 27. Total tollage on boats per ton-mile ...       | .....    | .....   | 3-1 pie   |  |           |
| 28. Total tollage on rafts per 100 cubic feet ... | .....    | .....   | 0-2-0     | 5. Balance due at the end of the month ...           | 59 3 9    |

## BUXAR CANAL SYSTEM.

LENGTH OF CANAL OPEN, 67 MILES.

| Number of<br>boats<br>or rafts.                      | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |          |          |  | PRIVATE.  |           | REMARKS. |
|--|--------------------------------------|-------------------------------|----------|----------|--|-----------|-----------|----------|
|  |                                      | Quantity—Tons.                |          |          | Value.   | Quantity. | Value.    |          |
|  |                                      | Up.                           | Down.    | Total.   | Rupees.  | Tons.     | Rupees.   |          |
| 88   | 1. Grain ...                         | 90                            | 1,277    | 1,367    | 1,23,489   | 1,367     | 1,23,489  |          |
| .....  | 2. Cotton ...                        | .....                         | .....    | .....    | .....  | .....     | .....     |          |
| 6  | 3. Oilseeds ...                      | .....                         | 80       | 80       | 10,432   | 80        | 10,432    |          |
| 2  | 4. Salt ...                          | 11                            | 3        | 14       | 1,832  | 14        | 1,832     |          |
| .....  | 5. Piece-goods ...                   | 4                             | .....    | 4        | 5,200  | 4         | 5,200     |          |
| .....  | 6. Metal ...                         | 2                             | .....    | 2        | 1,425  | 2         | 1,425     |          |
| 6  | 7. Building materials                | .....                         | 82       | 82       | 2,745  | 13        | 95        |          |
| 17   | 8. Miscellaneous ...                 | 37                            | 194      | 231      | 20,256   | 231       | 20,256    |          |
| .....  | 9. Fuel ...                          | .....                         | .....    | .....    | .....  | .....     | .....     |          |
| Rafts {  | 10. Timber ...                       | .....                         | 37       | 37       | 1,255  | 37        | 1,255     |          |
|  | 11. Bamboos ...                      | .....                         | 12       | 12       | 211  | 12        | 211       |          |
| 119  | 12. Total ...                        | 144                           | 1,685    | 1,829    | 1,66,845   | 1,760     | 1,64,195  |          |
| 146  | 13. Total of same<br>month last year | 159                           | 1,606    | 1,765    | 1,48,940   | 1,658     | 1,46,945  |          |
|  |                                      | Up.                           | Down.    | Total.   |  |           |           |          |
| 14. Total number of boats ply-<br>ing cargo No.      |                                      | 9                             | 110      | 119      |  |           | Rs. A. P. |          |
| 15. Total number of boats ply-<br>ing passenger No.  |                                      | 8                             | 9        | 17       | Total tollage of month—<br>24 + 25 + 26 ...                |           | 853 11 9  |          |
| 15½. Total number of empty<br>boats No.              |                                      | 22                            | 28       | 50       |  |           |           |          |
| 16. Total registered tonnage,<br>cargo ...           |                                      | 179                           | 2,225    | 2,404    | Total tollage of same<br>month last year ...               |           | 771 15 9  |          |
| 17. Total registered tonnage,<br>passenger ...       |                                      | 216                           | 243      | 459      |  |           |           |          |
| 17½. Total registered tonnage,<br>empty ...          |                                      | 84                            | 101      | 185      |  |           |           |          |
| 18. Ton-mileage ...                                  |                                      | 8,986                         | 61,058   | 70,044   | Memorandum of Tollage.                                     |           |           |          |
| 19. Estimated value of cargo Rs.                     |                                      | 22,620                        | 1,42,759 | 1,65,379 |  |           | Rs. A. P. |          |
| 20. Number of passengers No.                         |                                      | 648                           | 673½     | 1,321½   | 1. Balance not recovered<br>on the 1st of the<br>month ... |           | 135 9 9   |          |
| 21. Rafts, bamboos c. ft.                            |                                      | .....                         | 1,760    | 1,760    |  |           |           |          |
| 22. Do., bullahs ..                                  |                                      | .....                         | 2,788    | 2,788    | 2. Tollage per month ...                                   |           | 853 11 9  |          |
| 23. Estimated value of rafts Rs.                     |                                      | .....                         | 1,466    | 1,466    |  |           |           |          |
| 24. Tollage on boats ..                              |                                      | 123-6-0                       | 504-14-6 | 628-4-6  | 3. Total ...   |           | 989 5 6   |          |
| 25. Compounded tollage on<br>boats Rs.               |                                      | 75-0-0                        | 139-0-0  | 214-0-0  |  |           |           |          |
| 26. Tollage on rafts ..                              |                                      | .....                         | 11-7-3   | 11-7-3   | 4. Amount credited in<br>the accounts of the<br>month ...  |           | 951 8 6   |          |
| 27. Total tollage on boats per<br>ton-mile ...       |                                      | .....                         | .....    | 2-3 pie  |  |           |           |          |
| 28. Total tollage on rafts per<br>100 cubic feet ... |                                      | .....                         | .....    | 0-4-0    | 5. Balance due at the end<br>of the month ...              |           | 37 13 0   |          |

**ABSTRACT FOR THE MONTH OF JULY 1887, AS COMPARED WITH THE CORRESPONDING.  
MONTH OF THE PREVIOUS YEAR.**

| CANAL.                       | TRAFFIC, 1887-88. |    |    |                      |    |    | TRAFFIC, 1886-87. |    |    |                      |    |    | REMARKS. |
|------------------------------|-------------------|----|----|----------------------|----|----|-------------------|----|----|----------------------|----|----|----------|
|                              | During the month. |    |    | To end of the month. |    |    | During the month. |    |    | To end of the month. |    |    |          |
| <i>Orissa Circle.</i>        | Rs.               | A. | P. | Rs.                  | A. | P. | Rs.               | A. | P. | Rs.                  | A. | P. |          |
| Taldunda Canal System ...    | 1,087             | 1  | 6  | 1,908                | 0  | 6  | 334               | 13 | 0  | 1,384                | 4  | 7  |          |
| Kendrapara Canal System      | 3,751             | 8  | 5  | 10,815               | 0  | 2  | 4,402             | 12 | 1  | 13,626               | 6  | 1  |          |
| High Level, Range I ...      | 622               | 7  | 0  | 1,750                | 9  | 0  | 764               | 14 | 9  | 2,106                | 10 | 0  |          |
| Ditto, " II ...              | 457               | 8  | 9  | 1,103                | 1  | 6  | 397               | 7  | 9  | 1,256                | 15 | 3  |          |
| Ditto, " III ...             | 176               | 11 | 0  | 319                  | 13 | 3  | 256               | 3  | 0  | 781                  | 6  | 9  |          |
| Total Orissa Circle ...      | 6,095             | 4  | 8  | 15,896               | 8  | 5  | 6,156             | 2  | 7  | 19,155               | 10 | 8  |          |
| <i>South-Western Circle.</i> |                   |    |    |                      |    |    |                   |    |    |                      |    |    |          |
| Midnapore Canal ...          | 11,591            | 8  | 6  | 39,614               | 5  | 3  | 11,123            | 10 | 3  | 41,263               | 9  | 0  |          |
| Hidgellee Tidal Canal ...    | 4,857             | 3  | 3  | 21,225               | 5  | 3  | 5,169             | 6  | 9  | 25,721               | 5  | 6  |          |
| Total South-Western Circle   | 16,448            | 11 | 9  | 60,839               | 10 | 6  | 16,293            | 1  | 0  | 66,984               | 14 | 6  |          |
| <i>Sone Circle.</i>          |                   |    |    |                      |    |    |                   |    |    |                      |    |    |          |
| Patna Canal System ...       | 3,316             | 4  | 6  | 11,323               | 4  | 0  | 2,652             | 14 | 3  | 6,783                | 7  | 9  |          |
| Arrah ditto ...              | 1,589             | 7  | 0  | 5,957                | 5  | 10 | 2,407             | 3  | 9  | 7,120                | 2  | 4  |          |
| Buxar ditto ...              | 853               | 11 | 9  | 3,226                | 6  | 0  | 771               | 15 | 9  | 3,064                | 3  | 10 |          |
| Total Sone Circle ...        | 5,759             | 7  | 3  | 20,506               | 15 | 10 | 5,832             | 1  | 9  | 16,967               | 13 | 11 |          |
| GRAND TOTAL ...              | 28,303            | 7  | 8  | 97,243               | 2  | 9  | 28,281            | 5  | 4  | 1,03,108             | 7  | 1  |          |

**GOVERNMENT TRANSPORT SERVICE.**

| CANAL.                  | TRAFFIC, 1887-88. |        |                 |                  |        |                 |                      |        |                 | TRAFFIC, 1886-87. |        |                 |                   |        |                 |                  |        |                 |
|-------------------------|-------------------|--------|-----------------|------------------|--------|-----------------|----------------------|--------|-----------------|-------------------|--------|-----------------|-------------------|--------|-----------------|------------------|--------|-----------------|
|                         | During the month. |        |                 |                  |        |                 | To end of the month. |        |                 |                   |        |                 | During the month. |        |                 |                  |        |                 |
|                         | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers. | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers. | Goods. | Total receipts. |
| <i>Orissa Circle.</i>   | No.               | Mds.   | Rs. A. P.       | No.              | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A. P.       | No.               | Mds.   | Rs. A. P.       | No.               | Mds.   | Rs. A. P.       | No.              | Mds.   | Rs. A. P.       |
| High Level ...          | 520               | 390    | 549 9 7         | 1,183            | 1,975  | 1,605 5 3       | 1,767                | 2,238  | 1,851 7 0       | 4,366             | 10,294 | 5,111 12 6      |                   |        |                 |                  |        |                 |
| Total Orissa Circle ... | 520               | 390    | 549 9 7         | 1,186            | 1,975  | 1,605 5 3       | 1,767                | 2,238  | 1,851 7 0       | 4,366             | 10,294 | 5,111 12 6      |                   |        |                 |                  |        |                 |

**TOTAL NAVIGATION RECEIPTS.**

| CANAL.                    | EARNINGS, 1887-88. |    |    |                      |    |    | EARNINGS, 1886-87. |    |    |                      |    |    | REMARKS. |
|---------------------------|--------------------|----|----|----------------------|----|----|--------------------|----|----|----------------------|----|----|----------|
|                           | During the month.  |    |    | To end of the month. |    |    | During the month.  |    |    | To end of the month. |    |    |          |
|                           | Rs.                | A. | P. | Rs.                  | A. | P. | Rs.                | A. | P. | Rs.                  | A. | P. |          |
| Orissa Canals ...         | 6,644              | 14 | 3  | 17,501               | 13 | 8  | 8,007              | 9  | 7  | 24,267               | 7  | 2  |          |
| Midnapore Canal ...       | 11,591             | 8  | 6  | 39,614               | 5  | 3  | 11,123             | 10 | 3  | 41,263               | 9  | 0  |          |
| Hidgellee Tidal Canal ... | 4,857              | 3  | 3  | 21,225               | 5  | 3  | 5,169              | 6  | 9  | 25,721               | 5  | 6  |          |
| Sone Canals ...           | 5,759              | 7  | 3  | 20,506               | 15 | 10 | 5,832              | 1  | 9  | 16,967               | 13 | 11 |          |
| Total ...                 | 28,853             | 1  | 3  | 98,848               | 8  | 0  | 30,132             | 12 | 4  | 1,08,220             | 3  | 7  |          |

A. D. McARTHUR, Major, R.E.,  
Under-Secy. to the Govt. of Bengal

CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 10th September 1887,  
compared with the corresponding week of the previous year.*

| NATURE OF CARGO.      | WEEK ENDING SATURDAY, THE<br>10TH SEPTEMBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>11TH SEPTEMBER 1886. |                     |          |
|-----------------------|---|---------------------|----------|---|---------------------|----------|
|                       | Number of<br>boats.                               | Weight of<br>cargo. | Tollage. | Number of<br>boats.                               | Weight of<br>cargo. | Tollage. |
|                       | No.   | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy ... .. | 740   | 1,23,825            | 2,107    | 425   | 58,707              | 935      |
| Jute ... ..           | 71  | 24,725              | 523      | 63  | 32,001              | 565      |
| Firewood ... ..       | 107   | 47,185              | 706      | 197   | 1,06,352            | 1,526    |
| Other articles ... .. | 832   | 1,47,295            | 2,259    | 766   | 1,73,695            | 2,521    |
| Total ... ..          | 1,750   | 3,43,030            | 5,595    | 1,451   | 3,71,055            | 5,547    |



EAST INDIAN RAILWAY.

Statement of Goods Traffic in Staples carried during the 4 weeks and 2 days ended 30th July 1887, as compared with the same period of 1886.

| STAPLES.  | 1887.     |           | 1886.     |           | Increase. |          | Decrease. |          |
|---|-----------|-----------|-----------|-----------|-----------|----------|-----------|----------|
|   | Weight.   | Freight.  | Weight.   | Freight.  | Weight.   | Freight. | Weight.   | Freight. |
|   | Mds.      | Rs.       | Mds.      | Rs.       | Mds.      | Rs.      | Mds.      | Rs.      |
| ANIMALS, LIVING, (Horses, ponies, and mules ... ..  | No. 64    | 821       | No. 70    | 1,077     | .....     | .....    | No. 15    | 853      |
| FOR SALE. (Cattle ... ..  | " 5       | 48        | " 30      | 262       | .....     | .....    | " 25      | 214      |
| (Sheep and goats ... ..   | " 3,329   | 2,683     | " 2,250   | 1,852     | No. 1,079 | 781      | .....     | .....    |
| (Other kinds ... ..   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Borax ... ..  | 2,351     | 1,902     | 652       | 524       | 1,699     | 1,408    | .....     | .....    |
| Ones and rattans ... ..   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Caoutchouc (Indian-rubber) ... ..   | 8         | 2         | 3         | 9         | 5         | .....    | .....     | 7        |
| Chinese and Japanese ware ... ..  | 23        | 89        | 54        | 119       | .....     | .....    | 31        | 20       |
| Coal and coke, up ... ..  | 5,02,088  | 1,04,225  | 4,72,958  | 1,77,265  | 29,740    | 16,980   | .....     | .....    |
| Ditto, down ... ..  | 16,07,947 | 2,21,810  | 14,75,467 | 2,04,780  | 1,32,450  | 17,080   | .....     | .....    |
| Cotton, raw ... ..  | 87,040    | 37,768    | 26,090    | 31,195    | 10,920    | 6,573    | .....     | .....    |
| Twist and yarn (European) ... ..  | 8,884     | 12,108    | 9,117     | 12,218    | .....     | .....    | 233       | 110      |
| Ditto (Indian) ... ..   | 14,196    | 9,196     | 12,274    | 8,386     | 922       | 810      | .....     | .....    |
| COTTON, MANU- (Piece-goods (European) ... ..  | 82,422    | 1,01,855  | 82,112    | 1,04,446  | 310       | .....    | .....     | 2,591    |
| FACTURED. (Ditto (Indian) ... ..  | 12,688    | 7,929     | 13,272    | 8,416     | .....     | .....    | 584       | 487      |
| Amastoda ... ..   | 90        | 61        | 74        | 52        | 16        | 9        | .....     | .....    |
| DRUGS AND ME- (Other sorts, not intoxicating ... ..   | 1,332     | 2,473     | 1,501     | 2,761     | .....     | .....    | 169       | .....    |
| DICINES. (Intoxicating drugs (other than opium, i.e., arsenic, bhanga, ganja, and churus, &c.) ... .. | 1,729     | 969       | 1,617     | 830       | 112       | 79       | .....     | 288      |
| Indigo ... ..   | 217       | 63        | 289       | 397       | .....     | .....    | 72        | 354      |
| DYING MATE- (Madder or manjit ... ..  | 87        | 52        | 56        | 12        | 31        | 20       | .....     | .....    |
| RIALS. (Safflower ... ..  | 184       | 70        | 206       | 105       | .....     | .....    | 23        | .....    |
| Turmeric ... ..   | 6,613     | 4,617     | 11,308    | 10,114    | .....     | .....    | 1,756     | 5,497    |
| Other kinds ... ..  | 9,677     | 5,355     | 6,315     | 3,136     | 3,342     | 2,199    | .....     | .....    |
| Earthenware and porcelain ... ..  | 753       | 1,507     | 741       | 1,474     | 12        | 31       | .....     | .....    |
| Jute, raw ... ..  | 10,744    | 4,891     | 4,786     | 2,961     | 5,978     | 1,726    | .....     | .....    |
| FIBROUS PRO- (Do., manufactured (gunny bags and cloths). ... ..                                       | 53,149    | 26,474    | 71,965    | 36,476    | .....     | .....    | 18,852    | 10,002   |
| DUCTS. (Other fibres, raw ... ..  | 8,471     | 2,901     | 8,899     | 2,601     | 4,572     | 300      | .....     | .....    |
| Ditto, manufactured ... ..  | 2,694     | 1,702     | 2,635     | 997       | 359       | 705      | .....     | .....    |
| FRUITS & NUTS (Coconuts ... ..  | 1,194     | 18,861    | 1,363     | 1,294     | .....     | .....    | 199       | 49       |
| All other kinds ... ..  | 2,461     | 1,75,050  | 22,049    | 16,141    | 7,121     | 2,720    | 5,85,750  | 1,86,190 |
| Wheat ... ..  | 7,05,771  | 63,975    | 3,85,907  | 3,61,210  | .....     | .....    | 11,290    | 16,700   |
| GRAIN & PULSES (Gram and pulses ... ..  | 2,71,517  | 1,0,008   | 2,31,698  | 8,675     | .....     | .....    | .....     | .....    |
| Do., husked ... ..  | 5,81,498  | 2,043     | 14,043    | 45,239    | 1,50,000  | 55,770   | .....     | .....    |
| Do., unhusked ... ..  | 15,093    | 81,357    | 74,103    | 16,957    | 86,380    | 14,900   | .....     | .....    |
| Other rain and spring crops ... ..  | 1,60,183  | 2,824     | 3,024     | 1,501     | 2,343     | 1,221    | .....     | .....    |
| Gums and resins ... ..  | 5,309     | 13,012    | 31,776    | 17,230    | .....     | .....    | 4,372     | 1,318    |
| HIDES & SKINS (Hides of cattle ... ..   | 27,194    | 12,556    | 18,210    | 7,989     | 3,211     | 4,876    | .....     | .....    |
| Skins of sheep, goats, and small animals ... ..   | 2,111     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Horns ... ..  | 1,363     | 677       | 944       | 343       | 379       | 344      | .....     | .....    |
| LAC (Lac dye ... ..   | 318       | 297       | 315       | 203       | 3         | .....    | .....     | .....    |
| Do. shell ... ..  | 13,910    | 10,400    | 11,792    | 8,804     | 2,118     | 1,790    | .....     | .....    |
| Do. stick and other kinds ... ..  | 13,593    | 5,278     | 13,576    | 3,822     | 17        | 96       | .....     | .....    |
| LEATHER (Leather, unmanufactured ... ..   | 1,771     | 3,657     | 1,538     | 2,384     | 231       | 671      | .....     | .....    |
| Ditto, manufactured ... ..  | 1,216     | 655       | 1,779     | 2,361     | .....     | .....    | 363       | .....    |
| Liquors ... ..  | 10,745    | 11,065    | 13,106    | 11,800    | .....     | .....    | 2,361     | 766      |
| Mats ... ..   | 683       | 110       | 801       | 165       | .....     | .....    | 115       | 761      |
| METALS AND (Brass and copper ... ..   | 30,629    | 22,668    | 29,752    | 21,978    | 877       | .....    | .....     | 55       |
| MANUFACTURES (Iron ... ..   | 63,124    | 41,328    | 70,283    | 50,805    | .....     | .....    | 7,160     | 2,515    |
| OF (Other metals ... ..   | 4,371     | 4,114     | 11,809    | 7,128     | .....     | .....    | 7,429     | 8,477    |
| Oils ... ..   | 32,138    | 18,737    | 20,739    | 1,781     | 11,399    | 5,956    | .....     | 3,014    |
| Opium ... ..  | 6,169     | 3,709     | 4,127     | 2,823     | 2,042     | 896      | .....     | .....    |
| Paints and colours ... ..   | 1,608     | 1,185     | 1,506     | 1,111     | 192       | 41       | .....     | .....    |
| PROVISIONS (Ghee ... ..   | 19,332    | 18,441    | 20,369    | 20,282    | .....     | .....    | 1,037     | 1,841    |
| Other kinds ... ..  | 4,151     | 4,322     | 4,100     | 4,012     | 45        | 310      | .....     | .....    |
| Railway materials, Construction Account ... ..  | 36,620    | 2,403     | 1,74,912  | 4,401     | .....     | .....    | 1,39,292  | 1,968    |
| Ditto ditto, Foreign ... ..   | 1,71,964  | 71,415    | 82,941    | 29,063    | 1,28,992  | 45,352   | .....     | .....    |
| Salt ... ..   | 4,98,730  | 93,136    | 6,52,358  | 1,21,413  | .....     | .....    | 2,73,628  | 28,277   |
| SALTPTRE, &c. (Sulphate ... ..  | 3,282     | 15,537    | 31,531    | 15,513    | .....     | .....    | 1,409     | 176      |
| Other saline substances ... ..  | 16,811    | 4,255     | 19,940    | 5,106     | .....     | .....    | 3,129     | 601      |
| Linnseed ... ..   | 5,98,484  | 1,74,836  | 7,11,631  | 2,07,827  | .....     | .....    | 1,12,700  | 33,480   |
| SEEDS (Mustard and rape ... ..  | 1,17,872  | 4,017     | 1,07,852  | 50,817    | .....     | .....    | 49,080    | 11,900   |
| Til or gingelly ... ..  | 1,12,522  | 3,655     | 1,19,942  | 3,665     | .....     | .....    | 3,690     | 610      |
| Other oilseeds ... ..   | 2,53,692  | 76,282    | 2,89,312  | 1,14,532  | .....     | .....    | 45,620    | 38,410   |
| Indigo seed ... ..  | 4,088     | 1,349     | 1,208     | 1,509     | .....     | .....    | 190       | 160      |
| Tea seed ... ..   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Other kinds ... ..  | 31,411    | 14,114    | 26,594    | 12,674    | 4,850     | 1,140    | .....     | .....    |
| Silk, raw ... ..  | 3,106     | 1,874     | 2,250     | 1,815     | 856       | 59       | .....     | .....    |
| Do., manufactured (European) ... ..   | 243       | 151       | 649       | 414       | .....     | .....    | 880       | 203      |
| Do., ditto (Indian) ... ..  | 7,851     | 1,473     | 5,658     | 4,544     | 2,196     | 329      | .....     | .....    |
| Spices ... ..   | 68,126    | 7,224     | 82,795    | 1,595     | .....     | .....    | 14,689    | 1,277    |
| STONE and marble (Sugar, refined ... ..   | 88,008    | 17,417    | 80,282    | 15,507    | 7,726     | 1,010    | .....     | .....    |
| SUGAR (Do., unrefined ... ..  | 26,114    | 3,710     | 24,041    | 3,041     | 2,104     | .....    | .....     | 221      |
| TEA (Tea, Indian ... ..   | 2,050     | 4,402     | 2,518     | 3,550     | 432       | 852      | .....     | .....    |
| Do., Foreign ... ..   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Tobacco ... ..  | 65,666    | 22,552    | 87,285    | 34,509    | .....     | .....    | 23,719    | 11,957   |
| WOOD (Timber ... ..   | 20,407    | 5,547     | 24,532    | 6,846     | .....     | .....    | 4,035     | 1,299    |
| Kirewood ... ..   | 19,296    | 1,358     | 18,764    | 956       | 532       | 402      | .....     | .....    |
| Wool, raw ... ..  | 1,083     | 890       | 1,145     | 927       | .....     | 33       | 62        | .....    |
| Do., manufactured (European) ... ..   | 301       | 914       | 505       | 919       | .....     | .....    | 4         | 5        |
| WOOL (Wool, manufactured (Indian) ... ..  | 1,080     | 737       | 1,148     | 776       | .....     | .....    | 68        | 30       |
| Shawls ... ..   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| All other articles of merchandise ... ..  | 2,77,236  | 1,61,069  | 2,57,893  | 1,58,165  | 19,343    | 3,804    | .....     | .....    |
| Government stores ... ..  | 19,959    | 48,047    | 15,133    | 26,225    | 3,917     | 21,822   | .....     | .....    |
| Minerals ... ..   | 105,554   | 14,260    | 1,02,258  | 11,680    | .....     | .....    | 6,904     | .....    |
| Total ... ..  | 66,85,831 | 20,11,098 | 72,61,406 | 21,60,055 | 6,88,758  | 2,16,400 | 12,64,333 | 3,75,907 |

*General remarks on the fluctuation of principal staples carried over the East Indian Railway  
during the month ended 30th July 1887.*

**INCREASES.**

**Coal and coke.**—There was an increase in both the upwards and downwards despatches; the upwards increase was due to demands by Foreign Railways, and that in the down traffic is attributable principally to the facilities afforded by the opening of the Jubilee Bridge.

**Cotton.**—The increase in this staple was due to the shipment demands having improved after the dullness which prevailed in June 1887.

**Jute.**—This increase is entirely new traffic brought to the mills in the neighbourhood of Howrah over the Jubilee bridge.

**Rice (husked and unhusked).**—The reasons for the increase in this commodity being as before, good crops near stations on Loop line and high prices ruling up-country.

**Other grains.**—This increase was chiefly in the despatches from stations in the Allahabad district to Dhulpore, Bharatpore, Agra and Lucknow.

**Oil.**—The increase is entirely made up of despatches in kerosine oil from Howrah.

**Railway Material, Foreign.**—This was principally in despatches from Bombay *via* Jabulpore to Manikpore for the Indian Midland Railway, and from Howrah to Benares for the Oudh and Rohilkhand Railway.

**Skins.**—Due to despatches from up-country stations to Madras.

**Sugar, refined and unrefined.**—Increases are shown at some of the sugar-despatching stations in the Dinapore district for despatches to up-country stations where the market is favourable.

**Government stores.**—The increase was principally in the despatches of Government Ordnance stores to Military stations.

**DECREASES.**

**Turmeric.**—This falling off can only be ascribed to large stocks up-country and to supplies now going from Bettia *via* the Bengal and North-Western Railway, and from Madras to the North-West.

**Grain and Pulses.**—This is in continuation of the small despatches reported during the last few months, and was principally in long lead traffic from Delhi, *via* Delhi and Cawnpore.

**Gunny.**—The falling off was almost entirely at Howrah and followed the decrease in the export traffic in wheat and seeds.

**Wheat.**—Due to sudden fall in the home markets and to sellers holding out for better rates.

**Iron.**—This decrease was principally in the despatches from Howrah owing to there being no buyers and the market dull.

**Salt.**—This decrease was chiefly in the despatches *via* Agra due to diversion of the traffic by the Bombay, Baroda and Central India Railway to Cawnpore.

**Seeds.**—This decrease is attributable to the home markets being dull.

**Tobacco.**—This decrease as in the previous month is due principally to poor crops.

ALLEN MEARS, *Dy. Traffic Manager.*

TRAFFIC MANAGER'S OFFICE, JAMALPUR, the 6th September 1887.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 3rd September 1887 on 1,519 miles open.

|   | COACHING TRAFFIC.     |                 | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |            |
|---|-----------------------|-----------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|------------|
|   | Number of passengers. | Receipts.       | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.     |
|   |                       | Rs. A. P.       | Mds. S.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |            |
| Total traffic for the week                              | 203,109*              | 2,72,971 0 0*   | 22,02,332 20                     | 4,43,377 4 0  | 16,678 2 0                  | 7,33,026 12 0   | 65,642†                  | 75,949‡      | 141,592    |
| Or per mile of railway                                  | 133 11 3              | 179 11 3        | 14,498 10 0                      | 2,911 14 3    | 10 15 8                     | 482 9 2         | .....                    | .....        | .....      |
| For previous 8 weeks of half-year                       | 2,011,843             | 20,11,150 4 0   | 1,73,80,173 10                   | 36,43,538 2 6 | 1,45,183 10 0               | 57,99,872 1 3   | 541,583†                 | 672,033‡     | 1,213,616‡ |
| Total for 9 weeks                                       | 2,274,953             | 22,84,121 10 0  | 1,96,72,511 30                   | 40,86,915 6 6 | 1,61,861 12 0               | 65,32,898 13 3  | 607,225†                 | 747,982‡     | 1,355,208‡ |
| COMPARISON.   |                       |                 |                                  |               |                             |                 |                          |              |            |
| Total for corresponding week of previous year           | 209,354               | 2,26,314 1 8    | 21,91,236 20                     | 5,31,249 9 6  | 17,391 13 7                 | 7,74,955 8 9    | 61,824                   | 94,951       | 156,775    |
| Per mile of railway corresponding week of previous year | .....                 | 149 6 1         | .....                            | 350 10 7      | 11 7 8                      | 511 8 4         | .....                    | .....        | .....      |
| Total to corresponding date of previous year            | 2,111,229‡            | 21,13,413 12 11 | 2,07,07,097 20                   | 48,29,437 6 9 | 1,64,833 13 6               | 71,07,705 1 2   | 625,937                  | 891,970      | 1,505,907  |

\* The increase in coaching traffic is partly due to "Bhadra Purnima" and partly to Gya pilgrims on account of "Oppurpucksha."

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |              |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |              |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 4TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 3RD SEPTEMBER 1887. |                  |                  | Total increase in 1887. | Total decrease in 1887. |
|--|--------------|------------------|--|--------------|------------------|---|-----------------|------------------|---|------------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts.    | Per mile worked. | Mean mileage worked.                         | Receipts.    | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts.  | Per mile worked. | Rs.                     | Rs.                     |
| 1,513  | Rs. 7,74,956 | 512              | 1,519  | Rs. 7,33,027 | 483              | 1,515   | Rs. 1,98,91,288 | 13,130           | 1,519   | Rs. 1,90,07,629* | 12,413           | .....                   | Rs. 8,83,653            |

\* Deducted Rs. 7,418 on account of difference between the approximate and audited figures to week ended 30th July 1887.

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 3rd September 1887 on 57½ miles open.

|   | COACHING TRAFFIC.     |              | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------|----------------------------------|--------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.    | Weight carried.                  | Receipts.    |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.    | Mds. S.                          | Rs. A. P.    | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week                              | 27,615‡               | 15,237 8 0‡  | 30,009 30                        | 2,103 7 0    | 29 0 0                      | 17,380 15 0     | 2,345                    | 900          | 3,245  |
| Or per mile of railway                                  | 481                   | 266 11 10    | 520 30                           | 36 12 5      | 0 8 4                       | 304 0 4         | .....                    | .....        | .....  |
| For previous 8 weeks of half-year                       | 91,990*               | 44,773 12 0* | 3,25,071 20†                     | 29,820 10 0† | 238 13 0‡                   | 65,833 3 0      | 13,643                   | 6,537‡       | 20,181 |
| Total for 9 weeks                                       | 119,605‡              | 60,046 4 0   | 3,55,171 10                      | 32,924 1 0   | 267 13 0                    | 84,223 2 0      | 15,988                   | 7,527‡       | 23,516 |
| COMPARISON.   |                       |              |                                  |              |                             |                 |                          |              |        |
| Total for corresponding week of previous year           | 16,500                | 5,280 7 6    | 32,117 0                         | 2,281 8 0    | 14 11 9                     | 7,581 11 3      | 1,759                    | 635          | 2,394  |
| Per mile of railway corresponding week of previous year | 181                   | 92 6 3       | 561 20                           | 39 11 2      | 0 4 2                       | 132 8 9         | .....                    | .....        | .....  |
| Total to corresponding date of previous year            | 100,304‡              | 50,004 4 8   | 4,19,151 30                      | 21,433 14 0  | 277 5 3                     | 75,292 5 11     | 15,070                   | 7,875        | 22,945 |

\* Added number of passengers 1,970 and Rs. 1,554 0 0

† Ditto Mds. 15,797 and

‡ Ditto

§ The increase in coaching traffic is due to pilgrims visiting Gya on account of Oppurpucksha Srahd.

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |            |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 4TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 3RD SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|------------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts.  | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 57½  | Rs. 7,582 | 133              | 57½  | Rs. 17,340 | 304              | 57½   | Rs. 2,01,980    | 3,531            | 57½   | Rs. 2,01,907*   | 3,531            | .....                   | Rs. 48                  |

\* Added Rs. 2,320 on account of difference between the approximate and audited figures to week ended 30th July 1887.

DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 3rd September 1887 on 12 miles open.

|  | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|-------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...   | 2,816                 | 401 9 0     | 4,055 20                         | 98 15 0    | 9 7 0                       | 602 15 0        | 425½                     | 68           | 493½   |
| Or per mile of railway ...   | .....                 | 41 3 5      | .....                            | 8 3 11     | 0 12 7                      | 50 3 11         | .....                    | .....        | .....  |
| For previous 8 weeks of half-year  | 24,650*               | 4,102 12 0* | 74,162 30†                       | 1,732 8 0† | 75 11 0‡                    | 5,919 15 0      | 3,008                    | 996          | 4,004  |
| Total for 9 weeks ...  | 27,472                | 4,507 5 0   | 78,218 10                        | 1,831 7 0  | 85 2 0                      | 6,513 14 0      | 3,518½                   | 1,064        | 4,582½ |
| COMPARISON.  |                       |             |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...  | 2,301                 | 388 11 9    | 8,209 20                         | 172 8 0    | 1 12 3                      | 563 0 0         | 417                      | 70           | 486    |
| Per mile of railway corresponding week of previous year ...  | .....                 | 32 6 4      | .....                            | 14 6 0     | 0 2 4                       | 46 14 8         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...   | 21,788                | 4,148 9 3   | 1,01,031 10                      | 2,000 2 0  | 85 10 9                     | 6,243 6 0       | 3,091                    | 1,288        | 4,379  |
| * Deducted number of passengers 1,200 and Rs. 167 0 0 }<br>† Added Mds. 1,039 and deducted .. 121 0 0 } on account of differences between the approximate and audited returns to week ended 30th July 1887.<br>‡ Deducted .. 1 0 0 } |                       |             |                                  |            |                             |                 |                          |              |        |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Work Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 4TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 3RD SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
| 12   | Rs. 563   | Rs. 47           | 12   | Rs. 603   | Rs. 50           | 12  | Rs. 23,516      | Rs. 1,960        | 12  | Rs. 21,114*     | Rs. 1,760        | .....                   | Rs. 2,402               |

\* Deducted Rs. 289 on account of difference between the approximate and audited figures to week ended 30th July 1887.

SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 3rd September 1887 on 74½ miles open.

|   | COACHING TRAFFIC.     |              | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.    | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.    | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...  | 4,716                 | 3,313 12 0   | 85,080 20                        | 5,098 3 0   | 81 9 0                      | 9,003 7 0       | 695                      | 2,149½       | 2,844½  |
| Or per mile of railway ...  | .....                 | 44 7 0       | .....                            | 76 0 8      | 1 1 5                       | 121 9 1         | .....                    | .....        | .....   |
| For previous 8 weeks of half-year   | 41,145*               | 32,319 14 0* | 7,66,971 10†                     | 22,058 4 0† | 533 11 0‡                   | 54,931 13 0     | 5,736                    | 9,340½       | 15,076½ |
| Total for 9 weeks ...   | 45,861                | 35,638 10 0  | 8,55,051 30                      | 27,746 7 0  | 635 3 0                     | 61,025 4 0      | 6,431                    | 11,480       | 17,911  |
| COMPARISON.   |                       |              |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...   | 4,829                 | 3,437 8 4    | 81,753 0                         | 2,170 1 0   | 142 10 9                    | 5,750 4 1       | 661                      | 1,045        | 1,696   |
| Per mile of railway corresponding week of previous year ...   | .....                 | 45 15 4      | .....                            | 29 0 2      | 1 14 6                      | 76 14 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...  | 45,075                | 34,521 14 3  | 6,86,374 20                      | 24,559 13 0 | 966 5 0                     | 59,050 0 3      | 6,609                    | 9,688        | 16,297  |
| * Deducted number of passengers 425 and Rs. 95 0 0 }<br>† Added maunds 15,897 and .. 537 0 0 } on account of differences between the approximate and audited returns to week ended 30th July 1887.<br>‡ Added .. 63 9 0 } |                       |              |                                  |             |                             |                 |                          |              |         |

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 4TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 3RD SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
| 74½  | Rs. 5,750 | Rs. 77           | 74½  | Rs. 9,063 | Rs. 122          | 74½   | Rs. 1,55,425    | Rs. 2,078        | 74½   | Rs. 1,78,220*   | Rs. 2,383        | Rs. 22,795              | .....                   |

\* Added Rs. 505 on account of difference between the approximate and audited figures to week ended 30th July 1887.

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 3rd September 1887, on 22½ miles open.*

|   | COACHING TRAFFIC. |              | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-------------------|--------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of         | Receipts.    | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                   | Rs. A. P.    | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 15,547            | 4,732 12 0   | 3,162 10                         | 103 2 0     | 3 8 0                       | 4,839 6 0       | 923                      | 43           | 966    |
| Or per mile of railway ...                                  | .....             | 212 11 4     | .....                            | 4 10 2      | 0 2 6                       | 217 8 0         | .....                    | .....        | .....  |
| For previous 8 weeks of half-year ...                       | 135,671*          | 34,848 15 0* | 30,432 10†                       | 1,126 13 0† | 35 9 6‡                     | 36,011 5 0      | 7,097½                   | 518½         | 8,206  |
| Total for 9 weeks ...                                       | 151,218           | 39,581 11 0  | 33,614 20                        | 1,229 15 0  | 39 1 0                      | 40,850 11 0     | 8,612½                   | 561½         | 9,174  |
| COMPARISON.   |                   |              |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 13,987½           | 3,451 7 8    | 4,532 10                         | 118 10 0    | 3 19 0                      | 3,603 12 5      | 928                      | 40           | 968    |
| Per mile of railway corresponding week of previous year ... | .....             | 155 2 0      | .....                            | 6 10 10     | 0 2 8                       | 161 15 6        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 149,919‡          | 36,761 13 11 | 29,112 50                        | 1,054 11 0  | 51 11 0                     | 37,858 3 11     | 9,019                    | 190          | 9,218  |

\* Added number of passengers 11,214 and Rs. 193 0 0  
† Ditto Mds. 2,608 and .. 165 0 0 on account of differences between the approximate and audited returns to week ended 30th July 1887.  
‡ Deducted .. 13 0 0

*Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 4TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 3RD SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½  | 3,604     | 162              | 22½  | 4,839     | 218              | 22½   | 1,10,530        | 4,970            | 22½   | 1,17,907*       | 5,299            | 7,516                   | .....                   |

\* Added Rs. 345 on account of difference between the approximate and audited figures to week ended 30th July 1887.

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 3rd September 1887, on 42 miles open.*

|   | COACHING TRAFFIC.    |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                      | Rs. A. P.  | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,187                | 982 7 0    | 3,343 20                         | 271 11 0   | 22 0 0                      | 1,279 2 0       | 407                      | 181          | 588    |
| Or per mile of railway ...                                  | .....                | 23 6 3     | .....                            | 6 8 8      | 0 8 4                       | 30 7 5          | .....                    | .....        | .....  |
| For previous 8 weeks of half-year ...                       | 18,026*              | 7,056 2 9* | 68,923 10†                       | 5,199 5 0† | 201 4 6‡                    | 13,055 11 9     | 2,373                    | 2,499        | 4,872  |
| Total for 9 weeks ...                                       | 20,213               | 8,637 0 9  | 72,266 30                        | 5,471 0 0  | 223 4 0                     | 14,334 15 9     | 2,750                    | 2,680        | 5,460  |
| COMPARISON.   |                      |            |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,540                | 1,086 13 2 | 15,791 20                        | 1,286 9 0  | 25 7 0                      | 2,378 13 2      | 243                      | 345          | 588    |
| Per mile of railway corresponding week of previous year ... | .....                | 25 6 5     | .....                            | 30 10 2    | 0 9 8                       | 56 10 3         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 23,559‡              | 9,914 1 6  | 70,971 10                        | 6,233 4 0  | 180 12 3                    | 16,328 1 9      | 3,415                    | 2,129        | 5,544  |

\* Added number of passengers 347 and deducted Rs. 53 0 0  
† Deducted Mds. 496 and .. 817 0 0 on account of differences between the approximate and audited returns to week ended 30th July 1887.  
‡ Ditto .. 18 0 0

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 1TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 3RD SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 42   | 2,379     | 57               | 42   | 1,279     | 30               | 42  | 42,441          | 1,011            | 42  | 61,089*         | 1,525            | .....                   | .....                   |

\* Deducted Rs. 888 on account of difference between the approximate and audited figures.

EASTERN BENGAL STATE RAILWAY.  
(INCLUDING N. B. Dacca, K. AND D., AND ASSAM-BEHAR SECTIONS).  
*Approximate Return of Traffic for week ended 27th August 1887, on 645 miles open.*

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                  | Other earnings (estimated) including steam boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|--|-----------------------|--------------------|----------------------------------|------------------|--|-----------------|--------------------------|--------------|---------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.        |  |                 | Coaching.                | Merchandise. | Total.  |
|  |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.        | Rs. A. P.  | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                 | 101,073               | (a) 47,930 0 0     | (b) 8,435,361 0                  | (b) 1,29,590 0 0 | (c) 29,240 0 0                                   | 2,06,760 0 0    | 20,058                   | (b) 33,480   | 53,547  |
| Or per mile of railway ...                                     | 157                   | 74 0 0             | 1,312 0                          | 201 0 0          | (d) 20 0 0                                       | 265 0 0         | .....                    | .....        | .....   |
| For previous 7 weeks of half-year ...                          | 865,000               | 3,61,430 0 0       | 40,79,103 0                      | 6,47,970 0 0     | 1,07,810 0 0                                     | 11,17,210 0 0   | 141,798                  | 142,337      | 284,135 |
| Total for 8 weeks ...  | 966,082               | 4,09,390 0 0       | 40,44,564 0                      | 7,77,530 0 0     | 1,37,050 0 0                                     | 13,23,960 0 0   | 161,856                  | 175,826      | 337,682 |
| COMPARISON.  |                       |                    |                                  |                  |  |                 |                          |              |         |
| Total for corresponding week of previous year ...              | 901,954               | 44,174 0 0         | (b) 8,04,555 0                   | (b) 1,27,007 0 0 | 13,324 0 0                                       | 1,84,505 0 0    | 17,431                   | (b) 23,340   | 40,811  |
| Per mile of railway, corresponding period of previous year ... | 100                   | 73 0 0             | 1,327 0                          | 210 0 0          | .....  | 283 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...               | 956,093               | 3,87,875 0 0       | 36,02,001 0                      | 6,27,636 0 0     | 82,116 0 0                                       | 10,97,627 0 0   | 144,038                  | 149,910      | 294,848 |

(a) Includes Rs. 3,000 for haulage of mails.  
(b) Ditto ballast train.  
(c) Ditto Rs. 10,000 on account of E. I. Railway running-powers, Rs. 4,000 for interest on E. B. S. Railway steamers and flats.  
(d) Steam-boat earnings, Rs. 16,620, have been excluded from the calculation.  
Note—Dacca and Assam-Bihar approximate returns are also published separately.

FINANCIAL YEAR.  
*Approximate Statement of Gross Receipts of the Eastern Bengal State Railway.*

| RECEIPTS FOR WEEK ENDING 25TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 25TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 606  | 1,84,563  | 306              | 645  | 2,06,750  | 320              | 606   | 29,41,008       | 291              | 645   | 31,19,583*      | 230              | 1,78,615                | .....                   |

\* Audited up to 30th June 1887.

BENGAL CENTRAL RAILWAY.  
*Approximate Return of Traffic for week ended 3rd September 1887, on 125 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 28,087*               | 7,960 0 0          | 63,450 0                         | 3,100 0 0  | 60 0 0                      | 11,060 0 0      | 3,501                    | 2,540        | 6,050  |
| Or per mile of railway ...                                    | 225                   | 63 0 0             | 509 0                            | 25 0 0     | .....                       | 88 0 0          | .....                    | .....        | .....  |
| For previous 8 weeks of half-year ...                         | 192,322               | 62,530 0 0         | 3,35,254 0                       | 20,860 0 0 | 1,070 0 0                   | 5,720 0 0       | 29,046                   | 14,099       | 43,745 |
| Total for 8 weeks ...   | 220,409               | 70,490 0 0         | 3,98,904 0                       | 23,960 0 0 | 1,130 0 0                   | 95,580 0 0      | 32,547                   | 17,248       | 49,795 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 20,204                | 6,748 0 0          | 20,824 0                         | 1,740 0 0  | 15 0 0                      | 8,612 0 0       | 4,014                    | 1,202        | 5,216  |
| Per mile of railway corresponding period of previous year ... | 103                   | 54 0 0             | 167 0                            | 14 0 0     | .....                       | 68 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 217,731               | 70,264 0 0         | 1,50,689 0                       | 11,101 0 0 | 230 0 0                     | 81,004 0 0      | 37,163                   | 14,458       | 51,611 |

\* Includes monthly tickets.

FINANCIAL YEAR.  
*Approximate Statement of gross receipts of the Bengal Central Railway.*

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 4TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 3RD SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125  | 8,512     | 68               | 125  | 11,060    | 88               | 125   | 2,57,162        | 94               | 125   | 2,60,615*       | 95               | 3,453                   | .....                   |

\* Audited up to week ending 30th June 1887.

## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 27th August 1887 on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 10,282                | 3,785 0 0          | 36,732 c*                        | 2,440 0 0* | 65 0 0                      | 6,290 0 0       | 2,191                    | 1,795*       | 3,986  |
| Or per mile of railway ...                                    | 119                   | 44 0 0             | 427 0                            | 28 0 0     | 1 0 0                       | 73 0 0          | .....                    | .....        | .....  |
| For previous 7 weeks of half-year ...                         | 80,384                | 25,710 0 0         | 70,223 0                         | 6,000 0 0  | 870 0 0                     | 32,580 0 0      | 15,794                   | 7,118        | 22,902 |
| Total for 8 weeks ...   | 90,666                | 29,495 0 0         | 1,06,955 0                       | 8,440 0 0  | 935 0 0                     | 38,870 0 0      | 17,965                   | 8,901        | 26,866 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 13,083                | 4,633 0 0          | 2,932 0                          | 547 0 0    | 608 0 0                     | 5,808 0 0       | 1,281                    | 349          | 1,630  |
| Per mile of railway corresponding period of previous year ... | 150                   | 54 0 0             | 34 0                             | 7 0 0      | .....                       | 61 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 80,280                | 24,023 0 0         | 51,903 0                         | 4,372 0 0  | 1,757 0 0                   | 30,752 0 0      | 10,069                   | 6,254        | 16,303 |

\* Includes 20,000 maunds, Rs. 1,000 and 1,000 miles for ballast train.

## FINANCIAL YEAR.

*Approximate Statement of Gross Receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 28TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 28TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
| 86   | Rs. 5,808 | 68               | 86   | Rs. 6,290 | 73               | 86  | Rs. 97,152      | 53               | 86  | Rs. 1,03,596*   | 57               | 6,444                   | Rs. ....                |

\* Audited up to 30th June 1887.

## ASSAM-BEHAR STATE RAILWAY.

## PURNEAH SECTION.

*Approximate Return of Traffic for week ended 27th August 1887 on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,581                 | 950 0 0            | 4,430 0                          | 360 0 0    | 20 0 0                      | 1,360 0 0       | 664                      | 410          | 1,074  |
| Or per mile of railway ...                                    | 65                    | 24 0 0             | 114 0                            | 10 0 0     | 1 0 0                       | 35 0 0          | .....                    | .....        | .....  |
| For previous 7 weeks of half-year ...                         | 26,835                | 9,010 0 0          | 1,06,783 0                       | 11,900 0 0 | 230 0 0                     | 21,200 0 0      | 4,956                    | 2,894        | 7,850  |
| Total for 8 weeks ...   | 29,416                | 9,960 0 0          | 1,11,212 0                       | 12,260 0 0 | 250 0 0                     | 22,500 0 0      | 5,021                    | 3,308        | 8,329  |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 28TH AUGUST 1886. |           |                  | RECEIPTS FOR WEEK ENDING 27TH AUGUST 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 28TH AUGUST 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 27TH AUGUST 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
| .....                                      | .....     | .....            | 39   | Rs. 1,360 | 35               | .....   | .....           | .....            | 39  | Rs. 62,795*     | 76               | 62,795                  | .....                   |

\* Audited up to week ending 30th June 1887.

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 3rd September 1887, on 249 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week on 249 miles open ... ..             | 37,660½               | 11,797 1 11        | 83,084 20                        | 6,820 0 0     | 2,770 15 0                  | 21,348 1 8      | 6,260                    | 2,672        | 8,932   |
| Or per mile of railway ... ..                                   | 151                   | 47 6 0             | 334 0                            | 27 6 0        | 1 14 0                      | 76 10 0*        | .....                    | .....        | .....   |
| For previous 8 week of half-year ... ..                         | 317,191½              | 1,06,283 14 1      | 9,87,756 20                      | 82,900 0 0    | 26,407 0 8                  | 2,15,055 14 4   | 53,783                   | 40,120       | 93,903  |
| Total for 9 weeks ... ..  | 354,852               | 1,18,080 0 0       | 10,70,545 0                      | 89,780 0 0    | 29,178 0 0                  | 2,37,044 0 0    | 60,062                   | 42,792       | 102,794 |
| COMPARISON.   |                       |                    |                                  |               |                             |                 |                          |              |         |
| Total for corresponding week of previous year on 240 miles open | 31,131½               | 9,659 4 6          | 1,40,629 0                       | 12,461 1 0    | 2,338 14 1                  | 24,459 3 7      | 5,126                    | 4,166        | 9,332   |
| Per mile of railway corresponding week of previous year ...     | 127                   | 39 4 0             | 571 0                            | 50 11 0       | 0 10 0                      | 99 9 0*         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ... ..             | 298,919               | 96,066 7 3         | 11,05,243 0                      | 1,13,346 10 0 | 27,634 6 2                  | 2,37,077 7 5    | 46,718                   | 40,883       | 87,601  |

\* Steam-haul earnings excluded in calculating "Total earnings per mile of railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 4TH SEPTEMBER 1886. |                 | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 3RD SEPTEMBER 1887. |                 | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|---|-----------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Mean mileage worked.                                      | Total receipts. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             |   | Rs.             | Rs.                     |                         |
| 246  | 24,459    | 99               | 240  | 21,388    | 89               | 246   | 6,85,204        | 248½  | 7,31,077 (a)    | 46,873                  | .....                   |

(a) Includes figures as per supplementary adjustments.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 3rd September 1887, on 27½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,319½                | 873 15 0           | 7,103 30                         | 518 8 0    | 13 2 0                      | 1,405 9 0       | 500                      | 254          | 753    |
| Or per mile of railway ... ..                               | 85                    | 32 1 0             | 261 0                            | 19 0 0     | 0 8 0                       | 51 9 0          | .....                    | .....        | .....  |
| For previous 8 weeks of half-year ... ..                    | 26,411½               | 9,437 1 0          | 69,732 10                        | 4,539 8 0  | 203 14 0                    | 14,240 7 0      | 4,254                    | 2,554½       | 6,812½ |
| Total for 9 week ... ..                                     | 28,731                | 10,311 0 0         | 76,826 0                         | 5,118 0 0  | 217 0 0                     | 15,646 0 0      | 4,763                    | 2,812½       | 7,575½ |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ... ..        | 1,738                 | 703 12 6           | 8,756 20                         | 664 0 0    | 12 0 0                      | 1,379 3 6       | 500                      | 308½         | 817½   |
| Per mile of railway corresponding week of previous year ... | 64                    | 25 13 0            | 321 0                            | 24 6 0     | 0 7 0                       | 50 10 0         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ... ..         | 21,155½               | 8,183 14 2         | 58,876 30                        | 4,412 13 0 | 124 1 0                     | 12,720 12 11    | 4,769                    | 2,804        | 7,303  |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhathi State Railway.

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 4TH SEPTEMBER 1886. |                 | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 3RD SEPTEMBER 1887. |                 | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|---|-----------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Mean mileage worked.                                      | Total receipts. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             |   | Rs.             | Rs.                     |                         |
| 27½  | 1,380     | 51               | 27½  | 1,406     | 52               | 27½   | 37,056          | 27½   | 41,134*         | 4,078                   | .....                   |

\* Includes figures as per supplementary adjustments.



| DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.          |     |     |     |     |     |     | Rs.       |
|---|-----|-----|-----|-----|-----|-----|-----------|
| Approximate earnings for week ending 3rd September 1887 | ... | ... | ... | ... | ... | ... | 7,957     |
| Corresponding week last year                            | ... | ... | ... | ... | ... | ... | 9,315     |
| Decrease  | ... | ... | ... | ... | ... | ... | 1,358     |
| Receipts from 1st July to 3rd September 1887            | ... | ... | ... | ... | ... | ... | 81,852    |
| From 1st July to 4th September 1886                     | ... | ... | ... | ... | ... | ... | 89,700    |
| Decrease  | ... | ... | ... | ... | ... | ... | 7,848     |
|   |     |     |     |     |     |     | Miles.    |
| Miles open, week ending 3rd September 1887              | ... | ... | ... | ... | ... | ... | 51        |
| Corresponding week last year                            | ... | ... | ... | ... | ... | ... | 51        |
|   |     |     |     |     |     |     | Rs. A. P. |
| Receipts per mile open, week ending 3rd September 1887  | ... | ... | ... | ... | ... | ... | 156 0 4   |
| Corresponding week last year                            | ... | ... | ... | ... | ... | ... | 182 10 6  |
| Decrease  | ... | ... | ... | ... | ... | ... | 26 10 2   |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 10th September 1887.

W. STEVENSON, Acting Manager, D.-H. Railway.





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, SEPTEMBER 21, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## RESOLUTION ON THE GENERAL ADMINISTRATION REPORT OF THE BHAGULPORE DIVISION FOR THE YEAR 1886-87.

### GENERAL DEPARTMENT—MISCELLANEOUS.

*Calcutta, the 15th September 1887.*

### RESOLUTION.

READ—

The Annual General Report of the Bhagulpore Division for the year 1886-87.

This report is submitted by Mr. N. S. Alexander, who was in charge of the division throughout the year under review.

2. *Annual Tours.*—The Commissioner spent 114 days on tour, during which time he was especially occupied with Sonthal Pergunnahs' affairs. All the District and Sub-divisional Officers were in camp for the prescribed number of days, and in Bhagulpore the Joint-Magistrate also spent 43 days in the interior.

3. *Weather, Crops, and Public Health.*—The rainfall during the year was abnormally heavy in all parts of the Bhagulpore Division, and was on the whole well distributed, as is shown by the generally abundant harvests. In Maldah, the Sonthal Pergunnahs, Monghyr and Purneah, the crops, especially rice, were good, and in Bhagulpore, where the *bhadoi* suffered from flooding, the general results were not much below the average. The year was on the whole a particularly healthy one, and a decrease in mortality is shown by the returns of every district. With the exception of Purneah, where cholera made its appearance at the close

of the rains and continued up to the colder months, the whole division appears to have enjoyed comparative immunity from epidemics of any kind. The local officers are to be congratulated on the result of their efforts to extend vaccination in Monghyr and Purneah, but the excellent results there obtained are unfortunately counterbalanced by a falling off in the number of vaccinations, which is not satisfactorily explained in the other districts of the Division.

4. *Material Condition of the People.*—The mass of the population is agricultural, and their material condition necessarily varies with good and bad seasons. The abundant harvests of the year have restored to the cultivators a measure of prosperity which they had lost in recent unfavourable seasons. Only in the case of the Paharias in the Sonthal Pergunnahs is no improvement reported by the District Officer, and the Lieutenant-Governor would desire to have a special report on the condition of these aborigines, and on any measures which may appear to the local officers to be possible for the amelioration of their present wretched condition. As was to be expected under the circumstances of the year, the price of food fell throughout the division: the fall was particularly marked in the Bhagulpore district, at the sudder station of which rice was cheaper than it had been during the last 10 years. A corresponding tendency to rise in the rate of wages is noticed in Bhagulpore and Maldah, while the returns of registered emigration show a decrease. The remarks made by the Deputy Commissioner of the Sonthal Pergunnahs with regard to abuses in the system of free emigration to the tea districts have been read by the Lieutenant-Governor with attention, but it is observed that no mention is made of specific instances of fraud or kidnapping, or of any other criminal offence. It is important that it should be borne in mind that a policy of non-interference with free emigration to the labour districts has been definitely accepted by Government on the ground that greater evils would be caused by interference with a view to stop possible abuses than are involved in the relatively small number of instances in which abuses occur.

5. *Manufactures and Mines.*—Indigo is manufactured in all the districts of the division, but chiefly in Bhagulpore and Monghyr; this industry is reviving both in Purneah and Maldah. The season was on the whole favourable to this crop, but prices were low. Opium is grown in Monghyr alone, and the area under cultivation expanded slightly, but the outturn, owing to unseasonable rains, compares unfavourably with that of 1885-86. The manufacture of silk fabrics is a declining industry in Bhagulpore and Maldah, but the price of cocoons rose in both districts on account of larger demands for export. The manufacture of *bidri* work in Purneah is reported to be dying out, and the iron industry of South Bhagulpore does not flourish, but the manufacture of muzzle-loading guns in Monghyr has increased. Experiments made in slate quarrying and enamelling have not proved very successful, and exorbitant terms demanded by the zemindars, both in this district and in Bhagulpore, have stood in the way of mining enterprise.

6. *Trade and Commerce.*—The trade of the division was generally brisk during the year on account of the favourable harvests, and the increased export of food-grains, especially of wheat, is noticeable. The import of piece-goods appears to have improved in Monghyr and Maldah, but the Commissioner makes no comment on the report received last year from the Sonthal Pergunnahs to the effect that the bad quality of European piece-goods has made them unpopular and checked their importation, although the advisability of making enquiry was suggested in the Government Resolution. The timber trade with Nepal suffered from an overstocked market, but the demand for Nepal jute was maintained. The subject of registration of trade with Nepal in Purneah, to which attention is drawn in paragraph 68 of the Commissioner's report, will be separately considered. Under the head of development of trade routes, the opening of a station on the Tirhoot State Railway in the north-west corner of the Bhagulpore district, the opening of the Purneah branch of the Assam-Bihar State Railway, and the increased traffic of steamers on the Ganges must be noticed.

7. *Public Feeling and Administrative arrangements.*—The account of the general demonstrations of loyalty called forth by the Queen-Empress's Jubilee is in accord with those contained in the reports of other Commissioners. On

other topics public feeling did not display itself. The introduction of the income tax did not affect the mass of the people, and the Tenancy Act is hardly mentioned by the Commissioner in his report. From the tabular statement given by the Commissioner, showing the employment of Muhammadans in Government service in this division, it appears that 1 in 6 of the gazetted officers is a Muhammadan, and that in superior and inferior service the respective proportions are 1 in 5 and 1 in 3. The Commissioner expresses a decided opinion that in making appointments the best man available, irrespective of creed, is selected, and that the orders of Government are duly observed in filling up vacant appointments.

8. *Police and Crime.*—The results for the year under the head of Police and Crime were not altogether satisfactory. There was a decrease in the number of offences against property, probably connected with the agricultural prosperity of the year, but on the whole both cognizable and non-cognizable crime slightly increased. The percentage of convictions in sessions trials fell as low as 43·9, and there was no improvement in the results of prosecutions for false complaints. The police force of the division appears to be below the average in efficiency. In the rural police improvement is reported.

9. *Civil Justice.*—In civil suits there was an increase under the head of suits for money or moveables, a small decrease in the number of title suits, and a rather large decrease in rent suits. The increase under the first head is attributed to good seasons following bad ones; while the decrease of rent suits is said to be due to the general uncertainty felt regarding the effects of the provisions of the Tenancy Act. In Monghyr, however, the number of applications for deposit of rent was much higher than before. The Collector of Maldah quotes the opinion of the Munsif to the effect that the introduction of the new law has led to the speedier disposal of suits for arrears of rent, enhancement, and the surrender of holdings, and that the enhancement sections have benefited landlords.

The question of the advisability of permanently establishing a Subordinate Judge's court at Monghyr is under the consideration of the Lieutenant-Governor, and the opinion of the High Court thereon has been invited. The question of establishing a Munsif's court at Soopool will be considered in the Judicial Department.

10. *Land Revenue.*—The current demand of land revenue increased from Rs. 33,62,145 to Rs. 33,67,500, and the current collections exceeded those of the preceding year by Rs. 30,557, the percentage of current collections to current demand rising from 96·8 to 97·5. There was an improvement likewise in arrear collections. The registration of estates and the writing up of registers under Act VII (B.C.) of 1876 have been nearly completed in all the districts of the division.

11. *Excise, Stamps and Income Tax.*—The excise revenue rose from Rs. 10,26,244 to Rs. 11,11,267 during the year under report, the increase being shown under all heads—country spirits, tari, ganja, and opium—and being due apparently to the more prosperous circumstances of the people. The gross realizations from stamps also advanced from Rs. 9,74,919 to Rs. 10,50,574, the largest increase, particularly noticeable in Monghyr, being under the head of judicial or court-fee stamps. The total amount realized from the income tax, exclusive of fines and penalties, and the proceeds of the tax on Government salaries and pensions, was Rs. 2,15,098 as against Rs. 1,47,904 collected in the preceding year under the license tax.

12. *Communications.*—The Kosi extension of the Tirhoot State Railway and the opening of the Purneah section of the Assam-Bihar State Railway have been noticed above. A considerable number of useful original works were undertaken by the Road Cess Committees during the year, but the state of existing roads in Monghyr, Bhagalpore and Maldah is unsatisfactory. It would appear that the attention of the new District Committees should be directed rather to up-keep of existing roads than to undertaking new works at the expense of the maintenance of present lines of communication.

13. *Education.*—The percentage of success at the different examinations compares favourably with that reported in the preceding year, but otherwise the educational results of the year 1886-87 are discouraging. There has been a total decrease of 362 schools and of 5,889 pupils, secondary education

showing a loss of one school and a gain of 381 pupils, and primary education a decline of 655 schools and 7,617 pupils; the balance is accounted for by inclusion in the returns of the department of a larger number of indigenous schools. The decrease is due, as in other divisions, to the exclusion of small and inefficient schools from the returns, but the falling off in female education in all districts, except Maldah, which appears to be the result of the exclusion of small schools, is to be regretted. Gratifying progress is being made by Muhammadans, who, although they form only 19·6 per cent. of the whole population of the division, contribute 22·9 per cent. of the total school population. In the Damin-i-Koh the number of Santhali patshalas aided by Government has increased from 99 to 110.

14. *Committees and Local Bodies and Conduct of Zemindars.*—The meetings of Road Cess Committees during the year were not well attended, except in Purneah, and the Lieutenant-Governor has perused with regret the unfavourable remarks contained in the report on the working of Municipal Committees in respect especially of sanitary arrangements. The responsibility devolving on District Officers for the success of such Committees must not be forgotten, and Sir Stuart Bayley relies upon their energy and tact to assist the first developments of Local Self-Government.

The conduct of zemindars in this division is reported to have been generally satisfactory. The most serious difficulties between landlords and tenants exist apparently in North Bhagulpore, where the remedy of a survey and record of rights is to be applied in the two zemindaris of Srinagar and Banaili.

By order of the Lieutenant-Governor of Bengal,

W. C. MACPHERSON,

*Offg. Secretary to the Govt. of Bengal.*

## WOOL TRADE OF BENGAL.

The following is published for general information.

P. NOLAN,

*Secretary to the Govt. of Bengal.*

No. 2737—497 Agri., dated Calcutta, the 5th September 1887.

From—H. W. C. CARNDUFF, Esq., Offg. Under-Secy. to the Govt. of Bengal,

To—The Director of the Agricultural Department, Bengal.

I AM directed to acknowledge receipt of your letter No. 1194 Agri., dated the 4th August 1887, forwarding copy of an interesting Note on wool prepared by you at the instance of the Government of India, Revenue and Agricultural Department, and to say that Sir Steuart Bayley would be prepared to give his support to a scheme for improving the breed of sheep in Behar, if submitted with your approval.

*Note on Wool in Bengal.*

THE Government of India having asked me, by demi-official communication, for some information regarding the trade in wool in Bengal, and the possibility of improving the supply or quality of that article, I have made some enquiry on the subject. The information which I have been able to obtain is meagre and vague in its character. Further enquiries will continue to be made, but, pending results of such enquiry, I now give the small amount of information on the subject which I have been able to gather.

First, as regards the supply of wool from Thibet and the Northern Frontier, the following remarks occur in the report of the External Trade of Bengal with Nepaul, Sikkim, and Bhutan, published by the Government of Bengal, 1885 :—

"The quantity of wool available for export from Thibet is believed to be enormous. Between Kamba and Shigatse, within a march and a half of the Sikkim frontier at the head of the Lachen, sheep are killed, not for the sake of their hides or fleece, which are practically valueless for want of a market, but in order that their carcasses may be dried into jerked meat and sold for 8 annas each. At Kamba itself carpets and rugs are manufactured of the finest quality, and of patterns evincing excellent taste and skill; but there is no outlet for these fabrics. Further north on the Great Chang Thang (or northern plateau), which begins just beyond the Sanpo, within five marches of the Kongra Lama, are prodigious flocks and herds which roam at will over the endless expanse. In noticing the improvements in the supplies of wool imported into Bengal from Thibet during 1883-84, it was remarked in the report for that year—'it is believed that this trade has dwindled during the current year (1884-85), partly owing to the difficulties placed in the way by Thibetan officials,' the statistics recorded show that the belief was well founded, for the quantity imported during 1884-85 was only one tenth that imported during 1883-84, viz. 91 maunds against 911 maunds. With the exception of 19 maunds registered at Rungeet in 1883-84, and 5 maunds in 1882-83, the entire supply during the three years was brought through Pheydong. The value of manufactured woollen goods (chiefly blankets) during 1884-85 was Rs. 4,415 in excess of the figures of 1883-84, but Rs. 564 below those of 1882-83. By far the largest supplies are brought *via* Pheydong."

The following statement shows the quantity of wool imported into British territory from Sikkim and Thibet during the past five years :—

|                   | Mds.  |
|-------------------|-------|
| 1882-83 . . . . . | 168   |
| 1883-84 . . . . . | 911   |
| 1884-85 . . . . . | 91    |
| 1885-86 . . . . . | 2,555 |
| 1886-87 . . . . . | 1,933 |

The falling off in imports of wool in 1884-85, as compared with the two previous years, has been attributed to the difficulties placed in the way of this trade by Thibetan officials; but though this may be one of the true causes of the decline in question, it is to be noted that the trade appears to have been at all times insignificant and irregular. At the same time that there was a decline in the imports of wool, it is to be observed that there was a very large increase in the imports of other articles—for example, musk and yak tails.

|                     | 1883-84. | 1884-85. |
|---------------------|----------|----------|
|                     | Rs.      | Rs.      |
| Musk . . . . .      | 2,563    | 84,100   |
| Yak tails . . . . . | 8,924    | 58,794   |

margin, largely increased in 1884-85.

2. Without, however, questioning the existence or the pernicious effects of restrictions placed by the Thibetan officials on the frontier trade—matters on which I have no knowledge and no special sources of information—I may say that, having made some enquiry on the subject at Darjeeling, I have not seen or heard anything which would lead me to doubt that a considerable trade in Thibetan wool can be developed even under existing conditions, by

which, however, may be accounted for by the greater facility with which these less bulky articles may be smuggled. The imports of these latter commodities had, as will appear from the figures quoted in the

simply creating a steady demand and securing a steady sale for the article in Darjeeling. It will be seen from a letter from Mr. Spencer Robinson, which is annexed, that a merchant trading with Thibet has recently offered to deliver to that gentleman in Darjeeling ten thousand maunds of wool, provided he guaranteed the purchase of it at Rs. 16 per maund. The Thibetans, he adds, will not place any obstacles in the way of allowing the wool to come through. If the wool, as stated, can be delivered at Darjeeling at Rs. 16 a maund, or, say, three to three and a half pence per pound, and the wool is worth in England 6½ to 7 pence per pound, as it is believed to be, there would appear to be little doubt that the existence of a steady demand at Darjeeling, or some other place nearer the frontier within British territory, would lead to a steady supply so far as the resources of Thibet allow. I am not here arguing against the desirability of removing trade restriction—a question which does not come within my province, and on which I am not called upon to offer an opinion—but what I am arguing in favour of is the creation of a steady demand for Thibetan wool in Darjeeling by establishing an agency, public or private, for the continuous purchase of it. The attempts being made by Mr. Spencer Robinson, who has, I am informed, much practical knowledge of the subject, will, from this point of view, be watched with much interest. It will be seen from the annexed report, with which I have been favoured by the Chamber of Commerce, and from the Secretary of the Agri-Horticultural Society, that Thibetan wool as per sample received from Mr. Spencer Robinson is supposed to be worth 6½ to 7 pence per pound in England, where the price is rapidly rising. If this estimate turn out to be correct, and wool is forthcoming from Thibet in large quantities as stated to Mr. Spencer Robinson, the importation of wool from Thibet should be a highly remunerative business.

3. The following statement shows the exports or imports of wool from and to Calcutta according to the Custom House returns and statistics of river and rail-borne trade in Bengal since 1881-82 :—

| <i>Sea-borne trade.</i> |     |     |     | Export. | Import. |
|-------------------------|-----|-----|-----|---------|---------|
| Year.                   |     |     |     | lbs.    | lbs.    |
| 1881-82                 | ... | ... | ... | 13,446  | 7,484   |
| 1882-83                 | ... | ... | ... | 2,336   | 41,617  |
| 1883-84                 | ... | ... | ... | 32,684  | 19,613  |
| 1884-85                 | ... | ... | ... | 78,395  | 21,612  |
| 1885-86                 | ... | ... | ... | 57,595  | 86,367  |

4. As regards the trade in wool produced in the plains of Bengal, there is very little information available in the records of the Bengal Government, and as the Government of India has called for very early report on the subject, I have not been able to ask local officers for further information regarding it. No attempts have ever been made in Bengal to improve the quantity or quality of wool produced in these provinces. The bare suggestion of the possibility of taking measures with this end in view has been made subject of gibes and ridicule. It will, however, be seen from the papers annexed that practical men, who have given attention to the subject, are by no means of opinion that nothing can, or that nothing ought, to be done by Government in this matter. Mr. Abbott, a well known indigo-planter of Tirhoot, is enthusiastically in favour of endeavouring to improve the breed of Behar sheep by judicious cross-breeding, and is willing himself to undertake the supervision of the experiment on an inexpensive plan, which will be found described in his letter annexed, and Mr. Orrah, Deputy Superintendent of the Bhagulpore Jail, is of the same opinion. I think that Mr. Abbott's plan is an eminently practical one, and that cross-breeding on the lines suggested by him and Mr. Orrah ought to be tried. The Revenue and Agricultural Department of the Government of India may perhaps be in a position to give some assistance and support by supplying merino or other good rams and ewes. I am myself also in communication on the subject with Dr. Greenhill of Calcutta, who has been good enough to volunteer his assistance in the selection and importation of good rams from Australia.

5. I annex some interesting papers with which, through the courtesy of Dr. Lethbridge, I have been favoured by Mr. Orrah.

This gentleman has given much attention to the subject of Indian wool, and probably knows more about it than any official in Bengal. Some of his suggestions for effecting improvements in the quality of Bengal wool, owing no doubt to his want of acquaintance with the actual conditions of Bengal peasant life, are, I think, impracticable; but he agrees with Mr. Abbott in thinking that much may be done by judicious cross-breeding. Mr. Orrah, being in charge of the manufacture of woollen articles in the Bhagulpore Jail, is in a position to offer an opinion of value on the subject, and he bears testimony to the fact that the attempts made to improve the breed of sheep in the North-Western Provinces have led to a marked improvement in the quality of the wool of that province, which he says is decidedly superior to that produced in Bengal. Further, he significantly notes that since the system of cross-breeding sheep by continuous importation of fresh stock has ceased in the North-Western Provinces, the quality of the wool produced is there also deteriorating.

6. I regret that I am unable to furnish the Government of India at present with more accurate and detailed information on this subject, and have only two practical suggestions to make with a view to improvement in the supply and quality of wool from Bengal and the northern frontier.



These are—

1st.—That arrangements may be made by which a steady demand and sale can be guaranteed for Thibetan wool in Darjeeling or elsewhere within British territory—such demand will create the supply, and will probably arise without the aid or interference of Government, when it is known that wool is forthcoming. If, in addition to this, the Government of Thibet can be induced to remove restrictions which must as a matter of course injuriously affect trade, all the better; but I am not in a position to offer an opinion on this point. Further, it would perhaps be at first desirable to allow specially favourable rates for carriage of wool from Darjeeling by rail to Calcutta, and orders to have this done have, I understand, been recently issued. It would also be well, if possible, to improve the means of communication by road with the Thibetan frontier.

2nd.—That as regards wool produced in the plains of Bengal, the suggestions made by Mr. Abbott for cross-breeding in his letter, which is annexed, be accepted as a tentative measure.

M. FINUCANE,

*Director of the Agricultural Department, Bengal.*

Dated Teendaria, the 17th July 1887.

Demi-official from—SPENCER ROBINSON, Esq.,

To—M. FINUCANE, Esq., C.S.

I FORWARD by Mr. Stevenson two samples of Thibet wool as received from that country.

One is ewe wool, the other ram's wool. I have been selecting wool for a Calcutta merchant during the last week, who is sending it home to England. This is the first shipment of wool sent home. I received a valuation on this wool recently, which was 6½ to 7 pence per pound in England.

The wool trade with Thibet can be developed into a large business, and a merchant trading with Thibet offered to deliver me 10,000 maunds of wool in Darjeeling (provided I would guarantee to buy it) at Rs. 16 per maund. He states the Thibetans will not place any obstacles in the way of allowing the wool to come through the Passes. He is sending me samples of cloth, &c., purchased by the Thibetans, and wishes me to forward them to English manufacturers and let him know the price of such cloth when landed in Calcutta.

Dated Jaintpore, the 27th June 1887.

Demi-official from—H. E. ABBOTT, Esq.,

To—M. FINUCANE, Esq., C.S.

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Suffice it then to say, as a commencement of correspondence, that as far as sheep-breeding in Behar is concerned, I live in the very centre of it, and, roughly speaking, my tenants own at least a lakh of these useful little animals; but as far as wool or quality of meat goes they are of the most wretched description, though, like most things indigenous to the country, hardy to a degree. As I told you personally, I am convinced that judicious crossing would prove eminently beneficial (were Australian or British blood imported) to both wool and mutton. I do not think much outside trade is done in the wool line, the shepherds finding a sufficient market at present by weaving it into blankets, which they dispose of locally; but with the railroad now at their doors, the industry only wants encouragement to develop into a very valuable adjunct to the commercial economy of the district. Be it always remembered that the grazing in Behar is for India the best *par excellence*. Sheep during the hot weather are driven to the northern chours, when for a mere nominal sum they fairly well keep themselves; while during the rains practical farming-planters are glad enough to let them have the magnificent grazing of the inevitably heavy undergrowth in their indigo lands, charging the value of one sheep in the hundred for the right. Therefore, Behar is eminently a country suited to sheep farming, and it behoves Government to improve the breed. Give me a dozen rams and double the number of ewes, allow me Rs. 20 a month to keep them up, and I will guarantee to make a present of 90 per cent. of every ram produced in the stock to sheep-farmers in the district, and 50 per cent. of the ewes. Your charge shall be no more than the above Rs. 20 as long as I am in the country, and when I leave, I will give back to Government the same amount of stock that they handed me, or at the end of five years I will ask no further aid from Government, but will return it in kind the amount of rams and ewes advanced me. I will with pleasure furnish statistics of the entire births, deaths and distribution of the stock: of course you will fully understand that, should the stock die, I have no claim whatever against you as far as the Rs. 20 per mensem goes. My mere wish is to show how Government aid, properly applied, can benefit the district at small expense, and be made in the long run almost self-supporting. After a bit, I believe we could make money by letting out the services of the rams. But this must be done gradually. I have already proved that, as far as horses, poultry and dogs are concerned, one can with imported blood and judicious local crossing do very great things in Behar; and as I honestly believe, as far as Bengal is concerned, it could be made the nursery for grain, horses, oilseeds, sheep, cattle, *et hoc genus omne*, for the whole of Southern India.

In such a country as this the encouragement of horses, sheep, and poultry-breeding, of the importation of finer seeds from foreign countries, in fact the entire working up of Behar as a wholesale producer for India, should be the work of the Government at first, and of every Englishman who, like myself, is grateful to it for a happy if an exiled home.

Many experiments have doubtless been made, but forgive me if I say unhesitatingly they have been, as a rule, made on wrong lines. They are generally made through the means of the temporary Collector of the district, without the smallest effort being made to find whether the gentleman in question has a penchant for this kind of thing. The odds are he has not. Witness the attempt to breed mules in Mozufferpur.

*Report by Mr. Orrah.*

In reply to the Inspector-General of Jails' request, I have the honour to submit the following report upon Bengal wools, together with extracts.

Regarding the production and improvement of wool grown in Bengal, it will be necessary to enter somewhat minutely into the characteristics of wool, namely—

- |                        |                            |
|------------------------|----------------------------|
| 1st.—Softness.         | 4th.—Uniformity of staple. |
| 2nd.—Elasticity.       | 5th.—Fineness.             |
| 3rd.—Length of staple. | 6th.—Soundness.            |

So far as my experience goes in the working of Bengal wools, I find them wanting in all the aforementioned characteristics.

As regards want of softness and elasticity, I attribute this partly to the hardness of the water the sheep may have to drink, being of a limy character.

The scarcity of yolk in the fibre, which is the natural reservoir from which the wool fibre gains its character for softness, &c., shows the sheep are not sufficiently and suitably fed.

As regards length of staple, uniformity, fineness and soundness, these deficiencies are more the result of want of care and attention to the breeding. Good breeding is undoubtedly the main cause by which sheep of all countries are improved, or for want of it are deteriorated.

Whilst Bengal wools show these deteriorations all round, and contrast very unsatisfactorily with other provinces in the North-West of India, *there is one redeeming feature, which is a very valuable one, possessed by the Bengal sheep, and that is they are very receptive, or in other words susceptible of being improved more rapidly than many other classes of sheep.* The Thibet sheep, for instance, will require much more time to eradicate the coarse hairs and kemps out of the fleece than would the Bengal sheep.

To improve the quality and quantity of Bengal wool, I will mention a few principal methods of treatment necessary for this purpose, for part of which there is some evidence of its having been successful in India as well as other countries.

1st. Pasturage.—I have spoken of the water as being hard: this seems to point out that land pasturage over Bengal is of a calcic or lime character,\* and would undoubtedly not only account for hardness of water, but the pasturage thereof must contain in its grasses, herbs and trees and vegetation generally a large proportion of calcium, therefore the food upon which the sheep live and graze must also contain lime, and we see as a natural consequence that the wool they grow is dry, natureless, stunted, and irregular in staple, harsh in feeling, coarse, brittle, inelastic, whilst the yolk of the fibre is scanty and poor.

I would therefore suggest that the water which sheep drink should be tested, and if found to be hard should be treated chemically with a small sprinkling of oxalic acid,† viz. 1 oz. of the salt of this acid to 500 gallons of water, to deposit the lime of waters drunk by the sheep. The washing water for sheep should also have any lime that exists in it deposited before being used.

Quantity and quality of wool, which is distinguished from the fleshy parts of sheep by the large proportion of sulphur which it contains, is very much affected by the soil upon which the food grows: some soils growing poor grasses keep the sheep grazing thereon lean, and whilst giving finest of wool yields only 1½lbs., but a merino fed upon good pasturage, of chemically treated soils, often gives a fleece weighing 10lbs. to 11lbs. It is calculated that 30,000,000 sheep yield on an average 111,000,000lbs. wool, or about 4lbs of wool to the fleece. This quantity of wool contains 5,000,000lbs. of sulphur, which is of course all extracted from the soil.

If we suppose this sulphur to exist in, and to be extracted from, the soil in the form of gypsum, then the plants which the sheep live upon must take out from the soil to produce the wool alone 30,000,000lbs. or 13,000 tons of gypsum. Though the proportion of this gypsum lost by any one sheep farm in a year is comparatively small, yet it is reasonable to believe that by the long growth of wool on land to which nothing is even added, either by art or from natural sources, those grasses must gradually cease to grow in which sulphur most largely abounds, and which therefore form growth of wool—in other words, the

\* This is doubtful.

† Impracticable, and if practicable, would be dangerous, oxalic acid being a poison.

produce of wools likely to diminish by lapse of time where sulphur has for centuries been yearly carried off the land: and again the produce is likely to be increased in amount when such land is dressed with gypsum or other manures in which sulphur naturally exists.\* This, I believe, could be obtained in a very cheap form from the gas works of the country; some of their waste products containing sulphur in a large degree, such, for instance, as the sulphate of lime, a waste product of these works. There probably also is a natural form of sulphur found in connection with the rock salt districts, as geologically it exists in some form in the same stratification. Iron pyrites also contains sulphur in large proportions. Though not acquainted with all the natural products of India, I am quite sure products could be obtained sufficiently low in rates for manuring purposes. No bones of animals ought to leave India, for its land sadly needs it, being also a valuable manure for sheep farms, in addition to the various dungs of animals of all descriptions.

**Breeding.**

Next, I would suggest as of first importance also that a definite system of cross-breeding should be sustained with rams obtained from pure blood stock. There is, I believe, some difference of opinion amongst flock-owners as to what countries the best rams are obtainable from; but experience has always proved this fact, that the merino ram, whether of European, South African, or Australian breed, is decidedly the best for crossing with Indian sheep.

As success has been obtained by crossing the merino rams of each one of these aforementioned countries with Indian sheep, the aim of flock-owners should be to obtain wools for clothing purposes of a finer quality. This could be accomplished, and some six different qualities be obtained, which would work in combination or serve the special direct purposes of manufacture in general. With this end in view, I would suggest—

**Crosses.**

- 1st.—For producing finest fibres of a felty character, a cross of one South African merino ram, pure bred, with 100 Bengal ewes.
- 2nd.—For producing uniformity of lengths of staple, medium fineness, soundness, and elasticity, a cross of an English merino ram, pure bred, with 100 Bengal ewes.
- 3rd.—For medium qualities and characteristics ranging between Nos. 1 and 2, a cross of one Australian merino ram, pure bred, with 100 Bengal ewes.
- 4th.—For improvement from Indian stock rams for coarser wools and cloths, a cross with North-West part-bred merino rams, the result of crossings with European stock in years gone by. This crossing would give wool closely approaching the Agra wool, or wool used largely by Cawnpore and Dhariwal mills, and also exported largely to Europe.
- 5th.—I would advise a trial being made of crossing some Thibet ewes with an English merino ram, pure bred, and the rams obtained from this crossing should then be crossed with Bengal ewes. The effect, I believe, would be that a Bengal wool would be produced, having a character distinctly its own, and a flannel and clothing wool also suitable for hosiery would be produced of an excellent character and high value.
- 6th.—To produce combing wool of very long fine staple, soft in form, in length, soundness, and elasticity of a high value, for European combing machinery, would, I believe, be obtained by crossing Australian fine merino ewes, pure bred, with Thibet rams.

In connection with this matter of breeding are several important factors, such as the ascertaining of defects, pursuing a good system of selection or rejection and sub-division of sheep into classes. These should be done regularly by a yearly inspection, so as to form correct opinion of the nature and properties of the fleece borne by each, in order that the defective sheep may be removed and never again allowed to mix with those drafted and set apart for the production of fine wool.

White-woolled sheep, free from grey or black, should be kept separate.

Black-woolled sheep, free from white or grey, should be kept separate; also the rams of same should be similarly kept separate with their flocks, and not allowed to mix promiscuously. All parti-coloured sheep should be extirpated.

Kemp and hairy wool is very objectionable. Bengal wool is very kempy, that is, full of white hairy coarse bristles or hairs which protrude and will not dye or become amenable to any process or operation of improvement. This, however, is the result of deterioration in all its forms, and can only be eradicated by the carrying out of all such operations as are being suggested herein. If only a few kemps be seen in wool, it lowers its value immensely for clothing purposes. Good feeding, protection and breeding will eradicate these objectionable features. Thus it is that changes in the fleeces of sheep are wrought by propagation or crossing of breeds possessing those qualities which it is wished to acquire.

Lord Western, whose interest in the growth and improvement of wool production years ago, records the effect of a union he made with one of his lordship's own merino tups and some East Indian ewes, on which a striking proof was exhibited of the influence of the male upon the progeny, the latter having a fleece infinitely superior to that of the dams. The ram was kept highly fed, and consequently their fleeces became long in fibre, heavy in weight, the breed of the ram being the merino, which is considered the best from which foreign stock can be improved. Purity of blood should be unquestionable, and the result will then be a stronger stamina capable of standing changes of climate better.

It is, however, impossible, in the brief space of a report like this, to enter more fully into the minute details of sheep husbandry. I subjoin, however, a few extracts obtained from my library, which may be of interest in showing what has been done in the past in the

\* Gypsum would no doubt be good manure for pasture land, but *beriswallaks* are not likely to use it.

other presidencies of India, and which I consider somewhat confirms by facts some of the suggestions herein made.

Before concluding I might remark, from my present workings of the North-West of India wools, as compared with Bengal wools, there is so decided a superiority of the North-West wools that I am obliged to use a large proportion to obtain more satisfaction from those who purchase our blankets and cloths, and I have no doubt in my own mind that this same superiority has been given to it by some such early action in the matter of breeding, &c., having been taken by the Government of the North-West of India in the years gone by.

I am also convinced that Bengal could so improve its wools, and if the system of cross-breeding was kept up continuously, might eventually supersede in character the wools of those provinces. I judge also from what I see of the North-West wools, at present there are signs in their wools now that the system of cross-breeding is not being kept up by continuous importations of fresh stock, a very desirable element to sustain and further improve their wools: this I would suggest Bengal should attend to continuously.

ARTHUR ORRAH,

Deputy Supdt., Central Jail, Bhagalpore.

The 15th June 1887.

#### Extracts.

EARLY efforts to improve the country breed by merino of imported stock.

Early efforts.

The Cape-bred merino rams have been found to answer for this country, India, better than those imported from England, so much so that Government have determined henceforth to import only from the Cape as appear from the memorandum from Mr. Secretary Reid in 1835.

Government attention.

The attention of Government was first directed at the end of 1835 to the improvement of the wool and sheep of Western India. From the information furnished to Government, it appears that many parts of the Deccan and Guzerat are very well adapted to sheep pasture, and that, if the wool of this country, which, though very inferior in kind, finds a ready market, were improved by importing superior sheep so as to improve the fleece of the country breed, the natives would be greatly benefitted. Measures were accordingly adopted by Government to import sheep of a superior breed, and in 1837 a supply of rams and ewes, about 106 in number, of the Southdown merino breed, were sent out at a very heavy expense by the Honourable Court under the care of an experienced English shepherd. About 60 rams and ewes of the Saxon and merino breed were obtained from the Cape of Good Hope, where the breed is very fine.

A large supply of sheep (600) was also obtained through the agency of Colonel Pottonger and Captain Burne from Afghanistan and Cabul, and the pastoral districts in the vicinity of the Indus. A small number of sheep was also brought from Bussorah, as it is well known that the breed in that part of the country yields a very fine lengthy fleece. The sheep obtained from England, the Cape and Cabul, have been distributed about the country, and many of them are entrusted to the care of gentlemen who understand the management of this animal, and take an interest in the undertaking. A sheep farm was established at Ahmednugger, and another at the fort of Jooner, where the climate is good and pasturage plentiful, and these farms were entrusted to Mr. J. Webb of the Civil Service, who had a good practical acquaintance with the management of sheep. The natives in the interior, who breed sheep, are supplied from these farms with half-bred lambs and were allowed to send their ewes to the Government. From the experience gained by these practicalists, it was found that the Cape-bred merino sheep were far superior to those bred in England and better adapted to the Indian climate, the English sheep being too large for the slight made ewes of this country, and are moreover greatly affected by the change in the climate. The Cape sheep are less affected by the climate, and not so subject to disease as those of this country or of England, while their lambs are much stronger than those produced from the English sheep. It was therefore determined not to obtain any more supplies from England.

Of this enterprise on the part of the Government were noted by Sir George Arthur,

Results recorded.

who brought to the subject a valuable fund of information which he had acquired during his previous administration in New South Wales, and thus early declared himself a decided patron and supporter of improvements in Indian wool. When visiting the Government sheep farms of Ahmednugger and Amrut Mahub, he inspected the flocks, and in a minute drawn up on the occasion, remarked that "an improvement in the breed of sheep, as regarded the views of Government, was not an object that at all had reference to profit, but one on which the authorities took the lead, as being the best means of interesting industrious natives in the experiment. Sir George suggested the advantages which would be derived from establishing a more definite system in breeding in the first place by carefully ascertaining the defect on the indigenous race, and this done, by steadily pursuing a good system of rejection and crossing. He at the same time adopted a fresh mode of pasturing and sub-division of the sheep in such a manner that no flock should exceed 700 head, and recommended that, in order to encourage the natives to try the experiment, a given number of the improved sheep should be transferred to the native shepherds under an agreement to provide pasture and attendance, receiving in payment one-third of the produce, and so on.

Again, about a year later, Sir George Arthur having occasion to visit Alleghoom when the Government flock had been collected by a previous arrangement with the Superintendent, again inspected the stock, and in a minute written by himself, and dated 27th September 1843, he expressed himself much pleased with the manifest improvements in the condition of the sheep, which was such as showed the care and attention paid to them by the Superintendent, and the general appearance of the flock being greatly bettered by the removal of parti-coloured sheep, recommending at the same time that no relaxation in this system should be allowed, and urging that it would be proper in the next report from the farm to have the sale price of the wool compared with the ordinary country sheep distinctly noted. Sir George Arthur observed that in order to ensure success it would be necessary annually to import a fresh stock of merino rams till the improved stock had thoroughly superseded the country one on the farm.

Captain Henderson, who acquired much information on the subject as a sheep-farmer at the Cape in 1836, submitted to the Government of Bombay a paper of instruction on the management of merino sheep. In this treatise the Captain states that on rearing these animals the diseases in India most to be guarded against are dysentery and mange. As a precaution against the first, he says that dry pasturage is most essential, and in order to prevent the mange, that great attention should be paid to the cleanliness of the sheep. A Patna ewe crossed with a Southdown ram was tried in Calcutta by a gentleman who had had considerable experience in the growth and cleaning of the staple in the Australian Colonies, and he entered among the proceedings of the Agri-Horticultural Society of India the following result:—The wool is decidedly of a very good quality for the first cross, uniting length of staple and softness with great uniformity of quality throughout the fleece, which is much desirable. The quality from its coarseness will not admit of being used for other than blankets and very coarse cloth. Its market value was in the Home market 16d per pound. He further states that Mr. Rickets, the owner, had acted correctly in having crossed Patna with the Southdown, and should strongly recommend him to carry out the improvement by crossing the production with the merino, as he only requires now the texture, he having procured the length of staple with crosses. India can in my opinion, if sufficient care were displayed in the crosses, produce as good a sample of wool as any of Her Majesty's dominions from the luxuriousness of feed and the temperature of the climate, as texture with length of staple is all that is necessary.

Colonel Hazlewood, in writing to Captain Jacob, of Bombay Artillery, dated Bangalore, 1837, says:—I have just received six more Saxon rams from the ruby flock of Sydney. Mr. Sullivan brought out two merino rams and two ewes, and I have seen the effect of crossing by these and also by Southdown rams imported by Sir William Rumbold on the Neilgherries. Even the red hairy sheep of India become Southdown in size and wool in the second generation, and the white-wooled sheep of India become merino and Southdown in size and wool after one crossing. I have shown Mr. Sullivan's merinos which have been two years in India after twice washing and shearing the day after the ewes gave five or four and a half pounds each; in fineness, length of staple, elasticity and oiliness, equal to any I ever saw in Tasmania, where 2½ lbs. is the utmost ever got from a ewe of the merino kind.

*Further report by Mr. Orrah.*

SINCE writing my report upon the wools of Bengal, I have received, by mail, a copy of the weekly paper called the Wool and Textile Fabrics, which contains a report made by Mr. F. H. Bowman, D.S.C., F.R.S., &c., an authority in England on technical matters upon Indian wools. I have therefore had a copy of the same written out, which I send to you with this letter.

## COLONIAL WOOL

### IV.

*Copy from the Wool Textile Fabrics Weekly of 14th May 1887.*

WE take the following paper on colonial wools (by Mr. F. H. Bowman, D.S.C., F.R.S. &c., President of the Society of Dyers and Colourists) from the "Reports on the Colonial sections of the Colonial and Indian Exhibition," issued under the supervision of the Council of the Society of Arts, and edited by the Secretary to the Society, Mr. H. Trueman Wood, M.A.

The whole of the wools exhibited from India, except one or two incidental specimens were confined to those contained in a case within the Economic Court. In speaking of them as wools, the term is used in its widest sense, so as to include all goat and sheep fibres. The samples were 23 in number, and no reference appears to be made to them specially in the official catalogue. Few of these samples were named specifically, the largest portion being only distinguished by a number or letter without label. In character they covered a wide range of quality from the very coarsest goat's hair down to the finest wool or pure pashmina, which is the undergrowth of the Thibetan shawl-goat, as well as the native Indian wools, of which there are at least eight varieties. These wools are interesting, as they contain almost every variation in the individual fibres, which is to be found in all other races of sheep. Most of the hairs and wools exhibited in this section, however, are of comparatively small interest to European manufacturers, because the export is small and the quality such that they can only be used for the coarsest class of goods, and when worked by machinery

they require to be mixed with other wools. They are, however, of considerable importance in India as forming the staple of the woollen industry in the mountain districts, where the great bulk of the woollen goods are worn. Many of them are singular mixtures of coarse and fine fibres; so much so that those who are only accustomed to the regular wools of cultivated sheep can hardly conceive it possible that many of the samples could be obtained from a single animal. The finest specimen in quality and regularity of fibre, and in all characteristics which are typical of the best wools, can scarcely be surpassed; but by far the largest numbers of samples are defaced by irregularities in the structure and quality of the fibre, which are only to be found in the most neglected sheep in the United Kingdom and the Colonies. To enumerate all the defects which are found in many of these wools, when compared with the highest standards attainable in the Australasian Colonies, would be to mention all the defects to be found in any wool, and indeed many of the samples probably resemble the covering of the primitive sheep, from which all the truly domesticated varieties are originally derived. Without further knowledge in regard to the place of origin, a mere classification of these wools would be of little service, and especially since the wools of India scarcely come within the scope of this report, and will probably receive attention elsewhere.

As already remarked, the wide range over which the growth of the wool extended, and the difference in climate and other conditions to which the sheep in the various colonies were subjected, rendered the present opportunity most valuable in making a comparative examination of the different wools. This survey brought home to the eye most forcibly the very wide range of conditions under which the sheep can be cultivated, and the high state of perfection to which it can attain in almost every part of the world, when due attention is paid to the culture and breed. It seems to indicate that special cases of sheep are more adapted to certain regions of the earth's surface than others, and that in many cases the environment of the sheep tends in the course of generations, under careful management, to produce a special character which becomes permanent, and may be retained as a pure breed. It also shows that certain characteristics of the wool, such as lustre in the long-woolled breeds, can only be retained permanently by the re-introduction of fresh blood from time to time; at any rate, in all the regions which lie nearest to the equator, a certain degree of equality of temperature and atmospheric moisture being necessary for its permanence. Thus it appears to be retained longest in New Zealand and the southern coast of the Australian Continent. The nature of the herbage also affects the quality of the wool in a marked degree, and probably one of the chief reasons why the Australian merinos deteriorate when introduced into the Cape Colony is because the herbage is not fitted for the highest development of the sheep. One very marked lesson of the Exhibition is the fact that all the best wools exhibited show that, whatever tends to improve the character of the sheep in any one direction, re-acts all round in a benefit to all the other characteristics. The same conditions which tend to increase the size of the sheep cause the wool to be better nourished, firmer and more tenacious, without injury to the best qualities of the fibre, provided care is taken in the proper selection and purity of breed in the sheep. The question of difference in the lustre of the wool is an important one, and opens a wide field for investigation. It has been already noticed that the Victorian wools stand foremost in this respect amongst the merinos. When the fibres are examined by a microscope, it appears that, while the fibres are equally fine when compared, say, with those from New South Wales or South Australia, the development of the individual scales on the surface is larger, and they present fewer scales in the linear inch. On the other hand, as the fineness in diameter is maintained in the less lustrous fibres, and the development of the scales is greater in number, and this gives a greater softness and pliability to the individual fibres with a large degree of serration, and therefore a higher felting power. It is for this reason probably that the wools of New South Wales are more adapted for fine clothing trade than the more lustrous Victorian, or the coarser fibre wools of South Australia. The judicious introduction of the best characters of certain classes of sheep into other breeds, as is clearly shown, may induce a permanent improvement of the new breed only under certain conditions, and it seems now beyond a doubt that it will always be necessary for the farmer to discover the special class for which his own climate and surroundings are the most advantageous, if he is to attain the highest perfection in the production of wool. Those who are growers of wool must remember that every year the demand for quality in the raw material is greater, and those only who aim at securing all the best properties which wool can possess will secure the markets of the future.

In several instances "kemps" were found associated with the wool. These kemps are fibres, usually shorter and thicker than the others, in which all traces of wool structure are absent. They are brittle, solid, and ivory like. This is the sure indication of want of trueness in breed, and is most objectionable, as these kempy fibres will neither felt nor take any dye. They cannot be removed from the fleece by any process, except picking them out, and hence they injure the quality of any goods for which the wool may be used. The defect was specially noticed in some of the cross-breeds with the long-woolled sheep, and where it exists the value of the wool is most seriously deteriorated.

Nothing can compensate for the want of condition in the wool when sheep are neglected, and it cannot be too strongly urged that every endeavour should be made to maintain in the bulk the high standard presented in the samples exhibited. Without this care and due attention to classification, the results of good breeding and cultivation may all be lost, and rendered commercially unremunerative.



An endeavour was made in preparing this report by each specimen exhibited in relation to the geographical position in which it was grown, to determine, if possible, whether any general law with regard to characteristic properties could be drawn from this relation, but the differences in the breed of sheep, and in the care and attention bestowed on the wool, rendered any sound deduction impossible, and it therefore appears probable the selection of breed, good pasturage and attention, have far more influence than mere geographical position within the range of the temperate zone.

In conclusion, the author of this report begs to record his high sense of the uniform kindness and courtesy which he experienced from all the officials in charge of the various colonial exhibits, and from the Executive of the Exhibition. This was all the more appreciated, as it involved on their part, from the number of samples and variety of information required, a large amount of labour and time.

Dated Calcutta, the 28th July 1887.

From—S. E. J. CLARKE, Esq., Secretary, Bengal Chamber of Commerce,

To—M. FINUCANE, Esq., C.S.

I HAVE only received your letter of the 21st and 27th instant, the former handing me two samples of ram's wool and ewe's wool from Thibet, of which you wish to know the value in Calcutta. The samples have been examined by the Committee of the Chamber of Commerce, who direct me to send you the enclosed copies of letters written by Messrs. Peel, Jacob and Company of this city, with reference to similar descriptions of wool sent to them from Darjeeling in the beginning of 1884. Such wool, say 30 to 40 maunds, was then valued in Calcutta at Rs. 18 per maund. It was, however, subsequently sold to the Elgin Mills Company of Cawnpore for Rs. 25 per maund.

Through the courtesy of Mr. J. L. Mackay, of Messrs. Mackinnon, Mackenzie and Company, I am able to supplement the information given by Messrs. Peel, Jacob and Company by a London Valuation Report dated 18th May of the current year, on some samples of Thibetan wool sent home by Mr. Mackay's firm. The valuation given is from 6½d. to 7d. per pound at the then current market rates. The *Economist* gives the price, January—June 1884, of unwashed wool at 7d. per pound. The value of wool similar to the samples you have now sent would be probably at that time 5d. to 5½d. per pound. The higher quotation given by Messrs. Buxton, Ronald and Company in May last is owing to the rise in the price of wool which has taken place during the last three years.

Thibetan wool is not well known in this market, so that it is difficult to say what the demand for it would be.

The Committee of the Chamber of Commerce desire me to say that they are of opinion it would be advisable to send the samples to the Elgin Mills Company at Cawnpore, and also to the Egerton Woollen Mills Company, Limited, at Dharwal, Umritsur, from both of which concerns you would be likely to receive valuable and practical reports as to the quality of the wool and its suitability to their requirements. They would probably also be in a position to say what place it would take in the home market.

In conclusion, I am to say that, if you desire it, Mr. Mackay will be happy to send the samples home for valuation in London. An early reply to this suggestion will oblige.

*Report on Wool Samples referred to in Mr. Clarke's letter.*

WE have two samples of wool from you, and value the first received at 5d. per pound, and that last received at 5½d. per pound. The wool is unwashed and unassorted; it is well grown and is of a sound and healthy character. Such wool would sell in Europe in any quantity. Of similar wool from Bombay, Kurrachee, and Beyrout, we sell 50 million pounds annually. There is always a market for such wool at a price; at present the value of all carpet wools (this is carpet wool) is remarkably low. Please refer to the figures in the enclosed circulars about East India wool, which will govern this wool also. Those figures are for washed wool, assorted into various colours and qualities; and it might be advisable to trace a small lot of the wool you have in view in this manner, and ship it to test this market. At the same time, we would certainly suggest that *five* or *ten* bales should be shipped in the natural state, and then we could report fully, and you would be prepared to act in the event of prices rising. It appears to us that the subject is one of great importance, for it is evident that the wool shown by your samples comes from a country perfectly adapted for the growth of a sound and healthy wool.

In Bombay and Kurrachee it is customary to assort and wash the wool before it is shipped, and this plan commends itself to our buyers. We send you samples of a parcel of Candahar wool which was worth 5½d. per pound in its original state as clipped from the sheep, and we give you the result in the assorted and marked washed state of this wool. We do not, however, know what the wool weighed before it was washed.

|               | lbs. |     |     |                 | lbs. |
|---------------|------|-----|-----|-----------------|------|
| No. 1.—12,000 | ...  | ... | ... | 1st white value | 11d. |
| " 2.—1,700    | ...  | ... | ... | 2nd " "         | 7½   |
| " 3.—6,000    | ...  | ... | ... | Yellow " "      | 9    |
| " 4.—2,500    | ...  | ... | ... | " pieces " "    | 6½   |
| " 5.—1,200    | ...  | ... | ... | Grey " "        | 5½   |

24, Bassinghall Street, London, the 18th May 1887.

From—Messrs. BURTON, RONALD AND COMPANY.

To—Messrs. DUNCAN, MACNEILL AND COMPANY.

With reference to the sample of Thibet wool submitted to us this day for valuation, we beg to say we consider the wool worth from 6½ to 7d. per pound at present market values.

In accordance with your instructions, we have retained a portion of your sample as reference, and now return the remainder herewith.

Calcutta, the 14th January 1884

From—Messrs. PEEL, JACOB AND COMPANY,

To—The Secy. to the Bengal Chamber of Commerce.

The sample of wool referred to in your letter of 8th instant is to hand, and we will endeavour to send you a valuation for it in a few days.

Our Liverpool correspondents, to whom we sent a sample of your wool, write us as follows:—

“We find the present value is about 5d. for unwashed, and say 9d. per pound if washed. It is recommended to be washed before shipment, and if in addition the colours be assorted, each sort being of course packed separately, higher prices would be obtained. We understand there is usually a good demand for this article.”

These particulars may be interesting to you, even if they do not induce you to send a trial shipment to England.

Calcutta, the 25th January 1884.

From—Messrs. PEEL, JACOB AND COMPANY,

To—The Secy. to the Bengal Chamber of Commerce.

We much regret we have been unable to send you any report on the last sample of wool sent us, as we have not received any communication so far from the Elgin Mills, Cawnpore, to whom we sent it.

We have now the pleasure to enclose a report on your earlier samples, which we have received from our home correspondents, who have gone to some trouble in the matter, and we have sent you by post the five samples referred to therein. We enclose, for your further information, a Liverpool Wool Circular, details in which may be of interest to you. We would ask your careful consideration of the report, and would recommend you to make a trial shipment as suggested, with the view of commencing a regular business.

Dated Calcutta, the 30th July 1887.

From—The Secretary to the Agri-Horticultural Society of India,

To—The Director of the Agricultural Department, Bengal.

I AM now in a position to reply to your demi-official No. 284 of the 21st instant, regarding two samples of wool from Thibet, ram and ewe.

As mentioned in my previous note on this subject, there is very little trade done in wool in Calcutta, and the dealers in Thibetan wool amount to probably less than half a dozen in number. I have obtained the opinion of two of these traders on the samples. They consider they are good raw wools, but are very dirty, and their value would depend on the washing and cleaning they should receive before being put upon the market. In the present state the wool would be unsaleable here. The final market for wool of good quality is Amritsar, and the price there for staple of the quality of the samples would be from Re. 4 to Re. 5 per seer according to the cleaning to which it has been subjected; it would there meet in competition Australian and European wools which are imported *via* Bombay. Another market would be found at the mills in the North-Western Provinces, but prices are not good there, as best qualities of wool are not sought after.

Of the two samples the ewe's wool is the better; the brown spots in it would, however, probably depreciate its value. From an European point of view the samples would be much improved were the two qualities of wool of which they are each composed separated. The outer wool of the sheep is wiry and harsh as compared to the soft inner fleece which is the more valuable. Should you desire it, I can obtain a more precise valuation from Bombay in a few days.



## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 17th September 1887.

| No.  | District and date of return. | Rainfall at Sudder Station in inches.  | Character of the weather, state and prospects of the crops, and state of health at date.  |   |
|--|------------------------------|--|---|---|
| BENGAL.  |                              |  |   |   |
| Western Districts.   |                              |  |   |   |
| Burdwan Divn.  | 1 Burdwan, Sept. 17, '87     | 2.64   | Weather—hot; dry during latter half of week. Rain wanted for <i>amun</i> rice throughout most of the district, and badly in Cutwa, where price has risen somewhat; elsewhere prices stationary. <i>Aus</i> harvest approaching completion with fair outturn. Cholera decreasing; fever prevalent. |   |
|  | Culna ...                    | 3.34   |   |   |
|  | Cutwa ...                    | 1.42   |   |   |
|  | Raneegunge ...               | 1.24   |   |   |
|  | 2 Bankoora „ 17, '87         | 2.41   |   |   |
|  | Bishenpur ...                | 3.00   |   |   |
|  | 3 Boerbhoom „ 17, '87        | 1.90   |   |   |
|  | Rampur Haut ...              | 1.90   |   |   |
|  | 4 Midnapur „ 17, '87         | 2.96   |   |   |
|  | 5 Hooghly „ 17, „            | 2.02   |   |   |
| Jehanabad ...  | 1.80                         |  |   |   |
| Serampur ...   | 1.93                         |  |   |   |
| Howrah „ 17, '87   | 0.89                         | Weather—seasonable. <i>Aus</i> and jute are being harvested. Prospects of <i>amun</i> and sugarcane promising.   |   |   |
| Central Districts.   |                              |  |   |   |
| Presidency Divn.   | 6 24-Pargahs, Sept. 17, '87  | 2.56   | Weather—seasonable; cloudy and hot with occasional showers. Harvesting of <i>aus</i> nearly complete. Jute is being cut. Prospects of sugarcane favourable, but more rain still wanted in places for <i>amun</i> crop. Public health generally good.  |   |
|  | 7 Nuddea „ 17, „             | 2.33   |   |   |
|  | Kushtea ...                  | 3.47   |   |   |
|  | Meherpur ...                 | 0.34   |   |   |
|  | Chudanga ...                 | 1.35   |   |   |
|  | Ranaghat ...                 | 2.78   |   |   |
|  | 8 Khoulna „ 10, '87          | 3.60   |   |   |
|  | 9 Jessore „ 17, „            | 2.39   |   |   |
|  | Jhenidah ...                 | 1.72   |   |   |
|  | Magurah ...                  | 1.01   |   |   |
| Narail ...   | 1.04                         |  |   |   |
| Bongong ...  | 7.2                          |  |   |   |
| 10 Moorsheadabad „ 17, '87   | 2.11                         | Good showers; weather tolerably cool. Harvesting of <i>aus</i> nearly over. Rain of the week very beneficial to <i>amun</i> . In Magura sub-division some damage caused to <i>malbhoy dhan</i> , which covers a small area, by sudden rise of water. Public health good. |   |   |
| Lalbagh ...  | 3.13                         |  |   |   |
| 11 Dinagepur „ 16, '87   | 0.71                         |  |   |   |
| Thakurgaon ...   | 0.92                         |  |   |   |
| 12 Rajshahye „ 17, '87   | 1.74                         |  |   |   |
| Natore ...   | 0.70                         |  |   |   |
| 13 Rangpur „ 17, „   | 0.25                         |  |   |   |
| Nilphamari ...   | Nil                          |  |   |   |
| Gaibanda ...   | Nil                          |  |   |   |
| 14 Bogra „ 17, '87   | 0.53                         |  |   |   |
| Sherpur ...  | 0.22                         |  |   |   |
| Nowkhilla ...  | 1.32                         |  |   |   |
| 15 Pubna „ 17, '87   | 4.32                         | Weather—very hot. Rain at intervals. Harvesting of <i>bhadoi</i> paddy almost over. Prospects of <i>amun</i> good. Sowing of <i>til</i> and <i>kalai</i> commenced. Sugarcane and jute progressing. Public health good.  |   |   |
| Serajgunge ...   | 0.44                         |  |   |   |
| 16 Darjeeling „ 17, '87  | 0.44                         |  |   |   |
| 17 Julpigoree „ 17, „  | 0.64                         |  |   |   |
| Eastern Districts.   |                              |  |   |   |
| Dacca Division.  | 18 Dacca, Sept. 17, '87      |  | 1.11  | Weather—hot with occasional showers. Harvesting of jute still continues; outturn good. <i>Arini</i> paddy thriving. Prospects of crops and public health good. Rivers rising. |
|  | Manickgunge ...              |  | 0.67  |   |
|  | Munshigunge ...              |  | 0.22  |   |
|  | Naraingunge ...              |  | 1.47  |   |
|  | 19 Furroedpur „ 17, '87      |  | 2.00  |   |
|  | Goalundo ...                 | Nil  |   |   |
|  | Madaripur ...                | 1.59   |   |   |
|  | 20 Backergunge „ 15, '87     | 2.83   |   |   |
|  | Mymensingh „ 16, '87         | 3.59   |   |   |
|  | Jamalpur ...                 | 0.15   |   |   |
| Kishoregunge ...   | 0.09                         |  |   |   |
| Attea ...  | 0.76                         |  |   |   |
| Netrokona ...  | 1.50                         | Weather—seasonable. Cultivation of <i>amun</i> still going on. Prospects of crops good. More rain wanted. General health good.   |   |   |
| Weather—very hot. 3.21 inches of rain on 15th. Prospects of crops continue favourable. |                              |  |   |   |

| No                                 | District and date of return      | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|------------------------------------|----------------------------------|---------------------------------------|--|
| <b>BENGAL—contd.</b>               |                                  |                                       |  |
| <b>Eastern Districts—contd.</b>    |                                  |                                       |  |
| CHITTAGONG DIV.                    | 22 Chittagong, Sept. 20, '87     | 1.94                                  | Weather—seasonable. <i>Amra</i> thriving. Cholera reported; public health otherwise good. Prices stationary.   |
|                                    | 23 Noakholly „ 16 „              | 2.42                                  | Weather—generally sultry; latterly seasonable. Transplantation of <i>amra</i> all but completed. Prospects fair. A few heavy showers at intervals will be very welcome. The Sub-divisional Officer writes “prospects so far good.”   |
|                                    | 24 Tipperah „ 15 „               | 0.68                                  | Weather—not quite seasonable, because not enough rain. Rain is much wanted and a great deal of it. Paddy fields on comparatively high land are cracking, and the paddy turning yellow. In many fields of this sort transplantation is not feasible. Unless heavy rain falls soon the outlook will be very bad. |
|                                    | 25 Chittagong Hill Tracts „ 13 „ | 1.24                                  | Weather—sunshiny and excessively hot at noon. Occasional fall of rain throughout the week. Harvesting of jum paddy commenced. Cotton doing well. Transplanting of paddy in low land nearly over.   |
|                                    | Hill Tipperah „ 14 „             | 0.85                                  | Weather—hot; rain much wanted. <i>Amra</i> paddy still being transplanted. Sugar-cane and jum crops doing well. Public health good.  |
| <b>BEHAR.</b>                      |                                  |                                       |  |
| PATNA DIV.                         | 26 Patna Sept. 17, '87           | 0.16                                  | Weather—hot with occasional showers. Reaping of <i>bhadoi</i> crops still going on. Rice transplantation nearly over. More rain required for a good crop of rice. Cholera still reported in Behar and a few cases in Dinapur; public health otherwise good.  |
|                                    | 27 Gya „ 17 „                    | 0.59                                  | Weather—cloudy. <i>Bhadoi</i> being harvested. Paddy suffering for want of rain. Cholera reported from some quarters. Fever also reported.   |
|                                    | 28 Shahabad „ 17 „               | 0.68                                  | Weather—hot, but occasionally cloudy. Paddy transplantation finished. <i>Bhadoi</i> crops being harvested. Prospects hopeful. Public health generally good. Prices stationary.   |
|                                    | 29 Durbhunga „ 17 „              | 0.71                                  | Weather—sultry and occasionally cloudy. <i>Bhadoi</i> harvest still in progress. Prospects of rice very promising. Transplantation of tobacco commenced. Price of common rice averages 19 seers per rupee. Public health generally good.   |
|                                    | 30 Mozufferpur „ 17 „            | 0.48                                  | Weather—very variable, but little rain has fallen, and more wanted. <i>Bhadoi</i> crops are being harvested. Prospects of all crops excellent. Sporadic cholera exists.  |
| PRESIDENCY DIV.                    | 31 Saran „ 17 „                  | 0.08                                  | Weather—days hot, mornings cool. Prospects of crops continue favourable. Cholera abating; otherwise public health fair.  |
|                                    | 32 Chumnapur „ 17 „              | 0.28                                  | Weather—cloudy with easterly wind. Prospects of <i>bhadoi</i> good. Harvesting of <i>makai</i> commenced. <i>Aghani</i> crops look promising. Prices stationary. Public health good.   |
|                                    | 33 Monghyr „ 17 „                | 0.62                                  | Weather—hot and sultry. Prospects of winter rice continue promising, but more rain wanted. Harvesting of <i>bhadoi</i> crops nearly completed. Some cholera still reported from thanas Tegra and Khuruckpur.   |
|                                    | 34 Bhagulpur „ 17 „              | 0.84                                  | Weather—bright and sultry till 15th. State of all crops good, and prospects, now the rain has begun again, are very favourable. <i>Bhadoi</i> harvest in north continues.  |
|                                    | 35 Purneah „ 17 „                | 0.90                                  | Weather—hot; latterly heavy showers with high wind. All crops promise well.  |
| ORISSA DIV.                        | 36 Maldah „ 17 „                 | 1.32                                  | Weather—seasonable. <i>Bhadoi</i> harvest still going on in some places. Winter rice doing well. <i>Kalai</i> is being sown on the <i>dearaks</i> . Common rice 21 seers per rupee. Fever rather prevalent.  |
|                                    | 37 Sonthal Pergas „ 17 „         | 1.62                                  | Partial heavy rain. Weather growing cooler. State and prospects of crops fair. Slight damage done by Ganges floods. Fever in the flooded tracts.   |
|                                    | 38 Cuttack „ „                   | .....                                 | Report not received.   |
|                                    | 39 Pooree „ 15 „                 | 2.22                                  | Weather—cloudy and rainy. Prospects of <i>sarad</i> rice crop in Chilka tracts bad; in other places weeding in progress and prospects fair. Common rice 23 seers per rupee in Sudder sub-division and 20 seers 4 chittacks in Khooria sub-division. Public health good.  |
|                                    | 40 Balasore „ 16 „               | 3.36                                  | Weather—seasonable. Weeding of <i>sarad</i> crop advancing. Reaping of <i>biati</i> paddy commenced. Prospects of crops good. Rain has fallen in parts of Balasore and Chandbally thanas, where it was wanted. Public health generally good.   |
| <b>CHOTA NAGPORE.</b>              |                                  |                                       |  |
| <b>South-West Frontier Agency.</b> |                                  |                                       |  |
| 41                                 | Hazaribagh, Sept. 16, '87        | 0.63                                  | Weather—occasionally cloudy. Prospects generally good, but rain still wanted in parts. <i>Bhadoi</i> being harvested; outturn below the average. A few cases of cholera reported; otherwise general health good. Cattle-disease in some villages.  |
| 42                                 | Lohardugga „ 17 „                | 4.26                                  | Weather—seasonable. Rain throughout the week. Prospects of crops favourable. Price of rice fluctuating and has a tendency to rise. Cholera still continues.  |
| 43                                 | Singbhoom „ 16 „                 | 1.85                                  | Weather—cloudy and cool. More rain required to secure crops. Prospects improving. Rain all over district except Khursawan and Seraikela. <i>Gora dhas</i> being reaped, and uplands being ploughed. General health good.   |
| 44                                 | Manbhoom „ 17 „                  | 4.08                                  | Good rain during the week; weather hot and stormy. The rain has done much good, and the prospects of the crops are now excellent.  |

Published for general information.

**PRICES-CURRENT (*RETAIL*) OF FOOD-GRAINS, FIREWOOD AND SALT IN THE  
DISTRICTS OF BENGAL DURING THE FORTNIGHT ENDING THE  
15<sup>TH</sup> SEPTEMBER 1887.**

**PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the**

| Number.            | DISTRICTS.        | QUANTITIES PER RUPEE IN |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                      |                        |                                    |
|--------------------|-------------------|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--------------------------------------|------------------------|------------------------------------|
|                    |                   | WHEAT.                  |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLU<br>(Sorghum Vulgare). |                        |                                    |
|                    |                   | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                      | Next preceding return. | Corresponding return of last year. |
| BENGAL.            |                   |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                      |                        |                                    |
| Western Districts. |                   |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                      |                        |                                    |
|                    |                   | S. Ch.                  | S. Ch.                 | S. Ch.                             | S. Ch.          | S. Ch.                 | S. Ch.                             | S. Ch.           | S. Ch.                 | S. Ch.                             | S. Ch.          | S. Ch.                 | S. Ch.                             | S. Ch.                               | S. Ch.                 | S. Ch.                             |
| 1                  | Burdwan ...       | 15 0                    | 15 0                   | 13 8                               | No sale         |                        |                                    | 17 4             | 17 0                   | 15 12                              | 24 0            | 23 2                   | 21 0                               | ...                                  | ..                     | ..                                 |
| 2                  | Bankura ...       | 15 0                    | 15 0                   | 19 0                               | 20 0            | 20 0                   | 23 0                               | 18 0             | 17 8                   | 19 8                               | 19 8            | 22 8                   | 23 8                               | ...                                  | ...                    | ...                                |
| 3                  | Barbhoom ...      | 16 8                    | 16 8                   | 20 0                               | ...             | ...                    | ...                                | 17 4             | 16 8                   | 16 0                               | 22 8            | 22 8                   | 20 0                               | ...                                  | ...                    | ...                                |
| 4                  | Midnapore ...     | 15 0                    | 15 0                   | 18 0                               | ...             | ...                    | ...                                | 18 8             | 19 0                   | 16 0                               | 24 0            | 23 0                   | 21 0                               | ...                                  | ..                     | ...                                |
| 5                  | Hooghly ..        | 14 0                    | 14 0                   | 15 0                               | ...             | ...                    | ...                                | 10 0             | 10 0                   | 10 0                               | 16 0            | 16 0                   | 16 0                               | ...                                  | ...                    | ..                                 |
|                    | Howrah ..         | Not available.          |                        |                                    | ...             | ...                    | ...                                | 13 5             | 13 4                   | 12 0                               | 18 8            | 18 8                   | 16 0                               | ...                                  | ...                    | ...                                |
| Central Districts. |                   |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                      |                        |                                    |
|                    | Calcutta*         | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...             | ...                    | ...                                | ...                                  | ...                    | ...                                |
| 6                  | 24-Pargunnahs ... | 14 0                    | 14 0                   | 13 8                               | 26 8            | 26 8                   | 20 0                               | 8 8              | 8 0                    | 8 0                                | 16 6            | 16 13                  | 14 8                               | ...                                  | ...                    | ...                                |
| 7                  | Nudda ...         | 16 6                    | 16 0                   | 16 0                               | 36 0            | 36 0                   | 26 5                               | 16 0             | 15 4                   | 14 8                               | 20 8            | 17 10                  | 16 0                               | ...                                  | ...                    | ...                                |
| 8                  | Khoolna ..        | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 17 0             | 17 0                   | 15 8                               | 20 0            | 20 0                   | 18 0                               | ...                                  | ...                    | ...                                |
| 9                  | Jessore ...       | 15 0                    | 15 4                   | 16 0                               | ...             | ...                    | ...                                | 16 0             | 16 0                   | 13 5                               | 23 0            | 22 0                   | 20 0                               | ...                                  | ..                     | ...                                |
| 10                 | Moorshedabad ...  | 16 0                    | 15 0                   | 17 0                               | ...             | ...                    | ...                                | 16 0             | 16 0                   | 13 4                               | 24 0            | 20 0                   | 20 0                               | ...                                  | ...                    | ...                                |
| 11                 | Dinapore ...      | 14 8                    | 12 8                   | 16 0                               | 22 8            | 22 8                   | 21 0                               | 16 0             | 15 8                   | 16 8                               | 20 8            | 19 8                   | 21 0                               | ...                                  | ...                    | ...                                |
| 12                 | Rajahmhye ...     | 18 0                    | 18 0                   | 19 8                               | 45 0            | 45 0                   | 32 0                               | 16 8             | 16 8                   | 16 8                               | 20 4            | 19 14                  | 19 8                               | ...                                  | ...                    | ...                                |
| 13                 | Rungpore ...      | 18 12                   | 18 12                  | 17 12                              | ...             | ...                    | ...                                | 14 8             | 14 8                   | 14 6                               | 20 0            | 20 6                   | 17 12                              | ...                                  | ...                    | ...                                |
| 14                 | Bogra ...         | 15 0                    | 17 4                   | 16 8                               | ...             | ...                    | ...                                | 18 0             | 16 12                  | 13 8                               | 24 0            | 22 8                   | 20 4                               | ...                                  | ...                    | ...                                |
| 15                 | Pubna ...         | 18 0                    | 18 6                   | 20 0                               | ...             | ...                    | ...                                | 8 0              | 8 0                    | 8 4                                | 22 8            | 22 8                   | 19 2                               | ...                                  | ...                    | ...                                |
| 16                 | Darjeeling ...    | ...                     | 9 0                    | 10 0                               | 13 0            | 13 0                   | 10 0                               | 5 0              | 5 0                    | 5 0                                | 12 0            | 13 0                   | 12 0                               | ...                                  | ...                    | ...                                |
| 17                 | Jalpigore ...     | 13 0                    | 12 0                   | 13 4                               | 20 0            | 20 0                   | 20 0                               | 13 0             | 13 0                   | 13 0                               | 18 0            | 20 0                   | 22 0                               | ...                                  | ...                    | ...                                |
| Eastern Districts. |                   |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                      |                        |                                    |
| 18                 | Dacca ...         | 14 8                    | 14 8                   | 14 0                               | 26 0            | 26 0                   | 26 0                               | 17 0             | 17 0                   | 14 0                               | 19 0            | 20 0                   | 16 0                               | ...                                  | ...                    | ...                                |
| 19                 | Farroadpore ...   | 14 0                    | 14 0                   | 21 8                               | 24 0            | 24 0                   | 25 0                               | 19 0             | 19 0                   | 16 0                               | 22 0            | 22 0                   | 17 8                               | ...                                  | ...                    | ...                                |
| 20                 | Backergunge .     | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 17 0             | 16 0                   | 14 0                               | 20 0            | 19 0                   | 16 8                               | ...                                  | ...                    | ..                                 |
| 21                 | Mymensingh ...    | 12 0                    | 11 12                  | 13 4                               | ...             | ...                    | ...                                | 12 8             | 12 8                   | 12 4                               | 18 0            | 16 12                  | 17 4                               | ...                                  | ...                    | ...                                |

\* Return not received.

A In sub-divisions retail prices of salt per rupee were:—Culna 12 seers, Outwa 13 seers, and Baneegunge 12½ seers.

B At Bishenpore retail price of salt 12 seers per rupee.

C At Rampore Haot retail price of salt 12½ seers per rupee.

D In Tumlock retail price of salt 11 seers per rupee.

E In sub-divisions retail prices of salt per rupee were:—Serampore 12½ seers and Jehanabad 13½ seers.

F In sub-divisions retail prices of salt per rupee were:—Baraset 13 seers, Bu sishat 13 seers, Diamond Harbour (Mugrahat) 10½ seers, Barackpore 12½ seers and Dum-dum 11 seers.

G In sub-divisions retail prices of salt per rupee were:—Khowsta 13½ seers, Meherpore and Chudanga 12 seers, and Ranghat 10½ seers.

H In B-girhat retail price of salt 11 seers per rupee.

I In sub-divisions retail prices of salt per rupee were:—Bishenpore and Baneegunge 12½ seers.



## PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

| Number.                        | DISTRICTS.               | QUANTITIES PER RUPEE IN |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |
|--------------------------------|--------------------------|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|---------------------------------------|------------------------|------------------------------------|
|                                |                          | WHEAT.                  |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLU.<br>(Sorghum Vulgare.) |                        |                                    |
|                                |                          | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                       | Next preceding return. | Corresponding return of last year. |
|                                |                          |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |
| Eastern Districts—concluded.   |                          |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |
| 22                             | Chittagong ...           | 10 0                    | 10 0                   | 16 0                               | ...             | ...                    | ...                                | 18 0             | 18 0                   | ...                                | 19 0            | 16 14                  | 12 0                               | ...                                   | ...                    | ...                                |
| 23                             | Noakholly ...            | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 18 0             | 18 0                   | 14 0                               | 20 0            | 20 0                   | 16 0                               | ...                                   | ...                    | ...                                |
| 24                             | Tipperah ...             | 11 12                   | 12 4                   | 12 0                               | ...             | ...                    | ...                                | 17 13            | 16 7½                  | 13 5                               | 25 4            | 25 1                   | 17 13                              | ...                                   | ...                    | ...                                |
| 25                             | Obittagong Hill Tracts.* | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...             | ...                    | ...                                | ...                                   | ...                    | ...                                |
|                                | Hill Tipperah ...        | 12 0                    | 12 0                   | 12 0                               | ...             | ...                    | ...                                | 12 0             | 12 0                   | 10 0                               | 17 0            | 18 0                   | 15 0                               | ...                                   | ...                    | ...                                |
| BEHAR.                         |                          |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |
| 26                             | Patna ...                | 19 0                    | 19 0                   | 21 0                               | 28 0            | 28 0                   | 30 0                               | 11 8             | 11 8                   | 11 8                               | 21 8            | 21 8                   | 18 0                               | 26 0                                  | 26 0                   | 28 0                               |
| 27                             | Gya ...                  | 16 0                    | 16 0                   | 17 8                               | 24 0            | 22 0                   | 31 0                               | 9 8              | 9 8                    | 9 0                                | 18 8            | 18 0                   | 15 8                               | ...                                   | ...                    | ...                                |
| 28                             | Bahabad ...              | 16 0                    | 16 0                   | 17 8                               | 28 0            | 27 0                   | 28 0                               | 9 0              | 8 0                    | 8 0                                | 16 0            | 16 0                   | 18 0                               | ...                                   | ...                    | ...                                |
| 29                             | Durbhanga ...            | 18 10                   | 17 9                   | 17 0                               | 23 0            | 28 7                   | 28 8                               | 14 4             | 13 0                   | 12 0                               | 17 8            | 17 9                   | 16 0                               | ...                                   | ...                    | ...                                |
| 30                             | Monsiehpore ...          | 21 0                    | 20 0                   | 18 0                               | 30 0            | 30 0                   | 29 0                               | 12 0             | 12 0                   | 10 0                               | 22 0            | 20 0                   | 16 8                               | ...                                   | ...                    | ...                                |
| 31                             | Saran ...                | 18 0                    | 16 0                   | 19 0                               | 29 0            | 29 0                   | 28 0                               | 8 8              | 8 8                    | 8 0                                | 21 0            | 21 0                   | 18 8                               | ...                                   | ...                    | ...                                |
| 32                             | Chumpan ...              | 22 0                    | 22 0                   | 20 0                               | 26 0            | 28 0                   | 29 0                               | 8 0              | 7 8                    | 10 0                               | 17 0            | 17 0                   | 15 0                               | ...                                   | ...                    | ...                                |
| 33                             | Monghyr ...              | 22 0                    | 22 0                   | 18 10                              | 23 9            | 31 8                   | 23 9                               | 13 14            | 12 9                   | 12 9                               | 16 13           | 16 13                  | 15 12                              | ...                                   | ...                    | 21 0                               |
| 34                             | Bhagalpur.*              | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...             | ...                    | ...                                | ...                                   | ...                    | ...                                |
| 35                             | Parasah ...              | 16 0                    | 16 0                   | 20 0                               | 22 0            | ...                    | ...                                | 16 0             | 16 0                   | 16 0                               | 17 0            | 17 0                   | 20 0                               | ...                                   | ...                    | ...                                |
| 36                             | Maldah ...               | 18 0                    | 16 0                   | 18 0                               | ...             | ...                    | ...                                | 13 0             | 13 0                   | 14 0                               | 23 0            | 25 0                   | 22 0                               | ...                                   | ...                    | ...                                |
| 37                             | Northal Pergha.          | 14 0                    | 15 0                   | 14 0                               | ...             | ...                    | ...                                | 16 0             | 16 0                   | 16 0                               | 25 0            | 25 0                   | 24 0                               | ...                                   | ...                    | ...                                |
| ORISSA.                        |                          |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |
| 38                             | Cuttack.*                | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...             | ...                    | ...                                | ...                                   | ...                    | ...                                |
| 39                             | Pooree ...               | 11 12                   | 10 8                   | 18 2                               | ...             | ...                    | ...                                | 12 2             | 12 2                   | 11 12                              | 21 0            | 21 0                   | 17 1                               | ...                                   | ...                    | ...                                |
| 40                             | Balasore ...             | 13 0                    | 13 0                   | 14 0                               | 13 0            | 13 0                   | 13 0                               | 15 0             | 15 0                   | 13 0                               | 25 0            | 25 0                   | 24 0                               | ...                                   | ...                    | ...                                |
| CHOTA NAGPORE.                 |                          |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |
| South-Western Frontier Agency. |                          |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |
| 41                             | Hasarashagh ...          | 16 0                    | 16 8                   | 16 8                               | 20 0            | 20 0                   | 18 0                               | 10 0             | 10 0                   | 10 0                               | 18 0            | 17 0                   | 20 0                               | Not procurable.                       |                        |                                    |
| 42                             | Lohardugga ...           | 20 0                    | 20 0                   | 21 0                               | 24 0            | 24 0                   | 18 0                               | 16 0             | 16 0                   | 16 0                               | 22 0            | 20 0                   | 22 0                               | ...                                   | ...                    | ...                                |
| 43                             | Singbhoom ...            | 20 0                    | 20 0                   | 24 0                               | 22 0            | 22 0                   | 24 0                               | 20 0             | 20 0                   | 28 0                               | 24 0            | 24 0                   | 32 0                               | ...                                   | ...                    | ...                                |
| 44                             | Manbhoom ...             | 16 0                    | 16 0                   | 18 0                               | ...             | 22 0                   | ...                                | 18 0             | 19 0                   | 15 0                               | 24 0            | 28 0                   | 28 0                               | ...                                   | ...                    | ...                                |

\* Returns not received.

S In Cox's Bazar retail price of salt 8 seers per rupee.

T At Panchga in Fenny sub-division retail price of salt 9 seers per rupee.

U In Chandpore sub-division retail price of salt 11½ seers per rupee.

V In sub-divisions retail prices of salt per rupee were:—Sameram 12 seers, Bhaboah 10½ seers, and Bazar 12½ seers.

W In sub-divisions retail prices of salt per rupee were:—Madhubani 11 seers and Tajpore 12 seers.

X In sub-divisions retail prices of salt per rupee were:—Sowani 11½ seers and Gopalgunge 12½ seers.

Y In Bettiah sub-division retail price of salt 11½ seers per rupee.

*Districts of Bengal during the Fortnight ending 15th September 1887—(concluded.)*

|   |                       |                                       |   |                        |                                       |                 |                        |                                       |                 |                       |                                       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |                        |                                       | DISTRICTS. |
|---|-----------------------|---------------------------------------|---|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|-----------------------|---------------------------------------|---|------------------------|---------------------------------------|------------|
| INDIAN CORN OR<br>MAIZE.<br>(Zea Mays.) |                       |                                       | ARHAR OR THUR.<br>CADJAN PEA.<br>(Cajanus indicus.) |                        |                                       | FIRWOOD.        |                        |                                       | SALT.           |                       |                                       | SALT.   |                        |                                       |            |
| Present return.                         | Next preceding return | Corresponding return<br>of last year. | Present return.                                     | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return | Corresponding return<br>of last year. | Present return.                               | Next preceding return. | Corresponding return<br>of last year. |            |

*Eastern Districts—concluded.*

| S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | Rs. A. P. | Rs. A. P. | Rs. A. P. |                            |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|-----------|----------------------------|
| ...    | ...    | ...    | 11 0   | 10 8   | 9 0    | 75     | 80 0   | 75     | 8 0    | 8 0    | 12 0   | 4 8 0  | 4 8 0  | 3 2 0     |           |           | Chittagong.                |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | 9 0    | 9 0    | 8 0    | 3 12 0 | 3 12 0 | 4 8 0     |           |           | Noakhali.                  |
| ...    | ...    | ...    | 9 8    | 10 10  | 9 0    | ...    | ...    | ...    | 12 0   | 12 0   | 11 0   | ...    | 3 5 0  | 3 9 0     |           |           | Tipperah.                  |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...       |           |           | Chittagong Hill<br>Tracts. |
| ...    | ...    | ...    | 16 0   | 16 0   | 16 0   | ...    | ...    | ...    | 11 0   | 11 0   | 11 0   | 3 4 0  | 3 4 0  | 3 4 0     |           |           | Hill Tipperah.             |

BEHAR.

|       |          |      |       |      |      |       |       |       |       |       |      |        |       |       |  |  |                 |
|-------|----------|------|-------|------|------|-------|-------|-------|-------|-------|------|--------|-------|-------|--|--|-----------------|
| 40 0  | 40 0     | 26 0 | 26 0  | 26 0 | 26 0 | 120 0 | 120 0 | 110 0 | 11 12 | 11 12 | 11 8 | 3 1 6  | 3 1 6 | 3 1 6 |  |  | Patna.          |
| ...   | ...      | ...  | 21 0  | 21 0 | 23 0 | 150 0 | 150 0 | 200 0 | 11 0  | 11 0  | 11 0 | 3 5 0  | 3 5 0 | 3 5 0 |  |  | Gya.            |
| ...   | ...      | ...  | 16 0  | 15 0 | 16 0 | 120 0 | 120 0 | 160 0 | 12 8  | 12 8  | 12 0 | 3 3 0  | 3 3 0 | 3 5 0 |  |  | Shahabad.       |
| 38 7  | 38 7     | 23 0 | 20 13 | 22 0 | 21 0 | 176 0 | 176 0 | 180 0 | 12 0  | 12 0  | 11 8 | 3 0 0  | 3 0 0 | 3 4 0 |  |  | Durbhanga.      |
| 40 0  | 28 0     | 30 0 | 20 0  | 20 0 | 21 0 | 120 0 | 120 0 | 140 0 | 12 0  | 12 0  | 12 0 | 3 4 0  | 3 4 0 | 3 4 0 |  |  | Muzafferpore.   |
| (new) | ...      | ...  | ...   | ...  | ...  | ...   | ...   | ...   | ...   | ...   | ...  | ...    | ...   | ...   |  |  | ...             |
| 31 0  | 29 0     | 24 0 | 24 0  | 25 0 | 26 0 | 160 0 | 140 0 | 140 0 | 12 0  | 12 0  | 11 8 | 3 2 0  | 3 2 0 | 3 4 0 |  |  | Saran.          |
| 32 0  | 32 0     | 28 0 | 23 0  | ...  | 26 0 | 160 0 | 160 0 | ...   | 12 0  | 12 0  | 11 8 | 3 4 0  | 3 4 0 | 3 7 0 |  |  | Chumparan.      |
| 34 10 | 36 12    | 37 0 | 24 2  | 23 0 | 23 0 | 126 0 | 105 0 | 126 0 | 12 9  | 12 9  | 12 1 | 2 14 6 | 3 0 0 | 3 4 0 |  |  | Monghyr.        |
| ...   | ...      | ...  | ...   | ...  | ...  | ...   | ...   | ...   | ...   | ...   | ...  | ...    | ...   | ...   |  |  | Rhagulpore.     |
| ...   | Not sold | ...  | 13 0  | 18 0 | 18 0 | 160 0 | 160 0 | 128 0 | 10 8  | 10 8  | 10 0 | 3 10 0 | 3 8 0 | 3 8 0 |  |  | Purneah.        |
| ...   | ...      | ...  | ...   | ...  | ...  | 120 0 | 120 0 | 120 0 | 12 0  | 12 0  | 11 0 | 3 4 0  | 3 4 0 | 3 5 0 |  |  | Maldah.         |
| 60 0  | 35 0     | 32 0 | 26 0  | 26 0 | 23 0 | 200 0 | 200 0 | 200 0 | 11 8  | 11 0  | 12 0 | 3 1 0  | 3 4 0 | 3 3 3 |  |  | Senthal Pergua. |

ORISSA.

|     |     |     |      |      |      |       |       |       |      |      |      |        |        |        |        |           |
|-----|-----|-----|------|------|------|-------|-------|-------|------|------|------|--------|--------|--------|--------|-----------|
| ... | ... | ... | ...  | ...  | ...  | ...   | ...   | ...   | ...  | ...  | ...  | ...    | ...    | ...    | ...    | Cuttack.  |
| ... | ... | ... | 14 7 | 14 7 | 14 7 | 70 0  | 70 0  | 80 0  | 14 7 | 14 7 | 14 7 | 3 10 0 | 2 10 0 | 2 10 0 | 2 10 0 | Pooros.   |
| ... | ... | ... | 13 0 | 13 0 | 13 0 | 160 0 | 160 0 | 120 0 | 10 8 | 10 8 | 10 0 | 3 4 0  | 3 5 0  | 3 10 0 | 3 10 0 | Balasore. |

CHOTA NAGPORE.  
*South-Western Frontier Agency.*

|      |      |      |      |      |      |       |       |       |       |       |       |        |       |       |  |  |             |
|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|--|--|-------------|
| 30 0 | 25 0 | 15 0 | 21 0 | 21 8 | 18 0 | 320 0 | 320 0 | 320 0 | 10 0  | 10 8  | 9 0   | 3 6 0  | 3 4 0 | 4 0 0 |  |  | Hazaribagh. |
| 40 0 | ...  | ...  | 28 0 | 28 0 | 19 0 | 120 0 | 120 0 | 120 0 | 10 0  | 9 12  | 9 0   | 3 12 0 | 4 0 0 | 4 4 0 |  |  | Lohardugga. |
| ...  | ...  | ...  | 20 0 | 20 0 | 21 0 | 320 0 | 320 0 | 360 0 | 9 0   | 9 0   | 9 0   | 4 0 0  | 4 0 0 | 4 0 0 |  |  | Singbhoom.  |
| 48 0 | ...  | ...  | 22 0 | 22 0 | 18 0 | ...   | 340 0 | 210 0 | 10 10 | 10 10 | 10 10 | 3 8 0  | 3 8 0 | 3 8 0 |  |  | Manbhoom.   |

- 2 In sub-divisions retail prices of salt per rupee were:—Begusarai 11 seers and Jamui 11½ seers.  
 Z1 In Arrareah and Kishengunge sub-divisions retail price of salt 10 seers per rupee.  
 Z2 In sub-divisions retail prices of salt per rupee were:—Deoghur 13 seers, Godda 11 seers, and Pakour and Rajnehal 12 seers.  
 Z3 In Khoorda sub-division retail price of salt 14 seers per rupee.  
 Z4 In Bhadruck sub-division retail price of salt 9½ seers per rupee.  
 Z5 At Kharagdiha in Giridih sub-division retail price of salt 11 seers per rupee.  
 Z6 In Govindpore retail price of salt 12 seers per rupee.

PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt in the

| Number. | MARKS.       | WHEAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    |
|---------|--------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|         |              | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|         |              | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.         | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |
| 1       | Calcutta*    | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...             | ...                    | ...                                |
| 2       | Serajgunge   | 1 14 0          | 1 14 0                 | 2 0 0                              | ...             | ...                    | ...                                | 3 10 0           | 3 10 0                 | 3 12 0                             | 1 14 0          | 1 10 0                 | 1 14 0                             |
| 3       | Dacca        | 2 7 0           | 2 7 0                  | 2 9 0                              | 1 8 0           | 1 6 0                  | 1 8 0                              | 2 6 0            | 2 6 0                  | 2 10 0                             | 2 0 0           | 1 14 6                 | 2 7 0                              |
| 4       | Narsingunge* | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...             | ...                    | ...                                |
| 5       | Chittagong   | 3 7 0           | 3 7 0                  | 3 6 0                              | ...             | ...                    | ...                                | 3 0 0            | 3 0 0                  | ...                                | 2 2 0           | 2 4 0                  | 3 4 0                              |
| 6       | Patna        | 2 0 0           | 2 0 0                  | 1 13 9                             | 1 5 3           | 1 5 3                  | 1 4 0                              | 3 0 0            | 3 0 0                  | 3 0 0                              | 1 14 0          | 1 14 0                 | 2 1 0                              |
| 7       | Balasore     | 3 0 0           | 3 0 0                  | 2 8 0                              | 3 0 0           | 3 0 0                  | 3 0 0                              | 2 8 0            | 2 8 0                  | 3 0 0                              | 1 7 0           | 1 7 0                  | 1 10 0                             |
| 8       | Pooree       | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | 1 14 0          | 1 14 0                 | 2 2 6                              |
| 9       | Cuttack*     | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...             | ...                    | ...                                |

\* Returns not

CALCUTTA,  
The 20th September 1887.



*undermentioned Maris of Bengal during the Fortnight ending 15th September 1887.*

| GRAM, CHANA, CHHOLA,<br>KADALAY OR BUKAGA.<br>(Cicer Aristinum.) |                        |                                       | INDIAN-CORN OR MAIZE.<br>(Zea Mays.) |                        |                                       | ARHAR OR THUR<br>CADJAN PEA.<br>(Cajanus indicus.) |                        |                                       | FIREWOOD.       |                        |                                       | SALT.           |                        |                                       | MANTS.       |
|--|------------------------|---------------------------------------|--------------------------------------|------------------------|---------------------------------------|--|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|--------------|
| Present return.  | Next preceding return. | Corresponding return<br>of last year. | Present return.                      | Next preceding return. | Corresponding return<br>of last year. | Present return.                                    | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. |              |
| R. A. P.   | R. A. P.               | R. A. P.                              | R. A. P.                             | R. A. P.               | R. A. P.                              | R. A. P.   | R. A. P.               | R. A. P.                              | R. A. P.        | R. A. P.               | R. A. P.                              | R. A. P.        | R. A. P.               | R. A. P.                              |              |
| ...  | ...                    | ...                                   | ...                                  | ...                    | ...                                   | ...  | ...                    | ...                                   | ...             | ...                    | ...                                   | ...             | ...                    | ...                                   | Calcutta.    |
| 1 13 0   | 1 14 0                 | 1 14 0                                | ...                                  | ...                    | ...                                   | ...  | ...                    | ...                                   | ...             | ...                    | ...                                   | 2 10 0          | 2 10 0                 | 3 3 0                                 | Serajunga.   |
| 2 0 0  | 1 14 0                 | 2 6 0                                 | ...                                  | ...                    | ...                                   | 2 0 0  | 2 0 0                  | ...                                   | 0 5 0           | 0 5 0                  | 0 5 0                                 | 3 3 0           | 3 3 0                  | 3 8 0                                 | Dacca.       |
| ...  | ...                    | ...                                   | ...                                  | ...                    | ...                                   | ...  | ...                    | ...                                   | ...             | ...                    | ...                                   | ...             | ...                    | ...                                   | Narain, unke |
| 2 4 0  | 2 4 0                  | 2 12 0                                | ...                                  | ...                    | ...                                   | 3 8 0  | 3 12 0                 | 4 2 0                                 | 0 8 0           | 0 8 0                  | 0 8 0                                 | 4 8 0           | 4 8 0                  | 3 2 0                                 | Chittagong.  |
| 1 4 9  | 1 5 9                  | 1 5 0                                 | 0 15 0                               | 0 15 0                 | 1 6 0                                 | 1 7 0  | 1 7 0                  | 1 8 0                                 | 0 5 0           | 0 5 0                  | 0 5 0                                 | 3 3 1           | 3 1 6                  | 3 1 6                                 | Patna.       |
| 2 6 0  | 2 6 0                  | 2 10 0                                | ...                                  | ...                    | ...                                   | 3 0 0  | 3 0 0                  | 3 0 0                                 | 0 4 6           | 0 4 6                  | 0 6 0                                 | 3 4 0           | 3 5 0                  | 3 10 0                                | Balasore.    |
| ...  | ...                    | ...                                   | ...                                  | ...                    | ...                                   | ...  | ...                    | ...                                   | ...             | ...                    | ...                                   | 2 10 0          | 2 10 0                 | 2 10 0                                | Pooree.      |
| ...  | ...                    | ...                                   | ...                                  | ...                    | ...                                   | ...  | ...                    | ...                                   | ...             | ...                    | ...                                   | ...             | ...                    | ...                                   | Cuttack.     |

received.

Published for general information.

P. NOLAN,  
Secy. to the Govt. of Bengal.

# Meteorological Report of the Province of B

| METEOROLOGICAL DIVISION. |                        |                 | STATION OBSERVATIONS. |                         |                                 |                            |                      |                       |                     |                      |                        |                     |       |                           |                                   |                                 |                                     |
|--------------------------|------------------------|-----------------|-----------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------|------------------------|---------------------|-------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|
|                          |                        |                 | DISTRICT.             | Representative station. | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.         |                        |                     |       |                           |                                   |                                 |                                     |
|                          |                        |                 |                       |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week. | Date.                  | Lowest during week. | Date. | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. |
|                          |                        |                 |                       |                         |                                 |                            |                      |                       |                     |                      |                        |                     |       |                           |                                   |                                 |                                     |
| ORIGINAL.                | Pooree                 | Gopalpore       | 29.576                | 29.626                  | -.133                           | SW                         | 185                  | 91.2                  | 10th Sept.          | 78.3                 | 11th, 16th Sept.       | 88.5                | 80.3  | 84.3                      | +0.4                              |                                 |                                     |
|                          | False Point            | 29.603          | 29.626                | -.133                   | South-westerly.                 | 185                        | 92.5                 | 10th "                | 75.1                | 11th, 15th, Sept.    | 87.3                   | 77.5                | 82.4  | -0.7                      |                                   |                                 |                                     |
| DETAILED.                | Outtack                | Outtack         | 29.541                | 29.622                  | -.120                           | Calm                       | 45                   | 95.4                  | 10th "              | 75.8                 | 11th "                 | 88.4                | 77.8  | 83.1                      | -0.7                              |                                 |                                     |
|                          | Balasore               | Balasore        | 29.553                | 29.611                  | -.123                           | Variable                   | 87.3                 | 98.4                  | 10th "              | 75.3                 | 11th "                 | 87.9                | 77.5  | 82.7                      | +0.5                              |                                 |                                     |
| ORIGINAL.                | South-West Midnapore   | Saugor Island   | 29.601                | 29.627                  | -.130                           | Variable                   | 207                  | 92.2                  | 10th "              | 77.0                 | 11th "                 | 88.6                | 79.1  | 83.8                      | +0.8                              |                                 |                                     |
|                          | South 24-Pargunnahs    | Midnapore       | 29.498                | 29.648                  | -.100                           | Variable                   | 70.8                 | 92.3                  | 10th "              | 73.3                 | 11th "                 | 88.9                | 77.0  | 83.0                      | -0.5                              |                                 |                                     |
| DETAILED.                | Midnapore              | Midnapore       | 29.498                | 29.648                  | -.100                           | Variable                   | 70.8                 | 92.3                  | 10th "              | 73.3                 | 11th "                 | 88.9                | 77.0  | 83.0                      | -0.5                              |                                 |                                     |
|                          | 24-Pargunnahs          | Calcutta        | 29.607                | 29.629                  | -.124                           | SE                         | 90                   | 91.5                  | 10th "              | 77.0                 | 11th "                 | 87.1                | 78.1  | 82.6                      | -0.3                              |                                 |                                     |
| ORIGINAL.                | Howrah                 | Burdwan         | —                     | —                       | —                               | E                          | 72                   | 94.6                  | 10th, 11th Sept.    | 76.4                 | 11th, 12th Sept.       | 90.8                | 78.7  | 84.8                      | +0.7                              |                                 |                                     |
|                          | Hooghly                | Bankoora        | 29.312                | —                       | —                               | SE                         | 39.8                 | 94.1                  | 10th, 11th Sept.    | 76.6                 | 12th, 13th, 16th Sept. | 90.4                | 77.8  | 84.1                      | —                                 |                                 |                                     |
| DETAILED.                | Burdwan                | Burdwan         | —                     | —                       | —                               | E                          | 72                   | 94.6                  | 10th, 11th Sept.    | 76.4                 | 11th, 12th Sept.       | 90.8                | 78.7  | 84.8                      | +0.7                              |                                 |                                     |
|                          | Bankoora               | Bankoora        | 29.312                | —                       | —                               | SE                         | 39.8                 | 94.1                  | 10th, 11th Sept.    | 76.6                 | 12th, 13th, 16th Sept. | 90.4                | 77.8  | 84.1                      | —                                 |                                 |                                     |
| ORIGINAL.                | Beerbhoom              | Raneegunge      | 29.361                | 29.611                  | -.090                           | Easterly                   | 124.8                | 94.0                  | 10th "              | 75.3                 | 12th "                 | 89.1                | 78.1  | 83.0                      | +0.3                              |                                 |                                     |
|                          | West Burdwan           | Berhampore      | 29.578                | 29.644                  | -.112                           | E                          | 94.9                 | 92.7                  | 11th "              | 76.3                 | 11th "                 | 89.2                | 78.7  | 83.9                      | -0.0                              |                                 |                                     |
| DETAILED.                | Moorshedabad           | Krishnagur      | 29.379                | 29.645                  | —                               | S. Ely.                    | 103.1                | 92.8                  | 10th "              | 76.3                 | 11th "                 | 90.1                | 77.6  | 83.9                      | —                                 |                                 |                                     |
|                          | Nuddea                 | Krishnagur      | 29.379                | 29.645                  | —                               | S. Ely.                    | 103.1                | 92.8                  | 10th "              | 76.3                 | 11th "                 | 90.1                | 77.6  | 83.9                      | —                                 |                                 |                                     |
| ORIGINAL.                | Jessore                | Jessore         | 29.619                | 29.652                  | -.118                           | SSE                        | 98.9                 | 95.3                  | 10th "              | 75.9                 | 19th "                 | 89.9                | 78.8  | 84.4                      | +0.4                              |                                 |                                     |
|                          | Khoolna                | Jessore         | 29.619                | 29.652                  | -.118                           | SSE                        | 98.9                 | 95.3                  | 10th "              | 75.9                 | 19th "                 | 89.9                | 78.8  | 84.4                      | +0.4                              |                                 |                                     |
| DETAILED.                | Chittagong             | Chittagong      | 29.618                | 29.708                  | -.093                           | SSE                        | 99                   | 99.0                  | 10th "              | 76.0                 | 12th, 14th Sept.       | 87.1                | 76.4  | 81.9                      | 0                                 |                                 |                                     |
|                          | Chittagong Hill Tracts | Dumagiri        | —                     | —                       | —                               | Observations not received. | —                    | —                     | —                   | —                    | —                      | —                   | —     | —                         | —                                 |                                 |                                     |
| ORIGINAL.                | Backergunge            | Barisal         | 29.652                | 29.661                  | -.089                           | S                          | 95.3                 | 95.3                  | 10th "              | 76.1                 | 12th "                 | 89.2                | 77.5  | 82.9                      | +1.3                              |                                 |                                     |
|                          | Noakholly              | Noakholly       | —                     | —                       | —                               | —                          | —                    | —                     | —                   | —                    | —                      | —                   | —     | —                         | —                                 |                                 |                                     |
| DETAILED.                | Furreedpore            | Furreedpore     | 29.625                | 29.666                  | -.101                           | E                          | 110                  | 91.5                  | 10th "              | 75.9                 | 10th "                 | 87.8                | 78.8  | 83.3                      | +0.9                              |                                 |                                     |
|                          | Dacca                  | Dacca           | 29.642                | 29.663                  | -.101                           | SSE                        | 123                  | 94.1                  | 10th "              | 77.2                 | 16th "                 | 90.8                | 79.2  | 84.9                      | +1.2                              |                                 |                                     |
| ORIGINAL.                | Commillah              | Commillah       | 29.645                | 29.680                  | -.104                           | SE                         | 117.5                | 96.3                  | 10th "              | 75.8                 | 10th "                 | 90.1                | 76.9  | 83.5                      | +1.9                              |                                 |                                     |
|                          | Mymensingh             | Mymensingh      | 29.667                | 29.721                  | -.025                           | Easterly                   | 92                   | 92.3                  | 10th "              | 70.1                 | 11th "                 | 90.0                | 71.3  | 82.3                      | 0                                 |                                 |                                     |
| DETAILED.                | Bogra                  | Bogra           | 29.551                | 29.644                  | —                               | E                          | 74.2                 | 94.3                  | 11th "              | 76.8                 | 16th "                 | 90.6                | 79.2  | 84.9                      | —                                 |                                 |                                     |
|                          | Pubna                  | Serajgunge      | 29.614                | 29.661                  | -.106                           | Easterly                   | 78.7                 | 93.1                  | 10th "              | 77.8                 | 16th "                 | 89.4                | 79.3  | 84.6                      | +1.9                              |                                 |                                     |
| ORIGINAL.                | Rajshahye              | Rampore Beaulah | 29.587                | 29.657                  | -.063                           | E                          | 17.6                 | 93.3                  | 10th, 11th Sept.    | 73.6                 | 11th "                 | 90.0                | 76.4  | 83.2                      | +0.7                              |                                 |                                     |
|                          | Maldah                 | Maldah          | 29.495                | —                       | —                               | Calm                       | —                    | 91.0                  | 10th "              | 75.2                 | 11th "                 | 92.4                | 79.3  | 85.9                      | —                                 |                                 |                                     |
| DETAILED.                | Dinagpore              | Dinagpore       | 29.335                | 29.655                  | -.084                           | N. Ely.                    | 80                   | 95.0                  | 11th "              | 78.1                 | 16th "                 | 92.3                | 90.4  | 86.4                      | +3.2                              |                                 |                                     |
|                          | Rungpore               | Rungpore        | 29.575                | 29.660                  | -.061                           | E                          | 35                   | 94.8                  | 11th "              | 74.2                 | 13th "                 | 91.9                | 78.6  | 85.5                      | +3.1                              |                                 |                                     |
| ORIGINAL.                | Julpigoree             | Julpigoree      | 29.406                | 29.662                  | -.089                           | NE                         | 38.0                 | 94.0                  | 10th, 11th Sept.    | 74.8                 | 15th "                 | 91.6                | 77.0  | 84.0                      | +3.5                              |                                 |                                     |
|                          | Cooch Behar            | Julpigoree      | 29.406                | 29.662                  | -.089                           | NE                         | 38.0                 | 94.0                  | 10th, 11th Sept.    | 74.8                 | 15th "                 | 91.6                | 77.0  | 84.0                      | +3.5                              |                                 |                                     |
| DETAILED.                | Darjeeling Hill Tracts | Darjeeling      | 22.947                | —                       | -.082                           | NE                         | 30                   | 70.6                  | 11th "              | 56.2                 | 16th "                 | 64.2                | 57.0  | 62.6                      | +2.4                              |                                 |                                     |
|                          | Purneah                | Purneah         | 29.534                | 29.680                  | -.071                           | Calm, E                    | 10.6                 | 93.2                  | 11th "              | 76.6                 | 15th, 16th Sept.       | 90.5                | 78.6  | 84.5                      | +0.5                              |                                 |                                     |
| ORIGINAL.                | North Bhagulpore       | Purneah         | 29.534                | 29.680                  | -.071                           | Calm, E                    | 10.6                 | 93.2                  | 11th "              | 76.6                 | 15th, 16th Sept.       | 90.5                | 78.6  | 84.5                      | +0.5                              |                                 |                                     |
|                          | Mozufferpore           | Mozufferpore    | —                     | —                       | —                               | Observations suspended.    | —                    | —                     | —                   | —                    | —                      | —                   | —     | —                         | —                                 |                                 |                                     |
| DETAILED.                | Durbhunga              | Durbhunga       | 29.490                | 29.646                  | -.070                           | ESE                        | 82                   | 95.4                  | 10th "              | 78.0                 | 10th "                 | 92.0                | 81.3  | 86.7                      | +2.8                              |                                 |                                     |
|                          | Thumpanan              | Motihari        | 29.412                | 29.637                  | -.104                           | SE                         | 145.8                | 94.7                  | 10th, 11th Sept.    | 77.4                 | 10th "                 | 93.3                | 79.3  | 86.3                      | +3.5                              |                                 |                                     |
| ORIGINAL.                | Jaran                  | Chupra          | 29.428                | 29.621                  | -.100                           | E                          | 5.2                  | 94.6                  | 11th "              | 70.7                 | 12th "                 | 92.3                | 77.0  | 84.7                      | +0.8                              |                                 |                                     |
|                          | Shahabad               | Dehree          | 29.316                | 29.608                  | -.062                           | ESE                        | 267.0                | 90.4                  | 10th "              | 77.0                 | 12th "                 | 88.4                | 79.4  | 83.9                      | +1.7                              |                                 |                                     |
| DETAILED.                | Buxar                  | Buxar           | 29.390                | 29.640                  | -.100                           | E                          | 174.7                | 93.4                  | 10th "              | 76.3                 | 12th "                 | 91.3                | 79.5  | 85.4                      | +2.3                              |                                 |                                     |
|                          | Arrah                  | Arrah           | 29.430                | 29.620                  | -.069                           | E                          | 87.0                 | 93.9                  | 15th "              | 78.0                 | 12th, 13th, 16th Sept. | 92.6                | 79.5  | 86.1                      | +2.3                              |                                 |                                     |
| ORIGINAL.                | Gya                    | Gya             | 29.231                | 29.606                  | -.134                           | NNE                        | 58                   | 93.4                  | 10th "              | 77.8                 | 10th "                 | 91.7                | 79.1  | 85.4                      | +0.8                              |                                 |                                     |
|                          | Patna                  | Bankipore       | 29.463                | 29.644                  | -.059                           | E                          | 82                   | 97.0                  | 15th & 16th Sept.   | 80.2                 | 16th "                 | 95.8                | 81.3  | 88.0                      | +3.3                              |                                 |                                     |
| DETAILED.                | South Bhagulpore       | Bhagulpore      | 29.482                | 29.644                  | -.086                           | ESE                        | 74                   | 92.4                  | 11th "              | 76.6                 | 11th "                 | 90.3                | 79.3  | 84.8                      | +1.7                              |                                 |                                     |
|                          | Monghyr                | Bhagulpore      | 29.482                | 29.644                  | -.086                           | ESE                        | 74                   | 92.4                  | 11th "              | 76.6                 | 11th "                 | 90.3                | 79.3  | 84.8                      | +1.7                              |                                 |                                     |
| ORIGINAL.                | 20th Pargunnahs        | Duonia          | 29.150                | —                       | —                               | Easterly                   | 22.9                 | 93.1                  | 10th "              | 75.5                 | 11th "                 | 90.0                | 77.5  | 85.5                      | —                                 |                                 |                                     |
|                          | Baribach               | Hazuribagh      | 27.645                | 29.638                  | -.102                           | Easterly                   | 247                  | 88.5                  | 10th "              | 71.7                 | 12th, 13th Sept.       | 85.7                | 72.6  | 79.2                      | +0.6                              |                                 |                                     |
| DETAILED.                | Chardugga              | Ranchee         | 27.511                | 29.622                  | -.099                           | Easterly                   | 150.1                | 87.5                  | 10th "              | 69.9                 | 11th "                 | 84.0                | 71.8  | 77.9                      | +0.7                              |                                 |                                     |
|                          | Chhoom                 | Chhoom          | 28.842                | —                       | —                               | E                          | 43.4                 | 93.4                  | 10th "              | 74.2                 | 11th "                 | 88.9                | 76.5  | 82.7                      | —                                 |                                 |                                     |
| ORIGINAL.                | Sibsonagar             | Sibsonagar      | 29.384                | 29.714                  | -.091                           | Variable                   | 48                   | 95.6                  | 10th, 12th Sept.    | 70.5                 | 15th "                 | 92.9                | 79.7  | 84.3                      | +3.6                              |                                 |                                     |
|                          | Dhnbri                 | Dhnbri          | 29.578                | 29.694                  | -.091                           | Variable                   | 134                  | 91.2                  | 16th "              | 70.3                 | 16th "                 | 89.3                | 78.5  | 83.9                      | +1.6                              |                                 |                                     |
| DETAILED.                | Silchar                | Silchar         | 29.594                | 29.699                  | -.115                           | Variable                   | 59                   | 101.1                 | 10th "              | 75.8                 | 11th "                 | 93.5                | 78.0  | 86.8                      | +3.9                              |                                 |                                     |
|                          |                        |                 |                       |                         |                                 |                            |                      |                       |                     |                      |                        |                     |       |                           |                                   |                                 |                                     |

Summary.—The normal means of air pressure and temperature are the arithmetic means of the observations taken during the year.

Notes.—Summary.—The normal means of air pressure and temperature are the arithmetical average of means of the preceding decade. The humidity of the atmosphere is expressed as percentage, saturated air being presumed to be 100 per cent. The normal means or average of the rainfall is also given.

for the week ending Friday, the 16th September 1887.

| DISTRICT OBSERVATIONS. |              |            |                    |              |                     |                    |              |                 |                               |                              |                               |             |                              | Representative station.  |           | DISTRICT. |  |  |
|------------------------|--------------|------------|--------------------|--------------|---------------------|--------------------|--------------|-----------------|-------------------------------|------------------------------|-------------------------------|-------------|------------------------------|--------------------------|-----------|-----------|--|--|
| RAINFALL.              |              |            |                    |              |                     |                    |              |                 |                               |                              |                               |             |                              |                          |           |           |  |  |
| OF WEEK.               |              |            |                    |              | Since 1st of month. |                    |              | Since May 15th. |                               |                              | Average number of rainy days. |             | Normal number of rainy days. |                          |           |           |  |  |
| Mean for district.     | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation.          | Mean for district. | Normal mean. | Variation.      | Average number of rainy days. | Normal number of rainy days. |                               |             |                              |                          |           |           |  |  |
| 81                     | 5.9          | 3.12       | -                  | -            | -                   | -                  | -            | -               | -                             | -                            | -                             | -           | -                            | Gopalpore                | Pooree    |           |  |  |
| 85                     | 5.3          | 6.10       | 3.02               | 6.46         | 40.87               | 4.3                | False Point  | ...             | ...                           | ...                          | ...                           | ...         | ...                          | ...                      | ...       |           |  |  |
| 80                     | 5.6          | 3.08       | 2.41               | 5.72         | 40.41               | 3.7                | Cuttack      | ...             | ...                           | ...                          | ...                           | ...         | ...                          | ...                      | ...       |           |  |  |
| 85                     | 5.3          | 2.74       | 2.90               | 6.44         | 40.80               | 3.9                | Balasore     | ...             | ...                           | ...                          | ...                           | ...         | ...                          | ...                      | ...       |           |  |  |
| 86                     | 5.6          | 6.43       | 5.18               | 2.80         | 6.37                | 7.04               | -0.07        | 45.94           | 48.08                         | -3.04                        | 7.0                           | 4.2         | Saugor Island                | South-West Midnapore     |           |           |  |  |
| 84                     | 7.9          | 3.30       | 4.11               | 1.74         | 5.72                | 4.68               | +1.04        | 40.91           | 42.60                         | +4.22                        | 4.8                           | 3.2         | Midnapore                    | South 24-Pargunnahs      |           |           |  |  |
| 84                     | 9.0          | 3.43       | 2.38               | 1.68         | 3.27                | 5.26               | -1.90        | 44.40           | 43.88                         | +0.61                        | 4.5                           | 3.8         | Calcutta                     | 24-Pargunnahs            |           |           |  |  |
| 74                     | 5.7          | 2.71       | 2.62               | 1.63         | 4.29                | 4.66               | -0.37        | 40.59           | 39.72                         | +1.87                        | 4.7                           | 3.4         | Burdwan                      | Howrah                   |           |           |  |  |
| 80                     | 6.3          | 2.41       | 2.65               | 2.08         | 3.51                | 5.35               | -1.84        | 40.38           | 44.14                         | +2.24                        | 5.3                           | 3.7         | Bankoora                     | Hooghly                  |           |           |  |  |
| 81                     | 7.7          | 2.26       | 1.91               | 2.02         | 4.81                | 6.10               | -1.29        | 42.43           | 44.14                         | -1.71                        | 3.3                           | 3.4         | Ranergunge                   | Burdwan                  |           |           |  |  |
| 80                     | 5.1          | 1.03       | 3.00               | 2.43         | 7.73                | 6.16               | +1.57        | 52.19           | 40.50                         | +11.00                       | 4.2                           | 3.5         | Berhampore                   | Beerbhoom                |           |           |  |  |
| 78                     | 7.1          | 2.26       | 2.29               | 1.87         | 3.71                | 5.10               | -1.39        | 33.20           | 40.95                         | -7.64                        | 4.0                           | 3.1         | Krishnagur                   | West Burdwan             |           |           |  |  |
| 83                     | 5.4          | 2.70       | 2.84               | 1.83         | 4.19                | 5.40               | -1.21        | 32.13           | 44.94                         | -12.81                       | 4.6                           | 3.1         | Jessore                      | Moorshedabad             |           |           |  |  |
| 79                     | 5.7          | 1.93       | -                  | 2.58         | -                   | 9.47               | -            | 0.94            | 0.94                          | -                            | 4.3                           | 4.3         | Chittagong                   | Nuddea                   |           |           |  |  |
| 87                     | 5.7          | 4.40       | 3.47               | 2.17         | 5.78                | 7.03               | -1.25        | 45.02           | 61.87                         | -10.85                       | 6.3                           | 4.0         | Barrisal                     | Jessore                  |           |           |  |  |
| 85                     | 5.1          | 2.10       | 2.79               | 1.67         | 2.35                | 5.57               | -3.22        | 20.60           | 40.87                         | -17.18                       | 3.7                           | 3.0         | Furroadpore                  | Khoolna                  |           |           |  |  |
| 79                     | 6.0          | 0.96       | -                  | 1.76         | -                   | 7.02               | -            | 51.54           | -                             | -                            | 3.4                           | 3.4         | Dacca                        | Chittagong               |           |           |  |  |
| 77                     | 5.4          | 1.81       | -                  | 2.21         | -                   | 7.02               | -            | 60.02           | -                             | -                            | 3.5                           | 3.5         | Commillah                    | Chittagong Hill Tracts   |           |           |  |  |
| 78                     | 6.4          | 4.33       | 2.16               | 2.71         | 5.06                | 7.18               | -1.52        | 51.50           | 55.34                         | -3.75                        | 3.0                           | 3.7         | Mymensingh                   | Barrisal                 |           |           |  |  |
| 79                     | 6.0          | 0.56       | 0.88               | 2.25         | 7.93                | 5.30               | +2.03        | 52.03           | 40.78                         | +5.84                        | 2.0                           | 2.8         | Bogra                        | Hoakholly                |           |           |  |  |
| 88                     | 5.0          | 0.48       | 2.46               | 2.28         | 4.85                | 6.15               | -1.30        | 35.63           | 41.17                         | -5.34                        | 5.0                           | 2.9         | Serajgunge                   | Furroadpore              |           |           |  |  |
| 83                     | 4.1          | 1.24       | 0.97               | 2.30         | 6.43                | 6.62               | -0.19        | 42.05           | 43.94                         | -1.89                        | 2.0                           | 3.0         | Ramroo Baulah                | Pubna                    |           |           |  |  |
| 76                     | 3.4          | 1.32       | 1.05               | 2.28         | 8.11                | 7.06               | +1.03        | 43.00           | 46.17                         | -3.17                        | 3.5                           | 3.5         | Maldah                       | Rajshahye                |           |           |  |  |
| 77                     | 4.7          | 0.54       | 1.16               | 2.94         | 7.17                | 7.16               | +0.01        | 62.18           | 48.07                         | +14.12                       | 3.2                           | 3.0         | Dinagore                     | Maldah                   |           |           |  |  |
| 77                     | 2.3          | 0.21       | 0.77               | 2.92         | 9.22                | 7.61               | +1.61        | 74.40           | 61.79                         | +12.61                       | 1.5                           | 2.7         | Rungpore                     | Dinagore                 |           |           |  |  |
| 80                     | 5.3          | 0.38       | 1.00               | 4.43         | 16.50               | 12.14              | +4.36        | 110.09          | 93.98                         | +17.01                       | 2.8                           | 3.5         | Julpigoree                   | Rungpore                 |           |           |  |  |
| 81                     | 4.0          | 0.40       | 0.39               | 4.79         | 11.11               | 11.45              | -0.34        | 103.91          | 103.00                        | +2.01                        | 3.0                           | 4.8         | Darjeeling                   | Cooch Behar              |           |           |  |  |
| 79                     | 4.4          | 0.88       | 0.71               | 3.60         | 7.66                | 7.08               | -0.12        | 68.91           | 48.80                         | +10.62                       | 2.0                           | 3.1         | Purneah                      | Darjeeling Hill District |           |           |  |  |
| 80                     | 4.6          | 0.71       | 0.29               | 1.94         | 3.94                | 4.81               | -0.87        | 40.70           | 34.71                         | +5.99                        | 1.3                           | 2.0         | Mozafferpore                 | Purneah                  |           |           |  |  |
| 80                     | 7.8          | 0.61       | 0.45               | 1.08         | 8.18                | 4.48               | +3.03        | 39.80           | 37.63                         | +2.26                        | 2.0                           | 2.1         | Durbhunga                    | North Bhagalpore         |           |           |  |  |
| 85                     | 2.9          | 0.08       | 0.40               | 2.20         | 5.23                | 4.08               | +1.15        | 33.10           | 34.37                         | -1.27                        | 2.0                           | 2.5         | Chupra                       | Durbhunga                |           |           |  |  |
| 76                     | 3.6          | 1.22       | -                  | -            | -                   | -                  | -            | -               | -                             | -                            | -                             | -           | -                            | Dohree                   | Chumparan |           |  |  |
| 71                     | 4.9          | 1.73       | 1.87               | 2.08         | 3.6                 | 4.34               | -0.67        | 31.34           | 33.03                         | -1.70                        | 3.8                           | 2.0         | Buxar                        | Saran                    |           |           |  |  |
| 77                     | 6.4          | 0.68       | -                  | -            | -                   | -                  | -            | -               | -                             | -                            | -                             | -           | -                            | Arrah                    | Shahabad  |           |  |  |
| 71                     | 5.9          | 0.59       | 0.60               | 1.82         | 3.04                | 4.20               | -1.16        | 32.70           | 35.01                         | -2.31                        | 2.3                           | 2.2         | Gya                          | Gya                      |           |           |  |  |
| 75                     | 7.7          | 0.06       | 0.53               | 1.48         | 3.51                | 4.06               | -0.55        | 31.91           | 34.41                         | -2.50                        | 2.3                           | 2.6         | Bankipore                    | Patna                    |           |           |  |  |
| 85                     | 3.1          | 0.72       | 1.16               | 1.92         | 4.80                | 5.00               | -0.20        | 36.28           | 36.11                         | +2.17                        | 3.3                           | 2.3         | Bhagulpore                   | South Bhagalpore         |           |           |  |  |
| 80                     | 5.9          | 1.36       | 1.96               | 2.38         | 5.3                 | 6.29               | -0.90        | 40.98           | 42.19                         | +4.79                        | 3.3                           | 3.2         | Doomka                       | Monghyr                  |           |           |  |  |
| 10.0                   | 1.14         | 1.88       | 3.04               | 4.88         | 5.60                | -0.77              | 41.72        | 42.23           | -0.51                         | 4.6                          | 3.9                           | Hazariabagh | Sonthal Pargunnahs           |                          |           |           |  |  |
| 9.6                    | 4.56         | 3.80       | 2.11               | 5.48         | 5.18                | +0.28              | 41.21        | 40.07           | +1.14                         | 5.5                          | 3.8                           | Ranchee     | Hazariabagh                  |                          |           |           |  |  |
| 7.6                    | 2.34         | 2.68       | 2.19               | 3.00         | 5.63                | -2.63              | 40.15        | 44.35           | +1.80                         | 6.0                          | 4.3                           | Chyphausa   | Lohardogga                   |                          |           |           |  |  |
| 4.3                    | 4.81         | -          | -                  | -            | -                   | -                  | -            | -               | -                             | -                            | -                             | -           | -                            | Silbaga                  | Manbhoom  |           |  |  |
| 4.4                    | 1.27         | -          | -                  | -            | -                   | -                  | -            | -               | -                             | -                            | -                             | -           | -                            | Jhubri                   | Singbhoom |           |  |  |
| 5.0                    | 0.07         | -          | -                  | -            | -                   | -                  | -            | -               | -                             | -                            | -                             | -           | -                            | Silchar                  | Assam     |           |  |  |





## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 16th of September 1887—con.

| Meteorological Division. | District.           | Station.          | RAINFALL.                 |                         |                         |                          |                            |                           |                         | TOTAL.                |                      | Total rain-fall since 1st of month. | Average total rain-fall from 1st of month. | Total rain-fall since 16th May 1887. | Average rain-fall from 1st to date. |
|--------------------------|---------------------|-------------------|---------------------------|-------------------------|-------------------------|--------------------------|----------------------------|---------------------------|-------------------------|-----------------------|----------------------|-------------------------------------|--|--------------------------------------|-------------------------------------|
|                          |                     |                   | Saturday, 10th September. | Sunday, 11th September. | Monday, 12th September. | Tuesday, 13th September. | Wednesday, 14th September. | Thursday, 15th September. | Friday, 16th September. | Number of rainy days. | of rainfall in inch. |                                     |  |                                      |                                     |
| NORTH BENGAL—continued.  | Baran               | Gopalgunge        | 0.08                      |                         |                         |                          |                            | 0.30                      | 0.38                    | 2                     | 0.38                 | 8.41                                | 3.76                                       | 39.10                                | 3.4                                 |
|                          |                     | Sawan             |                           |                         |                         |                          | 0.48                       | 0.40                      | 0.88                    | 2                     | 0.88                 | 4.81                                | 4.39                                       | 31.73                                | 3.4                                 |
| SOUTH BENGAL             | Shahabad            | Churrah           | 0.08                      |                         |                         |                          |                            | 0.14                      | 0.22                    | 2                     | 0.22                 | 3.47                                | 3.28                                       | 31.44                                | 3.4                                 |
|                          |                     | Buxar             | 0.30                      | 0.05                    |                         |                          | 0.31                       | 0.04                      | 0.63                    | 5                     | 0.63                 | 4.88                                | 4.33                                       | 39.39                                | 3.4                                 |
|                          |                     | Deouree           | 1.15                      | 0.07                    |                         |                          |                            |                           | 0.40                    | 3                     | 1.02                 | 5.02                                | ?  | 34.36                                | 3.4                                 |
|                          |                     | Bhubooh           | 0.20                      | 1.20                    |                         |                          |                            |                           | 0.16                    | 3                     | 1.56                 | 3.16                                | 4.89                                       | 34.14                                | 3.4                                 |
|                          |                     | Nasirah           | 0.72                      | 0.30                    |                         |                          |                            |                           | 0.30                    | 3                     | 1.32                 | 1.97                                | 6.04                                       | 39.18                                | 3.4                                 |
|                          |                     | Arrah             | 0.30                      | 0.07                    |                         |                          |                            | 0.05                      | 0.15                    | 4                     | 0.57                 | 4.86                                | 4.18                                       | 33.18                                | 3.4                                 |
|                          |                     | Mohania           |                           |                         |                         |                          |                            |                           |                         | Nil                   | Nil                  | ?                                   | ?  | ?                                    | ?                                   |
|                          | Gya                 | Aarungabad        | 0.23                      | 0.40                    |                         |                          |                            | 0.30                      | 0.30                    | 3                     | 0.93                 | 1.55                                | 4.78                                       | 37.46                                | 3.4                                 |
|                          |                     | Gya               | 0.15                      | 0.44                    |                         |                          |                            |                           |                         | 2                     | 0.59                 | 2.44                                | 4.48                                       | 34.37                                | 3.4                                 |
|                          |                     | Nowadah           | 0.13                      |                         |                         |                          |                            |                           | 0.23                    | 2                     | 0.36                 | 3.33                                | 4.40                                       | 32.71                                | 3.4                                 |
|                          |                     | Jehanabad         | 0.16                      | 0.45                    |                         |                          |                            | 0.08                      | 0.25                    | 4                     | 0.94                 | 4.56                                | 3.23                                       | 33.21                                | 3.4                                 |
|                          |                     | Arwal             |                           |                         |                         |                          |                            | 0.21                      | 0.21                    | 1                     | 0.21                 | 1.01                                | ?  | 31.91                                | 3.4                                 |
|                          |                     | Daudnagar         | 0.70                      |                         |                         |                          |                            | 0.12                      | 0.30                    | 3                     | 1.12                 | 1.07                                | ?  | 34.01                                | 3.4                                 |
|                          |                     | Sherrghati        |                           | 0.43                    |                         |                          |                            | 0.30                      | 0.30                    | 2                     | 0.72                 | 3.71                                | ?  | 32.39                                | 3.4                                 |
|                          |                     | Rajauli           |                           |                         |                         |                          |                            |                           |                         |                       |                      | ?                                   | ?  | ?                                    | ?                                   |
|                          |                     | Pakri Barawan     |                           | 0.15                    |                         |                          |                            |                           | 0.25                    | 2                     | 0.40                 | 5.07                                | ?  | 19.92                                | 3.4                                 |
|                          | Patna               | Patna             | 0.01                      |                         |                         |                          |                            | 0.05                      | 0.40                    | 3                     | 0.44                 | 1.78                                | 3.94                                       | 31.43                                | 3.4                                 |
|                          |                     | Dinapore          |                           |                         |                         |                          |                            | 0.15                      | 0.15                    | 1                     | 0.15                 | 2.74                                | 3.52                                       | 33.54                                | 3.4                                 |
|                          |                     | Bohar             | 0.47                      | 0.09                    |                         |                          |                            | 0.09                      | 0.09                    | 3                     | 0.65                 | 3.01                                | 4.35                                       | 32.03                                | 3.4                                 |
|                          |                     | Barra             |                           | 0.25                    |                         |                          |                            | 0.09                      | 0.09                    | 2                     | 0.51                 | 5.51                                | 4.36                                       | 30.01                                | 3.4                                 |
|                          |                     | Bakram            | 0.30                      |                         |                         |                          |                            | 0.15                      | 0.15                    | 2                     | 0.35                 | 2.36                                | ?  | 30.06                                | 3.4                                 |
|                          |                     | Hilla             | 0.32                      | 0.13                    |                         |                          |                            |                           |                         |                       |                      | ?                                   | ?  | ?                                    | ?                                   |
|                          | Monkhyr             | Begowah           |                           | 0.40                    |                         |                          |                            | 0.14                      | 1.10                    | 3                     | 1.74                 | 6.26                                | 4.44                                       | 45.01                                | 3.4                                 |
|                          |                     | Monkhyr           |                           | 0.16                    |                         |                          |                            | 0.38                      | 0.08                    | 3                     | 0.62                 | 4.54                                | 4.17                                       | 40.27                                | 3.4                                 |
|                          |                     | Jamui             | 0.46                      |                         |                         |                          | 0.12                       | 0.69                      | 0.08                    | 4                     | 1.25                 | 4.44                                | 4.67                                       | 34.91                                | 3.4                                 |
|                          |                     | Gogri             |                           | 0.20                    |                         |                          |                            | 0.05                      |                         | 2                     | 1.55                 | 9.44                                | ?  | 40.73                                | 3.4                                 |
|                          |                     | Sheikhpura        |                           |                         |                         |                          | 0.40                       |                           |                         | 1                     | 0.40                 | 7.02                                | ?  | 29.13                                | 3.4                                 |
|                          | South Bhagulpore.   | Bhagulpore        | 0.33                      |                         |                         |                          |                            | 0.42                      | 0.12                    | 3                     | 0.87                 | 4.89                                | 5.02                                       | 39.99                                | 3.4                                 |
|                          |                     | Baika             | 0.38                      |                         |                         |                          |                            | 0.26                      | 0.08                    | 3                     | 1.32                 | 4.26                                | 4.92                                       | 34.33                                | 3.4                                 |
|                          |                     | Kolung            |                           |                         |                         |                          |                            |                           |                         | Nil                   | Nil                  | 4.84                                | ?  | 40.09                                | 3.4                                 |
|                          | Sonthal Pergunnahs. | Rajmouli          | 0.22                      |                         |                         |                          | 0.50                       | 0.23                      | 0.51                    | 4                     | 1.53                 | 4.00                                | 8.23                                       | 51.09                                | 4.3                                 |
|                          |                     | Goda              |                           |                         |                         |                          |                            | 0.28                      | 0.57                    | 2                     | 0.85                 | 2.46                                | 5.51                                       | 43.08                                | 3.4                                 |
|                          |                     | Pakour            | 1.25                      | 0.75                    |                         |                          |                            | 1.46                      | 0.40                    | 4                     | 3.86                 | 11.08                               | 7.07                                       | 48.76                                | 4.1                                 |
|                          |                     | Nya Doonah        | 0.19                      | 0.71                    |                         |                          |                            | 0.54                      | 0.36                    | 4                     | 1.90                 | 5.90                                | 6.60                                       | 40.27                                | 4.4                                 |
|                          |                     | Doonah            | 1.44                      |                         |                         |                          |                            | 0.06                      | 0.29                    | 3                     | 1.79                 | 3.79                                | 5.24                                       | 42.03                                | 4.1                                 |
|                          |                     | Jamara            | 1.19                      | 0.46                    |                         |                          |                            |                           | 0.31                    | 3                     | 1.90                 | 5.04                                | 4.10                                       | 35.77                                | 4.2                                 |
|                          |                     | Sinra             |                           |                         |                         |                          |                            |                           |                         |                       |                      | ?                                   | ?  | ?                                    | ?                                   |
|                          |                     | Nasihat           | 1.80                      | 0.29                    | 0.39                    |                          |                            |                           |                         | 2                     | 2.19                 | 7.48                                | ?  | 30.19                                | ?                                   |
| NUTIA NAG-PUR.           | Hasaribagh          | Pachumia (Girda). | 0.70                      | 0.25                    |                         |                          |                            | 0.38                      |                         | 3                     | 1.33                 | 3.85                                | 5.47                                       | 36.81                                | 4.0                                 |
|                          |                     | Hasaribagh        | 0.23                      | 0.25                    | 0.04                    |                          |                            | 0.90                      |                         | 4                     | 1.41                 | 3.71                                | 5.32                                       | 40.12                                | 4.1                                 |
|                          |                     | Hasaribagh        | 0.40                      | 0.25                    |                         |                          |                            | 0.20                      | 0.60                    | 5                     | 1.77                 | 6.30                                | 4.57                                       | 35.93                                | 3.8                                 |
|                          |                     | Manudi Hills      |                           |                         |                         |                          |                            |                           |                         |                       |                      | 4.81                                | ?  | 30.0                                 | 3.4                                 |
|                          |                     | Jhoomrah Hills    | 0.30                      | 0.70                    | 1.00                    | 0.30                     |                            | 0.20                      | 1.00                    | 6                     | 3.50                 | 3.80                                | 8.04                                       | 38.70                                | 3.4                                 |
|                          |                     | Saras             | 0.05                      | 0.41                    | 0.08                    |                          |                            | 0.30                      | 0.42                    | 5                     | 1.28                 | 4.56                                | ?  | 33.11                                | ?                                   |
|                          |                     | Chatre            | 0.36                      | 0.19                    |                         |                          | 0.24                       |                           | 0.53                    | 4                     | 1.73                 | 5.01                                | ?  | 41.51                                | ?                                   |
|                          |                     | Aaragdeh          |                           |                         |                         |                          |                            | 0.43                      |                         | 2                     | 1.25                 | 10.43                               | ?  | 63.03                                | ?                                   |
|                          |                     | Samghur           | 1.40                      |                         |                         | 1.40                     |                            |                           | 1.40                    | 3                     | 4.20                 | ?                                   | ?  | ?                                    | ?                                   |
|                          | Lohardugga          | Lohardugga        | 1.37                      | 0.25                    | 0.40                    |                          |                            | 1.68                      | 0.51                    | 5                     | 4.14                 | 8.07                                | ?  | 38.08                                | ?                                   |
|                          |                     | Kanoni            | 2.41                      | 0.30                    | 0.17                    |                          |                            | 0.14                      | 0.95                    | 5                     | 3.07                 | 5.84                                | 5.95                                       | 53.47                                | 4.1                                 |
|                          |                     | Pannow            | 0.10                      | 1.06                    | 0.16                    |                          |                            | 0.20                      | 0.18                    | 6                     | 1.96                 | 6.50                                | 5.23                                       | 46.19                                | 3.4                                 |
|                          |                     | Sikh              | 0.45                      | 0.08                    |                         | 0.05                     |                            |                           | 1.03                    | 4                     | 1.21                 | 5.83                                | ?  | 41.06                                | ?                                   |
|                          |                     | Hasaribagh        |                           |                         |                         |                          |                            |                           |                         |                       |                      | ?                                   | ?  | ?                                    | ?                                   |
|                          |                     | Garrwah           |                           |                         |                         |                          |                            | 0.70                      |                         |                       |                      | ?                                   | ?  | ?                                    | ?                                   |
|                          | Singbhoon           | Onyemah           | 0.95                      | 0.75                    | 0.05                    |                          | 0.08                       | 0.70                      | 0.20                    | 6                     | 2.68                 | 3.00                                | 5.63                                       | 48.15                                | 4.1                                 |
|                          |                     | Chakradhar-pore   | 0.55                      | 0.47                    | 0.41                    |                          |                            | 0.59                      | 0.61                    | 5                     | 2.63                 | 3.15                                | ?  | 36.06                                | ?                                   |
|                          |                     | Chustilla         | 0.69                      | 1.36                    | 1.95                    | 1.39                     | 1.31                       | 0.98                      | 0.56                    | 7                     | 7.80                 | 9.19                                | ?  | 51.58                                | ?                                   |
|                          |                     | Baharagura        | 1.02                      |                         |                         | 1.42                     |                            | 0.25                      | 1.70                    | 4                     | 5.53                 | 7.28                                | ?  | 36.69                                | ?                                   |
|                          | Manbhoon            | Parula            | 0.43                      | 1.33                    | 0.81                    | 0.68                     |                            | 0.35                      | 0.58                    | 6                     | 4.08                 | 5.46                                | 4.72                                       | 40.48                                | 4.1                                 |
|                          |                     | Gobindpore        |                           | 1.15                    | 0.08                    |                          | 0.05                       | 0.06                      | 0.21                    | 5                     | 1.53                 | 4.30                                | 4.70                                       | 39.70                                | 3.4                                 |
|                          |                     | Naghnath-pore     | 0.55                      | 1.75                    | 0.26                    | 0.47                     |                            | 0.13                      | 0.45                    | 6                     | 3.41                 | 4.38                                | ?  | 38.39                                | ?                                   |
|                          |                     | Sarrabhoon        | 0.85                      | 2.19                    | 0.80                    | 0.08                     |                            | 0.47                      | 0.70                    | 6                     | 4.84                 | 6.28                                | ?  | 38.18                                | ?                                   |
|                          |                     | Jhalas            | 2.06                      |                         |                         |                          |                            | 1.10                      |                         |                       |                      | ?                                   | ?  | ?                                    | ?                                   |
|                          |                     | Una               |                           |                         | 0.20                    |                          |                            | 1.50                      |                         |                       |                      | ?                                   | ?  | ?                                    | ?                                   |

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the return wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 16th September 1887.

**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVA-  
TIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
16TH OF SEPTEMBER 1887.**

On September, the 9th, or the last day of the previous week, an extremely rapid fall of pressure set in over the northern half of the Bay, the pressure giving way most rapidly at the eastern stations, and thus forming an area of relatively low pressure over the north-eastern part of the Bay. On the 10th a further very rapid fall of pressure took place over the northern half of the Bay, and at some of the stations in South Bengal the fall equalled about 0·15 inch. A distinct barometric depression was therefore formed, the centre of which was apparently not very far south of the Sunderbans, and on the 10th the centre of the wind circulation accompanying it was to the south or south-west of Burrisal. The depression then travelled in a westerly direction, and on the 11th the centre of the feeble storm was about midway between Saugor Island and Faise Point, and it was again accompanied by a distinct cyclonic circulation of winds, though the wind velocities in connection with it were light. On the morning of the 12th the depression had passed well inland, and had disappeared into the Central Provinces, and in South Bengal pressure rose very rapidly, while the area of lowest pressure in the Bay retreated to South Orissa. Pressure continued to rise on the 13th, but the general conditions were unaltered, and the depression had quite ceased to affect the weather in the Province of Bengal. During the formation and advance of the feeble storm, moderate to heavy rain was brought to the southern districts, and in some cases the falls were very heavy: thus on the 10th, Bongoug received 5·05 inches, Culna 3·08 inches, Khoolna 2·94 inches, Ranaghat 2·35 inches, Kandi 2·22 inches, and Tumlook 2·40 inches. On the 11th rainfall was again very general in the southern districts, and many stations received falls exceeding an inch, but on the 12th rainfall became rather less general and rather lighter.

The storm having disappeared inland, it then became possible for the monsoon winds to flow over the Province. Moderate rain commenced to fall in many districts, but it was neither very general nor heavy. A rather strong south-easterly current set in over the whole of Bengal from about the 13th, though, at the same time, a strong westerly current was blowing across the south of the Bay from the Arabian Sea. This seems to have deflected the area of heavy rainfall from the Bengal current towards the east coast of the Bay, and on the 14th Diamond Island reported the excessive rainfall of 9·58 inches. On the 15th a rapid fall of the barometer took place in the north-west angle of the Bay, resulting in the formation of another very feeble depression, the centre of which was near Balasore, and which was accompanied with cyclonic circulation of winds, and the result was that heavy rainfall was brought on this day to parts of South-West Bengal and Orissa, and thus Pooree reported 3·18 inches, False Point 4·46 inches, Dharmasallah 4·02 inches, Garbetta 2·18 inches, and Anda (Bankoora district) 2·70 inches. On the 16th the depression had entirely passed inland, and a steady monsoon current from the Bay of Bengal flowed over the whole Province, and on the 14th and 15th moderate rainfall was general over almost the whole Province.

It will thus be seen that conditions have been rather favourable for rainfall in all districts, except North Bengal and Behar, and the presence and movement of the two depressions have brought good rain to Orissa, South-West Bengal, and Chutia Nagpur.

*Pressure.*—The variations of pressure over the Province during the week have been large. At the commencement pressure generally fell rapidly in connection with the formation of the depression, but with its disappearance pressure rose rapidly till the 14th, when a fall again occurred, which was succeeded on the 15th and 16th by a further rise; but even at the close of the week pressure was still below the normal over the whole Province, the defect being as large as a tenth of an inch in Chutia Nagpur. The mean pressure for the whole week has therefore been considerably in defect of the normal, the defects varying from 0·103 inch at Gopalpur and 0·132 inch at False Point to 0·071 inch at Purneah. Taking only those stations into consideration, from which records have been received for a number of years, and which therefore furnish reliable averages, the mean pressure for the week for the whole Province has been in defect of the normal by 0·107 inch. In Assam also pressure has been in defect of the normal by nearly a tenth of an inch at each of the three stations, and the mean defect has been 0·101 inch.

*Temperature.*—Owing to the defective rainfall in North Bengal and Behar, temperature has been about 2° above the normal in these districts, while in the other districts of Bengal the variations from the normal have been small, though temperature has been generally rather higher than usual. For the whole week the mean temperature of the Province has been 1·2° above the normal. In Assam also temperature has been rather largely above the normal, and the excess has averaged 3°.

*Rainfall.*—It has already been stated that conditions were rather favourable for rainfall in Orissa, South-West and East Bengal, and in Chutia Nagpur, and unfavourable elsewhere. Orissa has received an average of about four inches of rain, South-West Bengal and East Bengal about three inches, and Chutia Nagpur about two and a half inches, and in each district rain has fallen on an average of four or five days during the week. In North Bengal and South Behar the rainfall has averaged little more than an inch, while in North Behar it has been less than half an inch, though even these districts have received rain on two or three days

in the week. Compared with the normal fall for the period, and expressed as a percentage of that amount, the actual district average falls for the past week have been—Orissa 142 per cent., South-West Bengal 144 per cent., East Bengal 128 per cent., North Bengal 86 per cent. North Behar only 20 per cent., South Behar 63 per cent., and Chutia Nagpur 112 per cent. Taking all these large divisions as having an equal value in the calculation, the average rainfall of the whole Province for the week may be said to have been 92 per cent. of the normal. The following districts have received very heavy falls during the week :—Pooree, Midnapore, 24-Pergunnahs, Howrah, Hooghly, Burdwan, Berhampore, Krishnagore, Jessore and Burrisal; while the following are very largely in defect :—Bogra, Rajshahye, Maldah, Dinagore, Rungpore, Julpigoree, Darjeeling, Purneah, Durbhunga, Chumparun, Gya, Patna and Sarun.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 16th of September 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          | RAINFALL.       |            |                         |                                |            |                     |                 |                      |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 15th May 1887. |                 |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. | Average.             | Normal average. |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |                 |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |                 |
| Orissa                       | 95.4                          | 75.1                         | 88.0                    | 78.3                   | 83.1                  | -0.1   | 3.90     | 2.77            | +1.13      | 4.9                     | 3.9                            | +1.0       | 4.61                | 6.21            | 36.50                | 41.12           |
| South-West Bengal            | 95.3                          | 73.3                         | 80.3                    | 78.2                   | 83.8                  | +0.1   | 2.82     | 1.96            | +0.86      | 4.6                     | 3.5                            | +1.1       | 4.03                | 5.50            | 39.96                | 43.00           |
| East Bengal                  | 96.3                          | 70.1                         |                         |                        |                       |  | 3.00     | 2.34            | +0.66      | 4.3                     | 3.8                            | +0.5       | 5.18                | 7.34            | 46.06                | 63.15           |
| North Bengal                 | 95.6                          | 73.6                         | 91.2                    | 78.8                   | 85.0                  | +2.5   | 1.10     | 3.02            | -1.92      | 2.7                     | 3.1                            | -0.4       | 9.40                | 7.62            | 67.39                | 58.73           |
| North Behar                  | 95.4                          | 70.77                        | 92.0                    | 79.1                   | 85.6                  | +1.9   | 0.47     | 2.42            | -1.95      | 2.0                     | 2.7                            | -0.7       | 5.70                | 5.68            | 45.56                | 39.85           |
| South Behar                  | 97.0                          | 75.5                         | 91.4                    | 79.4                   | 85.4                  | +2.0   | 1.21     | 1.93            | -0.71      | 3.1                     | 2.8                            | +0.3       | 4.22                | 4.92            | 37.25                | 36.59           |
| Chutia Nagpur                | 88.5*                         | 60.9*                        | 84.9*                   | 72.2*                  | 78.5*                 | +0.7*  | 2.35     | 2.09            | +0.26      | 5.0                     | 3.9                            | +1.1       | 4.60                | 5.43            | 41.03                | 41.58           |
| Assam                        | 101.1                         | 75.8                         | 92.5                    | 78.7                   | 85.6                  | +3.0   |          |                 |            |                         |                                |            |                     |                 |                      |                 |

\* Ohyebarua not included.

METEOROLOGICAL OFFICE, BENGAL ;

A. PEDLER,

The 20th September 1887.

Offa. Meteorological Reporter to the Govt. of Bengal.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 11th to 17th September 1887.

| MONTH.    | Date.        | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.           |            |           | Rain.   |
|-----------|--------------|--------------|----------|--------|----------|----------------|-----------------------|------------|-----------|---------|
|           |              | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension.<br>". | Dew point. | Humidity. |         |
| 1887.     |              | °            | °        | °      | °        | °              | Inches.               | °          | %         | Inches. |
| September | ... 11th ... | 78.1         | 87.5     | 10.7   | 76.8     | 78.2           | .949                  | 77.6       | 94        | 0.18    |
| "         | ... 12th ... | 79.1         | 83.9     | 6.1    | 77.8     | 79.2           | .971                  | 78.3       | 91        | 0.08    |
| "         | ... 13th ... | 80.4         | 90.0     | 11.2   | 78.8     | 80.5           | 1.013                 | 79.6       | 90        | 0.06    |
| "         | ... 14th ... | 80.6         | 91.0     | 12.0   | 79.0     | 80.7           | .998                  | 79.2       | 84        | 0.02    |
| "         | ... 15th ... | 79.6         | 87.3     | 9.1    | 78.2     | 79.7           | .984                  | 78.7       | 90        | 1.10    |
| "         | ... 16th ... | 79.7         | 87.0     | 8.2    | 78.8     | 79.8           | .992                  | 79.0       | 91        | 0.15    |
| "         | ... 17th ... | 79.1         | 90.5     | 12.9   | 77.6     | 79.3           | .966                  | 78.2       | 88        | 0.03    |

The mean temperature of the seven days

79.5

The extreme variation of temperature

14.2

The maximum temperature

91.0

The mean relative humidity

90

The total fall of rain from 11th to 17th September 1887

1.62

The mean temperature and humidity are obtained by applying to the mean of the 10th, 16th, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ;

A. PEDLER,

The 19th September 1887.

for Offa. Meteorological Reporter to the Govt. of India.



## Results of the Meteorological Observations taken at the Alipore Observatory from 11th to 17th September 1887.

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 59° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain.   | WEATHER.                       |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|--------------------------------|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |         |                                |
| 1887.  |       | O               |                                     | Inches.                              | O            | O        | O      | O        | O              | Inches          | O          | %         |                       |                 | Inches. |                                |
| Sept.  | 11th  | 146.5           | 3.2                                 | 29.427                               | 80.9         | 85.0     | 8.2    | 76.8     | 78.7           | 0.952           | 77.7       | 90        | NE, ESE and SE ...    | 137             | 0.24    | Chiefly cloudy, o, g, d, p.    |
| "      | 12th  | 146.2           | 3.8                                 | .577                                 | 81.8         | 86.3     | 8.4    | 77.9     | 79.3           | .968            | 78.2       | 89        | SE and ESE ...        | 97              | 0.37    | Chiefly cloudy, o, p, t.       |
| "      | 13th  | 150.5           | 3.7                                 | .650                                 | 82.8         | 87.5     | 8.9    | 78.0     | 80.1           | .991            | 79.0       | 88        | SE ...                | 79              | 0.03    | Chiefly cloudy, d, p.          |
| "      | 14th  | 146.9           | 5.8                                 | .580                                 | 82.9         | 88.3     | 9.5    | 78.8     | 80.0           | .990            | 78.9       | 88        | SE and ESE ...        | 65              | 1.43    | Chiefly cloudy, o, g, p, t, d. |
| "      | 15th  | 146.8           | 1.2                                 | .618                                 | 82.2         | 85.4     | 7.1    | 78.3     | 79.4           | .967            | 78.2       | 88        | ESE ...               | 162             | 0.24    | Cloudy, o, g, p, d.            |
| "      | 16th  | 151.4           | 1.7                                 | .616                                 | 81.9         | 84.9     | 6.6    | 78.3     | 79.2           | .963            | 78.1       | 88        | SE by S ...           | 182             | 0.07    | Chiefly cloudy, o, g, d.       |
| "      | 17th  | 145.3           | 6.9                                 | .707                                 | 82.6         | 88.4     | 11.3   | 77.1     | 79.2           | .951            | 77.7       | 84        | SE by S and SSE ...   | 94              | 0.02    | Partially cloudy, o, g, d.     |

|  |     |     |     |         |                 |
|--|-----|-----|-----|---------|-----------------|
| The mean pressure of the seven days  | ... | ... | ... | Inches. | 29.591          |
| The average pressure of the corresponding period for 24 years, S. G.'s Office          | ... | ... | ... | ...     | 29.669          |
| The total number of hours of bright sunshine   | ... | ... | ... | Hours.  | 26.3            |
| The maximum possible number of hours of sunshine                                       | ... | ... | ... | ...     | 85.9            |
|  |     |     |     | O       |                 |
| The mean temperature of the seven days   | ... | ... | ... | ...     | 82.2            |
| The average temperature of the corresponding period for 24 years, S. G.'s Office       | ... | ... | ... | ...     | 83.5            |
| The extreme variation of temperature   | ... | ... | ... | ...     | 11.6            |
| The maximum temperature  | ... | ... | ... | ...     | 88.4            |
|  |     |     |     | Miles.  |                 |
| The highest velocity of the wind in one hour   | ... | ... | ... | ...     | 14              |
|  |     |     |     | Lbs.    |                 |
| The highest pressure of wind on one square foot  | ... | ... | ... | ...     | Not measurable. |
|  |     |     |     | %       |                 |
| The mean relative humidity   | ... | ... | ... | ...     | 88              |
| The average relative humidity of the corresponding period for 24 years, S. G.'s Office | ... | ... | ... | ...     | 86              |
|  |     |     |     | Inches. |                 |
| The total fall of rain from 11th to 17th September 1887                                | ... | ... | ... | ...     | 2.40            |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | ...     | 1.98            |
| The total fall from 1st January to 17th September 1887                                 | ... | ... | ... | ...     | 49.92           |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | ...     | 54.54           |

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph. The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, t thunder, d dew.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA ;  
Calcutta, the 19th September 1887.

## MEMORANDUM.

THE mortuary returns of the districts in Bengal for the month of July 1887 disclose the following results:—

1. That the deaths of 137,112 persons were registered in these districts among their population of 66,163,884, representing an annual death-rate of 24·84 per 1,000 against 20·40 per 1,000 during the preceding month, and 16·92 per 1,000 during the corresponding month of the preceding year, indicating, as compared with both the periods, a very considerable advance in the registration of the events.

2. That the highest casualty rates were returned from the following districts:—

| Districts.     | Ratio per mille. | Districts.     | Ratio per mille. |
|----------------|------------------|----------------|------------------|
| Shahabad ...   | 72·00            | Darjiling ...  | 33·72            |
| Gya ...        | 63·80            | Hazaribagh ... | 33·36            |
| Puri ...       | 58·08            | Bhagulpore ... | 28·66            |
| Patna ...      | 51·00            | Chumparun ...  | 26·76            |
| Lohardugga ... | 42·72            | Jalpaiguri ... | 26·40            |
| Monghyr ...    | 40·32            | Balasore ...   | 26·04            |
| Sarun ...      | 38·40            |                |                  |

3. That the mortality from the specific death-causes specified in the table appended to this memorandum, as contrasted with the outcome of the corresponding month of the preceding year, stood as follows:—

|                      | Ratio per mille during— |            |
|----------------------|-------------------------|------------|
|                      | July 1887.              | July 1886. |
| Cholera ...          | 5·52                    | ·72        |
| Small-pox ...        | ·07                     | ·04        |
| Fever ...            | 14·52                   | 12·12      |
| Bowel-complaints ... | ·81                     | ·60        |
| Injury ...           | ·72                     | ·72        |
| Other causes ...     | 2·88                    | 2·28       |

indicating a marked increase of mortality from cholera and fever, particularly those from the former, no noticeable differences from the rest of the diseases, the casualties from injury remaining stationary.

4. That while no district presented noticeably high mortality from small-pox and injury, Darjiling suffered pre-eminently from bowel-complaints; Puri from the maladies classed under the head of "other causes" (the former disease furnishing a death-rate of 10·32, and the latter, of 11·52 per 1,000 of population), and the following districts from cholera and fever at the rates noted opposite them.

| Cholera.         | Ratio per mille. | Fever.         | Ratio per mille. |
|------------------|------------------|----------------|------------------|
| Puri ...         | 40·08            | Shahabad ...   | 29·16            |
| Shahabad ...     | 37·44            | Gya ...        | 25·80            |
| Gya ...          | 29·88            | Monghyr ...    | 25·56            |
| Lohardugga ...   | 20·64            | Lohardugga ... | 25·20            |
| Patna ...        | 14·52            | Patna ...      | 24·24            |
| Sarun ...        | 14·04            | Jalpaiguri ... | 23·40            |
| Balasore ...     | 9·36             | Dinajpur ...   | 22·08            |
| Monghyr ...      | 7·80             | Rajshahye ...  | 21·72            |
| Cuttack ...      | 6·72             | Bhagulpore ... | 21·60            |
| Chumparun ...    | 6·24             | Rungpore ...   | 20·40            |
| Durbhanga ...    | 6·00             |                |                  |
| Mozufferpore ... | 5·40             |                |                  |
| Hazaribagh ...   | 2·28             |                |                  |
| Midnapore ...    | 2·16             |                |                  |

It will be seen from the foregoing table that Puri, Shahabad, Gya and Lohardugga suffered notably from cholera, and the same districts, excluding Puri and including Monghyr, from fever.

5. That under the heads of *Sex*, *Class* and *Age*, the mortality of the month was distributed as follows:—

| According to Sex.                                   | Ratio per mille. | According to Class. | Ratio per mille. | According to Age.        | Ratio per mille. |
|---|------------------|---------------------|------------------|--------------------------|------------------|
| Males ...   | 27·00            | Christians ...      | 12·96            | Under 1 year             | 148·08           |
| Females ...   | 22·68            | Hindus ...          | 27·48            | 1 and under 5 years...   | 35·76            |
| Ratio of male deaths to every 100 female deaths ... | 117              | Mahomedans ...      | 19·68            | 5 " " 10 " ...           | 16·20            |
|   |                  | Budhists ...        | 17·04            | 10 " " 15 " ...          | 12·96            |
|   |                  | Other classes ...   | 27·60            | 15 " " 20 " ...          | 16·20            |
|   |                  |                     |                  | 20 " " 30 " ...          | 16·56            |
|   |                  |                     |                  | 30 " " 40 " ...          | 18·12            |
|   |                  |                     |                  | 40 " " 50 " ...          | 22·56            |
|   |                  |                     |                  | 50 " " 60 " ...          | 30·60            |
|   |                  |                     |                  | 60 years and upwards ... | 45·00            |

R. LIDDERDALE, M.D., Deputy Surgeon-General,

The 16th September 1887.

Sanitary Commissioner for Bengal.

*Statement showing the Results of the Registration of Deaths in the Districts in Bengali for*

| District.                 | POPULATION |           | DEATHS FROM— |          |            |         |                   |         |                 |                   |         |                 | DISEASE |             | RATIO PER 1,000 OF POPULATION FOR YEAR.                                   |  | COMPARISON WITH PREVIOUS YEAR. |  |
|---------------------------|------------|-----------|--------------|----------|------------|---------|-------------------|---------|-----------------|-------------------|---------|-----------------|---------|-------------|---|--|--------------------------------|--|
|                           | Males.     | Females.  | Total.       | Disease  |            |         |                   |         | Injury.         |                   |         |                 |         | All causes. | Rate of deaths per 1,000 of popu- lation per annum in the previous month. | Rate of deaths in this month of the previous year. |                                |  |
|                           |            |           |              | Cholera. | Small-pox. | Fevers. | Bowel-complaints. | Injury. | Other diseases. | Bowel-complaints. | Injury. | Other diseases. |         |             |   |  |                                |  |
| Burdwan                   | 609,254    | 725,425   | 1,334,679    | 10       | ..         | 1,2     | 8                 | 15      | 22              | 1,00              | 45      | 10,00           | 7,70    | 14,00       | 10,00   | 12,00  | 12,00                          |  |
| Barrackpore               | 897,140    | 824,530   | 1,721,670    | 73       | ..         | 1,32    | 34                | 41      | 28              | 1,51              | 45      | 6,00            | 2,94    | 13,00       | 13,00   | 13,00  |                                |  |
| Medinipur                 | 841,605    | 734,124   | 1,575,729    | 59       | ..         | 1,71    | 14                | 43      | 410             | 1,58              | 12      | 15,00           | 6,12    | 15,00       | 15,00   | 15,00  |                                |  |
| Midnapore                 | 1,406,105  | 1,247,525 | 2,653,630    | 40       | ..         | 1,71    | 14                | 137     | 510             | 4,20              | 21,12   | 10,00           | 2,40    | 10,00       | 10,00   | 10,00  |                                |  |
| Hugli                     | 1,406,105  | 1,247,525 | 2,653,630    | 40       | ..         | 1,71    | 14                | 137     | 510             | 4,20              | 21,12   | 10,00           | 2,40    | 10,00       | 10,00   | 10,00  |                                |  |
| Baranagar                 | 174,306    | 177,000   | 351,306      | 10       | ..         | 1,71    | 4                 | 50      | 8               | 7,51              | 1,71    | 6,00            | 2,01    | 10,00       | 10,00   | 10,00  |                                |  |
| Total (including Burdwan) | 400,251    | 524,874   | 925,125      | 31       | ..         | 6,67    | 115               | 67      | 135             | 1,02              | 30      | 8,16            | 1,50    | 11,16       | 11,16   | 11,16  |                                |  |
| Baranagar                 | 316,479    | 818,002   | 1,134,481    | 15       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 975,630    | 804,429   | 1,780,059    | 144      | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 609,254    | 725,425   | 1,334,679    | 40       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 897,140    | 824,530   | 1,721,670    | 73       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 841,605    | 734,124   | 1,575,729    | 59       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 1,406,105  | 1,247,525 | 2,653,630    | 40       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 1,406,105  | 1,247,525 | 2,653,630    | 40       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 174,306    | 177,000   | 351,306      | 10       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Total (including Burdwan) | 400,251    | 524,874   | 925,125      | 31       | ..         | 6,67    | 115               | 67      | 135             | 1,02              | 30      | 8,16            | 1,50    | 11,16       | 11,16   | 11,16  |                                |  |
| Baranagar                 | 316,479    | 818,002   | 1,134,481    | 15       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 975,630    | 804,429   | 1,780,059    | 144      | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 609,254    | 725,425   | 1,334,679    | 40       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 897,140    | 824,530   | 1,721,670    | 73       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 841,605    | 734,124   | 1,575,729    | 59       | ..         | 1,32    | 22                | 9       | 15              | 2,02              | 24      | 11,00           | 3,70    | 11,00       | 11,00   | 11,00  |                                |  |
| Baranagar                 | 1,406,105  |           |              |          |            |         |                   |         |                 |                   |         |                 |         |             |   |  |                                |  |



# MEMORANDUM.

THE returns from the principal Municipalities in Bengal presented, during the week ending 3rd September 1887, the following results :—

1. That births and deaths were recorded in these Municipalities at the rates respectively of 17·1 and 25·1 per 1,000 of population, as opposed to 19· and 28·4 per 1,000 in the preceding week ending 27th August, indicating a large reduction in the registration of both the events.

2. That these events were returned in the highest proportions from the following Municipalities :—

| <i>Births.</i> |     |                  | <i>Deaths.</i>      |     |                  |
|----------------|-----|------------------|---------------------|-----|------------------|
|                |     | Ratio per mille. |                     |     | Ratio per mille. |
| Monghyr        | ... | 41·6             | Gya                 | ... | 54·6             |
| Bhagulpore     | ... | 37·1             | Arrah               | ... | 45·5             |
| Gya            | ... | 35·5             | Puri                | ... | 42·0             |
| Durbhanga      | ... | 33·8             | Suburbs of Calcutta | ... | 36·2             |
|                |     |                  | Bhagulpore          | ... | 35·3             |
|                |     |                  | Monghyr             | ... | 32·5             |
|                |     |                  | Ranaghat            | ... | 29·9             |
|                |     |                  | Serampore           | ... | 29·4             |

3. That, in comparison with the results of the preceding week, there was a considerable reduction in the death-rate from cholera; no variations in fatality from small-pox and injury; and only small differences in the casualty-rates from the rest of the death-causes :—

|                  |     |     | Ratio per mille during the weeks ending— |                   |
|------------------|-----|-----|--|-------------------|
|                  |     |     | 3rd September 1887.                      | 27th August 1887. |
| Cholera          | ... | ... | 2·6                                      | 4·9               |
| Small-pox        | ... | ... | ·1                                       | ·1                |
| Fever            | ... | ... | 9·7                                      | 10·4              |
| Bowel-complaints | ... | ... | 4·8                                      | 4·5               |
| Injury           | ... | ... | ·3                                       | ·3                |
| Other causes     | ... | ... | 7·6                                      | 8·2               |

4. That the Municipalities named below appear to have suffered the most from the diseases indicated in the foregoing table, excepting small-pox and injury, the casualties from which were nowhere above normal :—

| <i>Cholera.</i> |                  | <i>Fever.</i> |                  | <i>Bowel-Complaints.</i> |                  | <i>Other Causes.</i> |                  |
|-----------------|------------------|---------------|------------------|--------------------------|------------------|----------------------|------------------|
|                 | Ratio per mille. |               | Ratio per mille. |                          | Ratio per mille. |                      | Ratio per mille. |
| Arrah           | 14·3             | Ranaghat      | 23·9             | Puri                     | 14·7             | Gya                  | 23·3             |
| Burdwan         | 10·7             | Bhagulpore    | 23·6             | Suburbs of Cal-          | 10·1             | Puri                 | 18·9             |
| Monghyr         | 6·3              | Arrah         | 22·7             | cutta                    |                  | Serampore            | 13·7             |
| Gya             | 5·5              |               |                  |                          |                  | Midnapore            | 10·8             |
| Durbhanga       | 3·9              |               |                  |                          |                  | Suburbs of Cal-      |                  |
| Patna           | 3·6              |               |                  |                          |                  | cutta                | 9·9              |

5. That the casualties in relation to *Sex*, *Class* and *Age*, were returned at the rates indicated below :—

| <i>According to Sex.</i>                        |     |                  | <i>According to Class.</i> |     |                  | <i>According to Age.</i> |     |                  |
|---|-----|------------------|----------------------------|-----|------------------|--------------------------|-----|------------------|
|   |     | Ratio per mille. |                            |     | Ratio per mille. |                          |     | Ratio per mille. |
| Males   | ... | 24·6             | Christians                 | ... | 17·4             | Under 1 year             | ... | 233·2            |
| Females   | ... | 26·0             | Hindus                     | ... | 26·8             | 1 and under 5 years      | ... | 41·7             |
| Ratio of male deaths to every 100 female deaths | 108 |                  | Mahomedans                 | ... | 21·6             | 5 " " 10 " "             | ... | 14·7             |
|   |     |                  |                            |     |                  | 10 " " 15 " "            | ... | 7·2              |
|   |     |                  |                            |     |                  | 15 " " 20 " "            | ... | 14·1             |
|   |     |                  |                            |     |                  | 20 " " 30 " "            | ... | 14·2             |
|   |     |                  |                            |     |                  | 30 " " 40 " "            | ... | 14·3             |
|   |     |                  |                            |     |                  | 40 " " 50 " "            | ... | 20·8             |
|   |     |                  |                            |     |                  | 50 " " 60 " "            | ... | 30·0             |
|   |     |                  |                            |     |                  | 60 years and upwards     | ... | 51·0             |

R. LIDDERDALE, M.D., *Deputy Surgeon-General,*

The 19th September 1887.

*Sanitary Commissioner for Bengal.*

| DISTRICTS. | NAMES OF MUNICIPALITIES. | POPULATION. |          |           | BIRTHS.                                  |  |  | MORTALITY ACCORDING TO—                  |          |                 |                   |                   |         |                 |             |   |         | Sex.  |  |     |      |      |      |                   |
|------------|--------------------------|-------------|----------|-----------|--|--|--|--|----------|-----------------|-------------------|-------------------|---------|-----------------|-------------|---|---------|---|--|-----|------|------|------|-------------------|
|            |                          | MALES.      |          | Total.    | NUMBER OF—                               |  | Ratio of male births to every 100 female births. | DISEASE.                                 |          |                 |                   |                   |         |                 |             |   |         | Ratio of deaths per 1,000 of population per annum in the previous week. | Ratio of male deaths to every 100 female deaths. |     |      |      |      |                   |
|            |                          | Males.      | Females. |           | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  | DEATHS FROM—                             |          |                 |                   |                   |         |                 |             |   |         |   |  |     |      |      |      |                   |
|            |                          |             |          |           | Total.                                   | Ratio of male births to every 100 female births. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |          |                 |                   |                   |         |                 |             |   |         |   |  |     |      |      |      |                   |
|            |                          |             |          |           |  |  |  | All causes.                              | Cholera. | Small-pox.      | Fever.            | Bowel-complaints. | Injury. | Other diseases. | All causes. | Ratio of deaths per 1,000 of population per annum in the previous week. | Deaths. | Ratio of deaths per 1,000 of population per annum.                      | Ratio of male deaths to every 100 female deaths. |     |      |      |      |                   |
| 1          | 2                        | 3           | 4        | 5         | 6  | 7  | 8  | 9  | 10       | 11              | 12                | 13                | 14      | 15              | 16          | 17  | 18      | 19  | 20   |     |      |      |      |                   |
| Bengal     | Burdwan                  | 18,063      | 16,017   | 34,080    | 4  | 12   | 12.2   | 6.1                                      | 18.3     | 7               | 6                 | 1                 | 1       | 15              | 16.7        | 1.5   | 22.9    | 35.1  | 7  | 8   | 20.2 | 26.0 | 87   |                   |
|            | Midnapore                | 16,927      | 16,633   | 33,560    | 3  | 3  | 6  | 4.6                                      | 9.3      | ...             | 3                 | 3                 | ...     | 7               | 13          | 10.8  | 20.1    | 27.9  | 4  | 9   | 12.3 | 28.1 | 44   |                   |
|            | Hughli and Chinsurah     | 19,170      | 19,339   | 38,509    | 4  | 6  | 12   | 5.4                                      | 10.7     | 10.1            | 50                | 1                 | ...     | 1               | 13          | 1.3   | 17.4    | 21.5  | 5  | 8   | 13.6 | 21.3 | 62   |                   |
| Bengal     | Serampore                | 13,659      | 12,917   | 26,576    | 6  | 4  | 10   | 11.9                                     | 19.6     | 150             | ...               | 3                 | 5       | 7               | 15          | 13.7  | 29.4    | 39.3  | 10   | 5   | 38.4 | 29.1 | 260  |                   |
|            | Uttarpara                | 3,046       | 2,464    | 5,510     | ...                                      | 3  | 3  | ...                                      | 28.3     | No male births. | ...               | ...               | ...     | 1               | 1           | ...   | 9.4     | 9.4   | ...  | 1   | ...  | ...  | ...  | No male deaths.   |
|            | Howrah                   | 53,183      | 57,680   | 110,863   | 9  | 4  | 13   | 5.1                                      | 2.3      | 7.4             | 225               | 3                 | ...     | 6               | 23          | 1.7   | 3.4     | 13.2  | 11.5   | 13  | 11   | 11.7 | 15.2 | 100               |
| Bengal     | Bali                     | 7,836       | 6,979    | 14,815    | 2  | 1  | 3  | 7.0                                      | 8.5      | 10.5            | 209               | 1                 | ...     | 2               | 4           | 3.5   | ...     | 14.0  | 7.0  | 3   | 1    | 10.9 | 7.5  | 300               |
|            | Suburbs of Calcutta      | 147,205     | 104,294  | 251,499   | 37                                       | 23   | 65   | 7.6                                      | 6.9      | 13.4            | 182               | 9                 | ...     | 48              | 175         | 1.9   | ...     | 36.2  | 30.4   | 69  | 76   | 35.0 | 37.9 | 130               |
|            | Kishinagur               | 13,293      | 14,214   | 27,507    | 2  | 2  | 4  | 8.7                                      | 3.7      | 7.6             | 100               | ...               | 4       | 1               | 6           | ...   | 1.9     | 11.4  | 13.9   | 1   | 5    | 3.9  | 16.3 | 20                |
| Bengal     | Ranaghat                 | 4,028       | 4,055    | 8,083     | 3  | ...  | 3  | 19.0                                     | ...      | 180             | No female births. | ...               | 4       | ...             | 5           | ...   | 21.9    | 27.9  | ...  | 5   | ...  | 61.3 | ...  | No female deaths. |
|            | Sanipore                 | 13,708      | 15,979   | 29,687    | 4  | 1  | 5  | 7.0                                      | 1.7      | 8.7             | 400               | ...               | 1       | ...             | 2           | ...   | 1.7     | 3.5   | 10.5   | 1   | 1    | 3.8  | 3.2  | 100               |
|            | Jessore                  | 4,580       | 3,685    | 8,265     | ...                                      | ...  | ...  | ...                                      | ...      | ...             | ...               | ...               | ...     | ...             | ...         | ...   | ...     | ...   | ...  | ... | ...  | ...  | ...  | ...               |
| Bengal     | Rampore Baulkiah         | 10,766      | 9,025    | 19,791    | 6  | 2  | 8  | 15.8                                     | 5.2      | 21.0            | 300               | 1                 | ...     | 3               | 8           | 2.9   | ...     | 21.0  | 44.8   | 3   | 5    | 14.5 | 28.9 | 60                |
|            | Darjiling                | 5,029       | 2,147    | 7,176     | 1  | 2  | 3  | 6.9                                      | 13.0     | 19.6            | 50                | ...               | 1       | ...             | 4           | ...   | 6.9     | 36.1  | 38.0   | ... | 4    | ...  | 70.4 | No male deaths.   |
|            | Dacca                    | 42,782      | 37,374   | 80,156    | 6  | 6  | 12   | 3.9                                      | 8.3      | 7.8             | 100               | ...               | 8       | 1               | 18          | ...   | 6.2     | 11.7  | 19.9   | 8   | 10   | 9.7  | 13.9 | 80                |
| Bengal     | Narsingunge              | 7,675       | 4,866    | 12,541    | 3  | 1  | 4  | 12.4                                     | 4.1      | 16.5            | 200               | ...               | 1       | ...             | 3           | ...   | ...     | 12.4  | 20.7   | 3   | ...  | 2.5  | ...  | No female deaths. |
|            | Chittagong               | 13,340      | 8,740    | 22,080    | 2  | 1  | 3  | 4.7                                      | 2.9      | 7.0             | 200               | ...               | 1       | 2               | 7           | ...   | 2.3     | 10.4  | 19.8   | 5   | 2    | 10.5 | 11.8 | 250               |
|            | Cemilliah                | 8,153       | 5,353    | 13,506    | 2  | 5  | 7  | 7.7                                      | 10.3     | 27.0            | 40                | ...               | 8       | ...             | 5           | ...   | 11.6    | ...   | 19.3   | ... | ...  | ...  | ...  | ...               |
| Bengal     | Patna City               | 78,762      | 81,475   | 160,237   | 22                                       | 22   | 44   | 7.1                                      | 7.1      | 14.3            | 100               | 11                | ...     | 22              | 68          | 7.1   | 22.4    | 20.1  | 2  | 3   | 12.9 | 29.1 | 68   |                   |
|            | Gya                      | 38,460      | 37,551   | 76,011    | 25                                       | 21   | 42   | 19.1                                     | 16.4     | 35.5            | 110               | 8                 | ...     | 31              | 90          | 5.5   | ...     | 43.6  | 41   | 39  | 53.7 | 53.6 | 105  |                   |
|            | Arrah                    | 29,087      | 22,505   | 51,592    | 13                                       | 9  | 22   | 15.7                                     | 10.9     | 29.3            | 144               | 12                | ...     | 3               | 34          | 11.3  | ...     | 72.9  | 2  | 19  | 49.0 | 41.0 | 111  |                   |
| Bengal     | Mosuffepore              | 53,054      | 19,658   | 72,712    | 1  | 2  | 3  | 1.2                                      | 2.4      | 3.6             | 50                | ...               | 3       | ...             | 11          | ...   | ...     | 13.4  | 7.3  | 2   | 9    | 4.5  | 23.3 | 22                |
|            | Durrhanga                | 38,774      | 22,822   | 61,596    | 22                                       | 21   | 43   | 17.4                                     | 10.5     | 33.9            | 104               | 5                 | ...     | 5               | 20          | 3.9   | ...     | 23.9  | 12   | 8   | 18.5 | 12.9 | 150  |                   |
|            | Chupra                   | 26,041      | 27,503   | 53,544    | 5  | ...  | 5  | 4.9                                      | ...      | 4.9             | No female births. | 1                 | ...     | 4               | 7           | 1.0   | ...     | 37.1  | 5  | 2   | 10.0 | ...  | ...  | 250               |
| Bengal     | Bagulpore                | 29,610      | 27,513   | 57,123    | 19                                       | 24   | 41   | 17.2                                     | 19.9     | 37.1            | 86                | ...               | 23      | ...             | 38          | ...   | ...     | 30.8  | 21   | 13  | 36.8 | 38.7 | 116  |                   |
|            | Monghyr                  | 29,184      | 26,060   | 55,244    | 27                                       | 19   | 46   | 24.4                                     | 17.2     | 41.4            | 142               | 7                 | ...     | 9               | 86          | 6.3   | ...     | 48.8  | 15   | 21  | 27.7 | 37.2 | 71   |                   |
|            | Purneah                  | 8,463       | 6,553    | 15,016    | 1  | 2  | 3  | 3.4                                      | 6.9      | 10.4            | 50                | ...               | ...     | 1               | 2           | ...   | ...     | 6.9   | 20.9   | 1   | 1    | 6.7  | 7.9  | 100               |
| Bengal     | Puri                     | 13,247      | 11,537   | 24,784    | 2  | 2  | 4  | 4.2                                      | 4.2      | 5.4             | 100               | ...               | 4       | ...             | 20          | ...   | 18.9    | 4.0   | 27.4   | 12  | 8    | 47.1 | 36.1 | 150               |
|            | TOTAL                    | 702,990     | 619,691  | 1,322,681 | 238                                      | 198  | 436  | 9.3                                      | 7.8      | 17.1            | 120               | 66                | ...     | 9               | 194         | 639   | 7.6     | 25.1  | 25.4   | 332 | 307  | 24.6 | 24.0 | 100               |

## MORTALITY ACCORDING TO—

Age.

Class.

DISTRICTS.  
NAMES OF MUNICIPAL  
PALIKES.

DEATHS AMONG—

RATIO PER 1,000 OF POPULA-  
TION PER ANNUM.

DEATHS.

RATIO PER 1,000 OF POPULATION PER ANNUM.

| DISTRICTS.       | DEATHS AMONG— |             |         |                |               | RATIO PER 1,000 OF POPULA-<br>TION PER ANNUM. |                       |                        |                        |                        | RATIO PER 1,000 OF POPULATION PER ANNUM. |                        |                        |                        |       |       |       |       |       |       |       |       |       |       |
|------------------|---------------|-------------|---------|----------------|---------------|---|-----------------------|------------------------|------------------------|------------------------|--|------------------------|------------------------|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                  | Christians.   | Mahomedans. | Hindus. | Other classes. | Under 1 year. | 1 and under 5 years.                          | 5 and under 10 years. | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years.                   | 40 and under 50 years. | 50 and under 60 years. | 60 years and up-wards. |       |       |       |       |       |       |       |       |       |       |
|                  | 1             | 2           | 3       | 4              | 5             | 6   | 7                     | 8                      | 9                      | 10                     | 11                                       | 12                     | 13                     | 14                     |       |       |       |       |       |       |       |       |       |       |
| Burdwan ..       | 11            | 4           | 212     | 203            | 2             | 2   | 1                     | 1                      | 1                      | 8                      | 2  | 1                      | 1                      | 1                      | 157.6 | 46.1  | 22.3  | 16.6  | 19.7  | 15.1  | 11.6  | 21.2  | 21.2  | 70.2  |
| Midnapore ..     | 10            | 3           | 261     | 210            | 4             | 4   | 1                     | 1                      | 1                      | 2                      | 2  | 2                      | 1                      | 1                      | 278.9 | ..... | 15.9  | ..... | ..... | 18.8  | 27.9  | 25.2  | 25.2  | 85.3  |
| Hugli ..         | 12            | 1           | 107     | 7.6            | 2             | 2   | 1                     | 1                      | 3                      | 1                      | 2  | 2                      | 1                      | 1                      | 110.3 | ..... | 14.9  | 52.6  | 6.7   | 11.9  | 20.3  | 15.9  | 15.9  | 20.7  |
| Serampore ..     | 14            | 1           | 258     | 273            | 3             | 3   | 2                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 5                      | 210.7 | 57.6  | ..... | ..... | 9.7   | 31.4  | 15.4  | ..... | ..... | 186.9 |
| Howrah ..        | 17            | 6           | 47      | 130            | 8             | 8   | 3                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 75.6  | 25.2  | 24.8  | 7.1   | ..... | 8.1   | 13.3  | 37.9  | 37.9  | 41.6  |
| 24-Pargunnahs .. | 4             | 116         | 102     | 20.6           | 32            | 14  | 2                     | 3                      | 8                      | 33                     | 22                                       | 20                     | 14                     | 20                     | 340.2 | 57.9  | 13.1  | 5.8   | 23.1  | 22.2  | 22.2  | 20.6  | 42.9  | 73.0  |
| Kishore ..       | 4             | 2           | 112     | 12.5           | 1             | 1   | 1                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 10.8  | ..... | ..... | ..... | 25.3  | 21.6  | ..... | 8.9   | ..... | 91.4  |
| Ranaghat ..      | 3             | 3           | 213     | 70.3           | 3             | 3   | 1                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 733.6 | ..... | ..... | ..... | 31.5  | ..... | 12.9  | ..... | ..... | ..... |
| Santipore ..     | 2             | .....       | 5.9     | .....          | 1             | 1   | 1                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 61.5  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Jessore ..       | .....         | .....       | .....   | .....          | .....         | .....   | .....                 | .....                  | .....                  | .....                  | .....                                    | .....                  | .....                  | .....                  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Raipur ..        | 5             | 3           | 262     | 15.9           | 1             | 1   | 1                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 128.1 | 110.9 | 58.9  | 25.9  | ..... | ..... | ..... | ..... | ..... | 101.7 |
| Darjiling ..     | 4             | .....       | 4.9     | .....          | .....         | .....   | .....                 | .....                  | .....                  | .....                  | .....                                    | .....                  | .....                  | .....                  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 615.4 |
| Dacca ..         | 13            | 5           | 167     | 66             | 3             | 3   | 1                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 82.2  | 21.2  | 5.2   | ..... | 7.1   | 8.4   | ..... | 12.4  | 22.0  | 46.6  |
| Chittagong ..    | 1             | 2           | 82      | 15.9           | 2             | 1   | 1                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 372.4 | 156   | ..... | ..... | ..... | ..... | 13.6  | ..... | ..... | ..... |
| Tripurah ..      | 7             | 7           | 278     | .....          | 1             | 1   | 1                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 12.4  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Patus City ..    | 57            | 12          | 249     | 15.3           | 15            | 9   | 8                     | 3                      | 2                      | 6                      | 6  | 3                      | 4                      | 13                     | 181.0 | 32.1  | 21.7  | 10.9  | 9.5   | 1.8   | 18.4  | 8.3   | 11.7  | 45.9  |
| Gya ..           | 65            | 15          | 56.3    | 48.5           | 27            | 17  | 5                     | 1                      | 1                      | 7                      | 3  | 6                      | 14                     | .....                  | 78.4  | 139.1 | 37.2  | 23.5  | 10.3  | 2.7   | 12.3  | 31.9  | 119.8 | ..... |
| Shahad ..        | 36            | 1           | 11.1    | 8.4            | 4             | 5   | 4                     | 2                      | 1                      | 2                      | 3  | 1                      | 1                      | 1                      | 16.5  | 12.9  | 11.6  | 13.1  | 17.1  | ..... | ..... | 10.4  | 32.0  | 96.2  |
| Moulvibazar ..   | 8             | 3           | 159     | 12.5           | 3             | 1   | 1                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 193.4 | 18.7  | 13.3  | 23.5  | 10.3  | ..... | ..... | 10.4  | 32.0  | 21.4  |
| Durban ..        | 8             | 12          | 88      | 15.5           | 7             | 2   | 2                     | 3                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 28.3  | 18.7  | 13.3  | 23.5  | 10.3  | ..... | ..... | 10.4  | 32.0  | 21.4  |
| Barun ..         | 6             | 1           | 70      | 13             | 2             | 1   | 1                     | 1                      | 1                      | 1                      | 1  | 1                      | 1                      | 1                      | 72.0  | ..... | ..... | ..... | ..... | ..... | ..... | 7.1   | 35.6  | 20.9  |
| Bhawal ..        | 26            | 18          | 349     | 30.2           | 7             | 11  | 2                     | 3                      | 4                      | 1                      | 3  | 1                      | 1                      | 1                      | 304.9 | 103.5 | 17.7  | 16.6  | 37.5  | 10.3  | 5.6   | 21.3  | 12.3  | 75.2  |
| Monghyr ..       | 28            | 6           | 52.5    | 35.1           | 6             | 7   | 2                     | 1                      | 3                      | 6                      | 2  | 1                      | 1                      | 1                      | 210.2 | 58.5  | 11.7  | 9.1   | 41.3  | 3.2   | 11.7  | 8.2   | ..... | 116.0 |
| Purneah ..       | 2             | .....       | 11.9    | .....          | .....         | .....   | .....                 | .....                  | .....                  | .....                  | .....                                    | .....                  | .....                  | .....                  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Puri ..          | 20            | .....       | 42.1    | .....          | 8             | .....   | .....                 | .....                  | .....                  | .....                  | .....                                    | .....                  | .....                  | .....                  | 511.9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| TOTAL ..         | 4             | 472         | 103     | .....          | 198           | 84  | 57                    | 14                     | 27                     | 74                     | 64                                       | 55                     | 70                     | .....                  | 233.2 | 41.7  | 14.7  | 7.2   | 14.1  | 11.2  | 14.3  | 20.8  | 80.0  | 51.0  |

## CIRCULAR AND EASTERN CANALS.

- *Approximate Return of Traffic for the week ending Saturday, the 17th September 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>17TH SEPTEMBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>18TH SEPTEMBER 1886. |                     |          |
|--------------------|---|---------------------|----------|---|---------------------|----------|
|                    | Number of<br>boats.                               | Weight of<br>cargo. | Tollage. | Number of<br>boats.                               | Weight of<br>cargo. | Tollage. |
|                    | No.   | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy ... | 697   | 1,32,640            | 2,290    | 561   | 1,15,773            | 2,125    |
| Jute ...           | 113   | 50,785              | 881      | 139   | 61,975              | 1,119    |
| Firewood ...       | 221   | 96,600              | 1,132    | 174   | 69,850              | 1,042    |
| Other articles ... | 845   | 2,31,945            | 3,676    | 939   | 2 32,343            | 3,561    |
| Total ...          | 1,876   | 5,12,020            | 8,279    | 1,816   | 4,79,951            | 7,847    |



Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 10th September 1887, on 1,519 miles open.

|   | COACHING TRAFFIC.     |                | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |            |
|---|-----------------------|----------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|------------|
|   | Number of passengers. | Receipts.      | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.     |
|   |                       | Rs. A. P.      | Mds. S.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |            |
| al traffic for the week ...                                 | 243,782               | 2,12,461 15 0  | 22,11,957 20                     | 4,84,558 1 0  | 10,032 5 0                  | 7,13,052 5 0    | 64,050                   | 79,772       | 144,722    |
| per mile of railway ...                                     | .....                 | 139 13 11      | .....                            | 319 0 0       | 10 8 10                     | 469 6 9         | .....                    | .....        | .....      |
| previous 9 weeks of half-year ...                           | 2,274,943             | 22,84,121 10 0 | 1,96,72,511 30                   | 40,80,915 0 0 | 1,01,861 12 9               | 65,32,899 13 3  | 607,225½                 | 747,982½     | 1,355,208½ |
| Total for 10 weeks ...                                      | 2,518,725             | 24,96,583 0 0  | 2,18,84,469 10                   | 46,71,473 7 6 | 1,77,894 1 9                | 72,45,951 2 3   | 672,175½                 | 827,754½     | 1,499,930½ |
| COMPARISON.   |                       |                |                                  |               |                             |                 |                          |              |            |
| al for corresponding week of previous year ...              | 256,067*              | 2,97,045 4 0*  | 20,25,957 10                     | 5,27,803 2 3  | 16,615 14 5                 | 8,41,464 5 5    | 68,708                   | 92,760       | 161,468    |
| per mile of railway corresponding week of previous year ... | .....                 | 196 1 1        | .....                            | 318 6 2       | 10 15 6                     | 555 6 9         | .....                    | .....        | .....      |
| al to corresponding date of previous year ...               | 2,367,296½            | 24,10,450 1 8  | 2,27,33,054 30                   | 53,57,240 0 0 | 1,81,469 11 11              | 79,49,160 6 7   | 692,945                  | 974,630      | 1,667,575  |

the coaching figures for the corresponding period of 1886 include traffic on account of four troop extra trains and a larger number of pilgrims to Baidyanath and Gya.  
Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |           |                      | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |           |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 11TH SEPTEMBER 1886. |             |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 10TH SEPTEMBER 1887. |             |                      | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|----------------------|---|-----------|----------------------|--|-------------|----------------------|--|-------------|----------------------|-------------------------|-------------------------|
| Per mile worked.                              | Receipts. | Mean mileage worked. | Per mile worked.                              | Receipts. | Mean mileage worked. | Per mile worked.   | Receipts.   | Mean mileage worked. | Per mile worked.   | Receipts.   | Mean mileage worked. |                         |                         |
| Rs.   | Rs.       |                      | Rs.   | Rs.       |                      | Rs.  | Rs.         |                      | Rs.  | Rs.         |                      |                         | Rs.                     |
| 515   | 8,41,464  | 555                  | 1,519   | 7,13,052  | 469                  | 1,516  | 2,07,32,762 | 13,683               | 1,519  | 1,97,20,681 | 12,983               | .....                   | 10,12,071               |

PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 10th September 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| al traffic for the week ...                                 | 23,095                | 14,451 4 0  | 26,348 30                        | 1,926 11 0  | 31 0                        | 16,412 4 0      | 1,906                    | 752          | 2,658  |
| per mile of railway ...                                     | 404                   | 252 11 2    | 461 0                            | 33 10 11    | 0 8 9                       | 286 14 10       | .....                    | .....        | .....  |
| previous 9 weeks of half-year ...                           | 119,524               | 60,031 1 0  | 3,54,171 10                      | 22,924 1 0  | 237 13 0                    | 83,223 2 0      | 15,948½                  | 7,527½       | 23,516 |
| Total for 10 weeks ...                                      | 142,619               | 74,483 8 0  | 3,80,519 0                       | 24,850 12 0 | 269 4 0                     | 99,635 8 0      | 17,894½                  | 8,279½       | 26,174 |
| COMPARISON.   |                       |             |                                  |             |                             |                 |                          |              |        |
| al for corresponding week of previous year ...              | 33,308½*              | 20,736 8 1* | 22,106 20                        | 1,837 7 0   | 30 5 0                      | 22,064 4 1      | 2,312                    | 579          | 2,891  |
| per mile of railway corresponding week of previous year ... | 584                   | 362 8 5     | 386 20                           | 32 1 11     | 0 8 6                       | 395 2 10        | .....                    | .....        | .....  |
| al to corresponding date of previous year ...               | 132,791               | 71,337 12 9 | 4,32,541 0                       | 26,251 5 0  | 307 8 3                     | 97,800 10 0     | 17,982                   | 8,451        | 26,436 |

\* Pilgrims in larger numbers travelled from K. I. Ry. to Gya in the corresponding week of 1886.

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |           |                      | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |           |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 11TH SEPTEMBER 1886. |           |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 10TH SEPTEMBER 1887. |           |                      | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|----------------------|---|-----------|----------------------|--|-----------|----------------------|--|-----------|----------------------|-------------------------|-------------------------|
| Per mile worked.                              | Receipts. | Mean mileage worked. | Per mile worked.                              | Receipts. | Mean mileage worked. | Per mile worked.   | Receipts. | Mean mileage worked. | Per mile worked.   | Receipts. | Mean mileage worked. |                         |                         |
| Rs.   | Rs.       |                      | Rs.   | Rs.       |                      | Rs.  | Rs.       |                      | Rs.  | Rs.       |                      |                         | Rs.                     |
| 57½   | 22,604    | 395                  | 57½   | 16,412    | 287                  | 57½  | 2,31,584  | 3,926                | 57½  | 2,18,397  | 3,818                | .....                   | 6,205                   |

DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 10th September 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,863                 | 607 11 0   | 9,734 10                         | 217 14 0  | 8 5 0                       | 839 14 0        | 423½                     | 70           | 46     |
| Or per mile of railway ...                                  | .....                 | 50 10 3    | .....                            | 18 2 6    | 0 11 1                      | 69 7 10         | .....                    | .....        | .....  |
| For previous 9 weeks of half-year ...                       | 27,472                | 4,647 5 0  | 78,218 10                        | 1,531 7 0 | 85 2 0                      | 6,513 14 0      | 3,518½                   | 1,004        | 4,58   |
| Total for 10 weeks ...                                      | 30,335                | 5,255 0 0  | 87,952 20                        | 2,049 5 0 | 93 7 0                      | 7,347 12 0      | 3,942                    | 1,134        | 5,076  |
| COMPARISON.   |                       |            |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,442                 | 405 13 8   | 5,305 20                         | 116 7 0   | 2 15 0                      | 525 3 8         | 408                      | 85           | 493    |
| Per mile of railway corresponding week of previous year ... | .....                 | 33 13 2    | .....                            | 9 11 3    | 0 3 11                      | 43 13 4         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 27,230                | 4,554 0 11 | 1,00,330 30                      | 2,15 9 0  | 88 9 0                      | 6,768 9 8       | 4,030                    | 1,373        | 5,415  |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 11TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 10TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         | Rs.                     |
| 12  | 525       | 44               | 12  | 834       | 69               | 12   | 24,041          | 2,003            | 12   | 21,918          | 1,829            | .....                   | 2,093                   |

SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 10th September 1887, on 74½ miles open.

|   | COACHING TRAFFIC.     |              | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.    | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.    | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 4,471                 | 3,318 5 6    | 1,07,102 20                      | 6,894 6 0   | 116 3 0                     | 10,230 14 0     | 688                      | 2,296½       | 2,984½  |
| Or per mile of railway ...                                  | .....                 | 44 5 10      | .....                            | 92 3 2      | 1 8 10                      | 138 1 10        | .....                    | .....        | .....   |
| For previous 9 weeks of half-year ...                       | 45,867                | 35,643 10 0  | 6,55,051 30                      | 27,746 7 0  | 635 3 0                     | 61,025 4 0      | 6,431                    | 11,440       | 17,870  |
| Total for 10 weeks ...                                      | 50,338                | 38,961 15 0  | 6,62,154 10                      | 31,612 13 0 | 751 6 0                     | 74,356 2 0      | 7,119                    | 13,736½      | 20,855½ |
| COMPARISON.   |                       |              |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 5,213                 | 3,718 12 8   | 83,063 0                         | 2,522 2 0   | 70 5 3                      | 6,311 3 11      | 641                      | 899          | 1,540   |
| Per mile of railway corresponding week of previous year ... | .....                 | 49 11 6      | .....                            | 33 11 6     | 0 15 0                      | 84 6 0          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 50,898                | 37,242 10 11 | 7,60,427 20                      | 27,081 15 0 | 1,036 10 3                  | 65,361 4 2      | 7,340                    | 10,587       | 17,927  |

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 11TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 10TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         |                         |
| 74½   | 6,311     | 84               | 74½   | 10,331    | 138              | 74½  | 1,61,736        | 2,163            | 74½  | 1,08,551        | 2,521            | 28,816                  | .....                   |

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 10th September 1887, on 22½ miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| al traffic for the week ...                               | 16,813                | 4,716 0 0   | 0,091 20                         | 148 8 0    | 5 11 0                      | 4,868 3 0       | 934                      | 34           | 968    |
| er mile of railway ...                                    | .....                 | 211 15 4    | .....                            | 6 9 4      | 0 4 1                       | 214 12 9        | .....                    | .....        | .....  |
| r previous 9 weeks of half-year ...                       | 151,218               | 39,581 11 0 | 33,614 26                        | 1,229 15 0 | 39 1 0                      | 40,850 11 0     | 8,612½                   | 561½         | 9,174  |
| Total for 10 weeks ...                                    | 168,031               | 44,297 11 0 | 39,706 0                         | 1,378 7 0  | 44 12 0                     | 45,718 14 0     | 9,546½                   | 595½         | 10,142 |
| COMPARISON.   |                       |             |                                  |            |                             |                 |                          |              |        |
| al for corresponding week of previous year ...            | 14,725                | 3,471 12 7  | 2,066 0                          | 73 3 0     | 4 7 3                       | 3,552 6 10      | 947                      | 21           | 968    |
| r mile of railway corresponding week of previous year ... | .....                 | 156 2 9     | .....                            | 3 4 8      | 0 5 2                       | 159 10 7        | .....                    | .....        | .....  |
| al to corresponding date of previous year ...             | 164,674½              | 40,226 10 6 | 31,178 30                        | 1,127 14 0 | 56 2 3                      | 41,410 10 9     | 9,066                    | 220          | 10,156 |

*Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 11TH SEPTEMBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 10TH SEPTEMBER 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                                     | Per mile worked. | Mean mileage worked. | Receipts.                                     | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Rs.                     |                         |
| Rs.   | Rs.              |                      | Rs.   | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              |                      | Rs.                     |                         |
| 22½   | 3,552            | 160                  | 22½   | 4,808            | 219                  | 22½  | 1,14,143         | 5,130                | 22½  | 1,22,775         | 5,518                | 8,632                   | .....                   |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 10th September 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| al traffic for the week ...                               | 1,360                 | 886 2 0    | 5,261 30                         | 315 14 0   | 17 0 0                      | 1,249 0 0       | 411                      | 174          | 588    |
| er mile of railway ...                                    | .....                 | 21 1 7     | .....                            | 8 3 9      | 0 6 6                       | 29 11 10        | .....                    | .....        | .....  |
| r previous 9 weeks of half-year ...                       | 20,215                | 8,637 9 0  | 72,206 30                        | 5,474 0 0  | 223 4 0                     | 14,534 13 9     | 2,790                    | 2,680        | 5,460  |
| Total for 10 weeks ...                                    | 22,205                | 9,523 11 9 | 77,531 20                        | 5,819 14 0 | 240 4 0                     | 15,583 13 9     | 3,194                    | 2,854        | 6,048  |
| COMPARISON.   |                       |            |                                  |            |                             |                 |                          |              |        |
| al for corresponding week of previous year ...            | 2,280½                | 630 14 8   | —3,812 10                        | 1,868 0 0  | 28 15 9                     | 2,536 14 5      | 203                      | 325          | 538    |
| r mile of railway corresponding week of previous year ... | .....                 | 22 6 1     | .....                            | 44 7 7     | 0 11 1                      | 67 8 9          | .....                    | .....        | .....  |
| al to corresponding date of previous year ...             | 25,849                | 10,854 0 2 | 67,150 0                         | 8,161 4 0  | 209 12 0                    | 19,105 0 2      | 3,078                    | 2,454        | 6,182  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 11TH SEPTEMBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 10TH SEPTEMBER 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                                     | Per mile worked. | Mean mileage worked. | Receipts.                                     | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Rs.                     |                         |
| Rs.   | Rs.              |                      | Rs.   | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              |                      | Rs.                     |                         |
| 42  | 2,537            | 68                   | 42  | 1,240            | 30                   | 42   | 45,278           | 1,078                | 42   | 65,228           | 1,555                | 20,080                  | .....                   |

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 3rd September 1887, on 86 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 9,974                 | 3,130 0 0          | 21,067 c                         | 1,569 0 0  | 90 0 0                      | 4,780 0 0       | 2,181                    | 783          | 2,964  |
| per mile of railway ...                                       | 116                   | 37 0 0             | 245 0                            | 18 0 0     | 1 0 0                       | 56 0 0          | .....                    | .....        | .....  |
| or previous 8 weeks of half-year ...                          | 90,650                | 29,405 0 0         | 1,06,055 0                       | 8,440 0 0  | 935 0 0                     | 38,870 0 0*     | 17,065                   | 8,901        | 26,966 |
| Total for 9 weeks ...   | 100,630               | 32,625 0 0         | 1,28,022 0                       | 10,000 0 0 | 1,025 0 0                   | 43,650 0 0      | 20,146                   | 9,684        | 29,830 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 10,177                | 3,008 0 0          | 5,421 0                          | 709 0 0    | 100 0 0                     | 3,943 0 0       | 1,012                    | 568          | 2,510  |
| per mile of railway corresponding period of previous year ... | 118                   | 36 0 0             | 63 0                             | 0 0 0      | .....                       | 45 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 90,496                | 27,691 0 0         | 57,324 0                         | 5,141 0 0  | 1,863 0 0                   | 34,695 0 0      | 11,981                   | 6,532        | 18,513 |

\* Audited up to week ending 189 .

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 4TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 3RD SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 80   | 3,943     | 46               | 86   | 4,780     | 56               | 80  | 1,01,095        | 53               | 86  | 1,08,370*       | 57               | 7,281                   | .....                   |

\* Audited up to 30th June 1887.

ASSAM-BEHAR STATE RAILWAY.

PURNAM SECTION.

Approximate Return of Traffic for week ended 3rd September 1887, on 39 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 1,693                 | 790 0 0            | 5,806 0                          | 480 0 0    | 20 0 0                      | 1,290 0 0       | 608                      | 410          | 1,078  |
| per mile of railway ...                                       | 41                    | 20 0 0             | 149 0                            | 12 0 0     | 1 0 0                       | 33 0 0          | .....                    | .....        | .....  |
| or previous 8 weeks of half-year ...                          | 20,386                | 9,960 0 0          | 1,11,222 0                       | 12,360 0 0 | 250 0 0                     | 32,560 0 0      | 5,624                    | 3,908        | 8,632  |
| Total for 9 weeks ...   | 30,079                | 10,750 0 0         | 1,17,028 0                       | 12,830 0 0 | 270 0 0                     | 23,850 0 0      | 6,292                    | 4,718        | 10,010 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| per mile of railway corresponding period of previous year ... | .....                 | Nil                | Nil                              | Nil        | Nil                         | Nil             | Nil                      | Nil          | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Assam-Bihar State Railway.

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 4TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 3RD SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  |           | Rs.              |  | Rs.       |                  |   |                 |                  |   |                 |                  | Rs.                     |                         |
| .....  | Nil       | .....            | 39   | 1,290     | 33               | .....   | Nil             | .....            | 39  | 64,085*         | 75               | 64,085                  | .....                   |

\* Audited up to 30th June 1887.

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B. DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

*Approximate Return of Traffic for week ended 3rd September 1887, on 645 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated) including steam boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|--------------|--|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |  |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.    | Rs. A. P.  | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                | 124,062*              | 43,080 0 0         | 5,03,813 0                       | 1,19,130 0 0 | 11,169 0 0                                       | 1,74,270 0 0    | 20,058                   | 21,302       | 41,490  |
| Or per mile of railway ...                                    | 193                   | 65 0 0             | 874 0                            | 185 0 0      | (a) 1 0 0  | 2 4 0 0         | .....                    | .....        | .....   |
| For previous 8 weeks of half-year ...                         | 960,082               | 4,09,390 0 0       | 49,44,554 0                      | 7,77,539 0 0 | 1,37,050 0 0                                     | 18,23,960 0 0   | 161,836                  | 175,826      | 337,662 |
| Total for 9 weeks ...   | 1,090,744             | 4,53,380 0 0       | 55,08,307 0                      | 8,96,090 0 0 | 1,48,270 0 0                                     | 14,98,230 0 0   | 181,914                  | 197,728      | 379,642 |
| COMPARISON.   |                       |                    |                                  |              |  |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 98,416                | 42,223 0 0         | 6,00,831 0                       | 1,38,572 0 0 | 9,940 0 0  | 1,96,735 0 0    | 18,012                   | 25,603       | 43,615  |
| Per mile of railway corresponding period of previous year ... | 157                   | 70 0 0             | 901 0                            | 228 0 0      | .....  | 299 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 1,061,451             | 4,90,098 0 0       | 42,92,892 0                      | 7,66,208 0 0 | 92,956 0 0                                       | 12,88,362 0 0   | 162,980                  | 175,613      | 338,593 |

\* Includes monthly tickets.

(a) Steam-boat earnings, Rs. 10,500, have been excluded from the calculation.

Note. -Dacca and Assam-Bihar approximate returns are also published separately.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Eastern Bengal State Railway.*

| RECEIPTS FOR WEEK ENDING 4TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 4TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 3RD SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 606  | 1,90,735  | 315              | 645  | 1,74,270  | 270              | 606   | 31,31,803       | 235              | 645   | 32,53,853*      | 232              | 1,62,050                | .....                   |

\* Audited up to 30th June 1887.

## TIRHOOT STATE RAILWAY.

*Approximate Return of Traffic for the week ending 10th September 1887, on 249 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|--------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.    | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week on 240 miles open ...                | 39,540                | 13,330 4 0         | 76,341 0                         | 8,081 0 6    | 2,973 2 8                   | 24,383 7 2      | 6,390                    | 3,620        | 10,010  |
| Or per mile of railway ...                                      | 159                   | 53 9 0             | 317 0                            | 32 7 0       | 2 11 0                      | 89 11 0*        | .....                    | .....        | .....   |
| For previous 9 weeks of half-year ...                           | 355,134               | 1,18,621 12 0      | 11,08,255 0                      | 91,273 15 6  | 30,441 13 4                 | 2,40,337 4 10   | 60,034                   | 42,687       | 102,721 |
| Total for 10 weeks ...  | 394,074               | 1,31,951 0 0       | 11,84,596 0                      | 99,355 0 0   | 33,415 0 0                  | 2,64,731 0 0    | 66,444                   | 46,306       | 112,750 |
| COMPARISON.   |                       |                    |                                  |              |                             |                 |                          |              |         |
| Total for corresponding week of previous year on 240 miles open | 72,021                | 10,432 2 10        | 1,03,785 0                       | 9,110 12 0   | 2,398 15 5                  | 21,941 15 0     | 5,001                    | 3,557        | 8,558   |
| Per mile of railway corresponding week of previous year ...     | 133                   | 42 7 0             | 422 0                            | 37 1 0       | 0 10 0                      | 80 2 0*         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...                | 331,540               | 1,09,529 10 1      | 12,00,928 0                      | 1,22,157 6 8 | 33,053 5 7                  | 2,50,619 6 5    | 51,719                   | 44,440       | 96,159  |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of railway."

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tirhoot State Railway.*

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 11TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 10TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|----------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. |                         |                      |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                      |
| 240   | 21,942    | 80               | 240   | 24,383    | 98               | 240  | 7,07,146        | 2,875            | 249  | 7,54,794        | 3,033            | 51,618                  | .....                |

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 10th September 1887, on 27½ miles open.

|                             | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|-----------------------------|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|                             | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|                             |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| traffic for the week        | 2,797                 | 1,008 15 0         | 9,606 30                         | 619 13 0  | 11 4 0                      | 1,040 0 0       | 500                      | 254          | 763    |
| mile of railway ...         | 103                   | 37 0 0             | 353 0                            | 22 12 0   | 0 7 0                       | 60 3 0          | .....                    | .....        | .....  |
| previous 9 weeks of half-   | 28,738                | 10,237 1 0         | 76,928 10                        | 5,121 5 0 | 216 12 0                    | 16,575 0 0      | 4,763                    | 2,921½       | 7,684½ |
| ...                         |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for 10 weeks          | 31,535                | 11,246 0 0         | 86,935 0                         | 5,741 0 0 | 228 0 0                     | 17,215 0 0      | 5,272                    | 3,176½       | 8,447½ |
|                             |                       |                    |                                  |           |                             |                 |                          |              |        |
| COMPARISON.                 |                       |                    |                                  |           |                             |                 |                          |              |        |
| for corresponding week      |                       |                    |                                  |           |                             |                 |                          |              |        |
| previous year               | 1,845½                | 717 0 6            | 8,868 20                         | 710 10 0  | 5 14 0                      | 1,433 14 6      | 500                      | 254          | 763    |
| mile of railway correspond- |                       |                    |                                  |           |                             |                 |                          |              |        |
| ing week of previous year   | 68                    | 26 5 0             | 325 0                            | 26 1 0    | 0 4 0                       | 52 10 0         | .....                    | .....        | .....  |
| to corresponding date of    |                       |                    |                                  |           |                             |                 |                          |              |        |
| ious year                   | 23,001                | 8,901 1 8          | 67,748 10                        | 5,123 7 0 | 120 15 9                    | 14,154 11 5     | 5,308                    | 2,576        | 8,006  |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 10th SEPTEMBER 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 10th SEPTEMBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1st APRIL 1886 TO 11th SEPTEMBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1st APRIL 1887 TO 10th SEPTEMBER 1887. |                  |  | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|--|-------------------------|-------------------------|
| Receipts.                                     | Per mile worked. | Mean mileage worked. | Receipts.                                     | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. |  |                         |                         |
| Rs.   | Rs.              |                      | Rs.   | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              |  | Rs.                     | Rs.                     |
| 1,434   | 53               | 27½                  | 1,640   | 60               | 27½                  | 38,490   | 1,412            | 27½                  | 42,763   | 1,567            |  | 4,213                   | .....                   |

REGISTERED No. 29.

No. 39 of 1887.



SUPPLEMENT TO  
**The Calcutta Gazette.**

WEDNESDAY, SEPTEMBER 28, 1887.

OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta. or Twelve Rupees if sent by Post.*

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## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 24th September 1887.

| No.                       | District and date of return. | Rainfall at Sudder station in inches.   | Character of the weather, state and prospects of the crops, and state of health at date.   |
|---------------------------|------------------------------|---|--|
| BENGAL.                   |                              |   |  |
| Western Districts.        |                              |   |  |
| BURDWAN DIVN.             | 1 Burdwan, Sept. 24, '87     | 2.54  | Weather—seasonable. Crop prospects improved by rain during week, but more wanted in some tracts, especially in Cutwa. Prices easier. Cholera abated. Fever prevalent.  |
|                           | Cutna ...                    | 1.26  |  |
|                           | Cutwa ...                    | 0.35  |  |
|                           | Raneegunge ...               | 1.75  | Weather—seasonable. <i>Amu</i> being harvested. Standing crops doing well. Prices stationary. Public health good.  |
|                           | 2 Bankoora „ 24, '87         | 0.44  |  |
|                           | Bishenpur ...                | 2.58  |  |
| 3 Beerbhoom „ 25, '87     | 2.65                         | Weather—cool and showery. More rain needed for paddy, which is, however, a very promising crop. Sugarcane coming up well. Prices falling and markets very dull. Cattle-disease reported from north of district. A good deal of fever everywhere.  |  |
| Rampur Haut ...           | 1.46                         |   |  |
| 4 Midnapur „ 24, '87      | 0.55                         | Thickly clouded, with occasional foul weather. The prospects of the rice crop are generally good, the only exceptions being certain parts of Ghattal and Contai sub-divisions, which have suffered from floods. Public health is good, but there are reported a few cases of cholera and malarious fever. |  |
| 5 Hooghly „ 24, „         | 0.71                         | Weather—cloudy and rainy. The rain has been seasonable and sufficient. No further damage to the crops is apprehended.   |  |
| Serampur ...              | 1.05                         |   |  |
| Howrah „ 24, '87          | 2.49                         | Weather - hot and sultry, with slight showers of rain. Harvesting of jute and <i>amu</i> proceeding. Prospects of <i>amu</i> and sugarcane continue good.   |  |
| Central Districts.        |                              |   |  |
| PRESIDENCY DIVN.          | 6 24-Perghs., Sept. 24, '87  | 4.78  | Weather—unsettled; cloudy and hot with occasional showers. Harvesting of <i>amu</i> nearly complete. Rain has done much good to <i>amu</i> . Prospects of jute and sugarcane good. Public health generally good, but a few cases of cholera and fever reported from Buxirhat and Sudder sub-divisions. |
|                           | 7 Nuddea „ 24, „             | 4.40  | Weather—seasonable. Prospects generally good. Rain of the week has benefited <i>amu</i> crop. Prospects of jute and sugarcane favourable. <i>Til</i> , chillief and <i>arhar</i> very slightly damaged by flood. River very much lower. Fever prevalent.   |
|                           | Kushtea ...                  | 0.71  |  |
|                           | Meherpur ...                 | 1.58  |  |
|                           | Chudanga ...                 | 1.60  | Weather—hot with occasional heavy showers. Late rice has benefited much from late rain. Prospects good. Public health good.  |
|                           | Hanaghat ...                 | 3.97  |  |
|                           | 8 Khoolna „ 24, '87          | 0.90  |  |
|                           | 9 Jessore „ 24, „            | 2.79  | Week's rainfall has been good and weather tolerably cool. Harvesting of <i>amu</i> paddy nearly finished. Prospects of <i>amu</i> crop excellent in Magurah and good in other sub-divisions. Public health good.   |
|                           | Jhenidah ...                 | 0.86  |  |
|                           | Magurah ...                  | Nil   |  |
| Narail ...                | 0.27                         | Weather—seasonable: rain at intervals. Prospect of <i>amu</i> good. Sowing of <i>til</i> and <i>kalai</i> commenced. Sugarcane and jute progressing. Public health good. Fever prevails in Lalbagh sub-division.  |  |
| Bongong ...               | 3.11                         |   |  |
| 10 Moorshedabad „ 24, '87 | 3.77                         |   |  |
| Lalbagh ...               | 2.53                         | Weather—hot and close. Standing crops doing well. Prospects of <i>keimanti</i> paddy fair. Harvesting of jute nearly finished. Rice 18 to 26 seers per rupee.   |  |
| Jungipore ...             | 1.56                         |   |  |
| 11 Dinagepur „ 24, '87    | 1.68                         | Weather—cloudy and showery. Prospects of <i>amu</i> paddy and other crops generally good. Public health fair.   |  |
| Thakurgaon ...            | 3.36                         |   |  |
| 12 Rajshahye „ 24, '87    | 1.28                         | Weather—seasonable. Prospects of crops good. Jute being harvested. Fever prevailing at head-quarters.   |  |
| Nattore ...               | 1.80                         |   |  |
| Nowgong ...               | 2.38                         | Weather—hot, but cloudy. Rain wanted for <i>amu</i> crop throughout the district. Transplantation going on. Harvesting of <i>amu</i> and jute-steeping in progress.   |  |
| 13 Rungpur „ 24, „        | 2.91                         |   |  |
| Gaibanda ...              | 0.88                         | Weather—seasonable. Rivers falling. Public health and prospect of crops good.   |  |
| Kurigram ...              | 1.26                         |   |  |
| 14 Bogra „ 24, '87        | 1.50                         | Weather—hot. State and prospects of crops good.   |  |
| Sherpur ...               | 1.94                         |   |  |
| Nowkhilla ...             | 1.90                         | Weather—seasonable. Prospects of crops good. Jute rather bad. More rain wanted. Cattle-disease prevails in Mynagori. Public health good.  |  |
| 15 Pubna „ 24, '87        | 0.46                         |   |  |
| Serajgunge ...            | 5.01                         | Weather—hot. Harvesting of jute still continues. Prospects of crops good. Rivers gradually falling. Public health generally good.   |  |
| 16 Darjeeling „ 24, '87   | 1.71                         |   |  |
| Julpigoree „ 24, „        | 0.87                         |   |  |
| Eastern Districts.        |                              |   |  |
| DACCA DIVISION.           | 18 Dacca, Sept. 24, '87      | 0.64  | Weather—cloudy with occasional light showers. <i>Amu</i> promises well. Outturn of <i>amu</i> good. General health good.   |
|                           | 19 Furreedpur „ 24, '87      | 0.64  |  |
|                           | Goalundo ...                 | 0.35  | Weather—seasonable but rain somewhat scanty. Transplantation of <i>amu</i> paddy not yet finished. Prospect of crops favourable. General health good.  |
|                           | Madaripur ...                | 1.92  |  |
|                           | 20 Backergunge „ 23, '87     | 3.37  | Rain on six days of the week; heavy on the 20th. Weather stormy. Prospect of crops good.   |
|                           | 21 Mymensingh „ 23, '87      | 1.76  |  |
| Jamalpur ...              | 1.85                         |   |  |
| Kishoregunge ...          | 1.27                         |   |  |
| Attea ...                 | 0.61                         |   |  |
| Netrokona ...             | 0.67                         |   |  |



| No.                                | District and date of return. | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|------------------------------------|------------------------------|---------------------------------------|---|
| <b>BENGAL—contd.</b>               |                              |                                       |   |
| <i>Eastern Districts—contd.</i>    |                              |                                       |   |
| CHITTAGONG DIV.                    | 22 Chittagong, Sept. 27, '87 | 1.98                                  | Weather—seasonable. Prospects of <i>amun</i> and sugarcane good. Cholera reported; public health otherwise good. Prices stationary. Report not received.  |
|                                    | 23 Noakhally ... ..          | .....                                 |   |
|                                    | 24 Tipperah " 22 "           | 0.84                                  | Weather—hot. <i>Amun</i> paddy on high lands has begun to be affected. Heavy rain is wanted to better the prospects, which up to now are fair.  |
|                                    | Brahmanbariah ... ..         | 0.94                                  |   |
|                                    | Chandpur " 20 "              | 0.63                                  | Weather—sunshiny and excessively hot at noon. Occasional fall of rain during the week. Harvesting of <i>jum</i> paddy continues. Cotton doing well. Transplanting of paddy on low lands now over. Public health good.                                     |
|                                    | Chittagong Hill Tracts.      | 0.96                                  |   |
|                                    | 25 Hill Tipperah " 21 "      | 0.60                                  | Weather—seasonable. Transplantation of <i>amun</i> paddy is being stopped. Sugarcane and <i>jum</i> crops doing well. Public health good.   |
| <b>BEHAR.</b>                      |                              |                                       |   |
| PATNA DIV.                         | 26 Patna Sept. 24, '87       | 1.73                                  | Weather—hot and clear. Reaping of <i>bhadoi</i> crops completed. Paddy growing well. Sowing of castor continues. Cholera still reported in Behar; otherwise public health good.   |
|                                    | Barh ... ..                  | 2.40                                  |   |
|                                    | 27 Gaya " 24 "               | 7.03                                  | Weather—fair. <i>Bhadoi</i> reaped. Paddy good. Cholera and fever reported from almost all parts of district.   |
|                                    | 28 Shahabad " 24 "           | 1.77                                  | Weather—bright and clear. Harvesting of <i>bhadoi</i> approaching to a close. Rice doing well, but a little more rain wanted. Prospects continue promising. Public health good. Prices stationary.  |
|                                    | 29 Darbhanga " 24 "          | 1.13                                  | Weather—seasonable. Harvesting of <i>bhadoi</i> crops nearly completed. Prospects of rice continue favourable. Transplantation of tobacco seedlings in progress.  |
|                                    | Madhubani ... ..             | 1.70                                  |   |
|                                    | Tajpur ... ..                | 2.55                                  | Price of common rice averages 19 seers per rupee. Public health generally good.   |
|                                    | 30 Mozufferpur " 24 "        | 1.47                                  | Weather very variable. Little rain has fallen during the week and more wanted. <i>Bhadoi</i> crops are being harvested. Prospects of all crops excellent.   |
|                                    | 31 Munger " 24 "             | 0.81                                  | Weather—days hot, mornings cool. Prospects of crops continue good, but rain much wanted for <i>aghani</i> rice. Cholera abating; otherwise public health good.  |
|                                    | Sewan ... ..                 | 2.09                                  |   |
|                                    | Gopalgunge ... ..            | 0.26                                  |   |
|                                    | 32 Champaran " 21 "          | 3.91                                  | Weather—hot with westerly wind. Prospects of <i>bhadoi</i> crops good. Harvesting of <i>makai</i> in progress. <i>Aghani</i> looks promising, but more rain wanted.   |
|                                    | Bettiah ... ..               | 0.48                                  | Public health fair. Prices remain stationary.   |
| PRESIDENCY DIV.                    | 33 Monguvt. Sept. 21, '87    | 2.73                                  | Weather—hot and sultry in the first part of the week, a little cool in the latter part with westerly wind. Prospects of winter rice continue favourable.  |
|                                    | Begusserai ... ..            | 3.46                                  |   |
|                                    | Jamui ... ..                 | 2.68                                  | <i>Bhadoi</i> crops have been harvested with favourable outturn. A little cholera in the Sudder sub-division; otherwise public health good.   |
|                                    | 34 Hugulpur " 24 "           | 0.75                                  | Weather—warm with little cloud and westerly breeze. Harvesting of early rice and <i>murwa</i> closing with good outturn. Late rice doing well.  |
|                                    | 35 Patna " 24 "              | 0.79                                  | Weather—rather hot for the time of year. <i>Aghani</i> promising well. <i>Bhadoi</i> and <i>jute</i> being harvested. Public health very bad.   |
|                                    | 36 Malda " 24 "              | 0.73                                  | Weather—seasonable. <i>Bhadoi</i> harvest still going on in some places. Winter paddy very promising. <i>Kalai</i> thriving. Common rice selling at 22 seers per rupee. Fever very prevalent.   |
|                                    | Chanchal ... ..              | 1.07                                  |   |
|                                    | Sibganje ... ..              | 1.27                                  |   |
|                                    | Gujole ... ..                | 0.1                                   |   |
|                                    | 37 Southal Pergas. " 24 "    | 3.51                                  | Stormy, ending with cool fair weather and north winds. Indian-corn harvest ended with good outturn. More rain wanted in Deoghur. <i>Sergoeja</i> and <i>kuorti</i> sowing begun. Fever in Rajmehal.   |
|                                    | Deoghur ... ..               | 1.53                                  |   |
|                                    | Jamtara ... ..               | 1.64                                  |   |
|                                    | Godda ... ..                 | 0.36                                  |   |
|                                    | Rajmehal ... ..              | 1.12                                  |   |
|                                    | Pakour ... ..                | 5.61                                  |   |
| <b>ORISSA.</b>                     |                              |                                       |   |
| ORISSA DIV.                        | 38 Cuttack " 23 "            | 3.49                                  | Weather—cloudy and rainy at times. Reaping of <i>beali</i> rice still continues. <i>Sarad</i> rice growing well. Ordinary fever prevails. Cases of cholera still reported; otherwise public health good. Prices of rice unchanged.                        |
|                                    | 39 Pooree " 22 "             | 4.86                                  | Weather—cloudy and rainy. Prospect of <i>sarad</i> crop on the Chilka tracts bad. Weeding in progress. Common rice 23 seers 10 chittacks per rupee in Sudder sub-division and 20 seers 6 chittacks per rupee in Khoorda sub-division. Public health good. |
|                                    | 40 Balasore " 23, "          | 0.60                                  | Weather—cloudy and seasonable. Weeding of <i>sarad</i> crop advancing. <i>Beali</i> paddy being reaped. Prospects of crops generally good. Public health good except a few cases of cholera in Chaudhally and Bhadruck.                                   |
| <b>CHOTA NAGPORE.</b>              |                              |                                       |   |
| <i>South-West Frontier Agency.</i> |                              |                                       |   |
| 41                                 | Hazaribagh, Sept. 23, '87    | 2.09                                  | Weather—fine. A heavy storm of rain at head-quarters on 20th. Recent rain has done good, but more required. All standing crops look well. <i>Bhadoi</i> being harvested with fair outturn. General health good.   |
| 42                                 | Lohardugga " 24 "            | 1.78                                  | Weather—seasonable; cool. Slight rain during the week; more wanted. Prospects of rice good. Prices as before. Cholera still prevails; otherwise general health good.  |
| 43                                 | Singbhoom " 23 "             | 3.35                                  | Rain all over the district has done much good. Weather cool and pleasant. Good reports of crops. Ploughing for <i>raddi</i> going on and autumn crops being reaped. General health good.  |
| 44                                 | Manbhoom " 24 "              | 0.82                                  | Weather—much cooler. More rain still wanted in parts of district for high land paddy. <i>Jhang</i> and other autumn crops being harvested with good outturn. Public health good.  |
|                                    | Govindpur ... ..             | 1.20                                  |   |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 27th September 1887.P. NOLAN,  
Secy. to the Govt. of Bengal.

## Meteorological Report of the Province of Bengal

| DISTRICT.          | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                         |                         |                     |         |                           |                                   |                                 |                                     |                           |
|--------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|-------------------------|-------------------------|---------------------|---------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|---------------------------|
|                    |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.            |                         |                     |         |                           |                                   |                                 |                                     |                           |
|                    |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week.    | Date.                   | Lowest during week. | Date.   | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean 10 A.M. temperature. |
| Gopalpore ...      | 29.711                  | 29.761                          | -.006                      | Calm                 | 110.0                 | 80.2                | 21st Sept.              | 79.8                    | 18th, 23rd Sept.    | 86.9    | 80.4                      | 83.8                              | 0                               | 85.4                                |                           |
|                    | False Point ...         | 29.725                          | 29.747                     | -.014                | Westerly              | 189.0               | 90.5                    | 21st ..                 | 75.1                | 23rd .. | 87.0                      | 77.4                              | 82.2                            | -1.0                                | 82.4                      |
| Cuttack ...        | 29.673                  | 29.754                          | +.001                      | W                    | 34.0                  | 90.4                | 20th ..                 | 76.8                    | 21st ..             | 90.2    | 78.1                      | 84.2                              | +0.2                            | 86.3                                |                           |
| Balasore ...       | 29.678                  | 29.737                          | -.023                      | NNW                  | 132.5                 | 90.4                | 21st ..                 | 74.8                    | 17th ..             | 87.7    | 77.8                      | 82.8                              | +0.4                            | 84.4                                |                           |
| h-West Midnapore   | Saugor Island           | 29.709                          | 29.735                     | -.031                | SSW                   | 302.0               | 90.2                    | 20th ..                 | 78.8                | 22nd .. | 87.8                      | 79.5                              | 83.6                            | -0.1                                | 83.5                      |
| h 24-Pergunnahs... | Midnapore ...           | 29.598                          | 29.749                     | -.027                | N                     | 101.9               | 91.3                    | 19th, 20th & 22nd Sept. | 76.8                | 23rd .. | 89.8                      | 77.8                              | 83.3                            | 0                                   | 84.8                      |
| Calcutta ...       | 29.709                  | 29.730                          | -.023                      | Southerly            | 96.0                  | 89.0                | 19th ..                 | 77.0                    | 17th, 23rd Sept.    | 86.5    | 78.0                      | 82.2                              | -0.9                            | 84.3                                |                           |
| Burdwan ...        | 29.691                  | 29.780                          | -.029                      | SE                   | 63.0                  | 88.1                | 22nd ..                 | 75.0                    | 17th, 21st Sept.    | 86.7    | 76.1                      | 81.4                              | -0.6                            | 84.4                                |                           |
| Bankoora ...       | 29.610                  | —                               | —                          | N                    | 23.0                  | 90.1                | 20th, 22nd & 23rd Sept. | 75.1                    | 23rd ..             | 88.0    | 77.2                      | 82.6                              | —                               | 85.5                                |                           |
| Raneegunge...      | 29.601                  | 29.709                          | -.014                      | NW                   | 144.8                 | 92.0                | 22nd ..                 | 74.4                    | 23rd ..             | 88.7    | 77.3                      | 83.0                              | -0.3                            | 85.2                                |                           |
| Berhampore...      | 29.678                  | 29.745                          | -.023                      | WNW                  | 80.2                  | 89.6                | 19th, 20th Sept.        | 74.8                    | 20th ..             | 87.7    | 77.9                      | 83.8                              | -2.1                            | 84.0                                |                           |
| Krishnaghur...     | 29.673                  | 29.739                          | —                          | Variable             | 81.1                  | 91.3                | 19th ..                 | 74.8                    | 21st ..             | 85.7    | 77.1                      | 82.9                              | —                               | 84.6                                |                           |
| Jessore ...        | 29.710                  | 29.743                          | -.041                      | S                    | 75.2                  | 91.8                | 19th, 20th Sept.        | 77.4                    | 17th, 21st Sept.    | 90.0    | 78.5                      | 84.3                              | 0                               | 85.7                                |                           |
| Chittagong ...     | 29.691                  | 29.780                          | -.029                      | SE                   | 63.0                  | 88.1                | 22nd ..                 | 75.0                    | 17th, 21st Sept.    | 86.7    | 76.1                      | 81.4                              | -0.6                            | 84.4                                |                           |
| Demasiri ...       | 29.735                  | 29.747                          | -.034                      | S, SE                | 90.0                  | 89.3                | 19th ..                 | 76.8                    | 20th ..             | 87.7    | 77.8                      | 82.8                              | +1.0                            | 84.8                                |                           |
| Barisal ...        | 29.707                  | 29.747                          | -.023                      | S, SE                | 89.0                  | 88.5                | 20th, 21st Sept.        | 77.4                    | 17th ..             | 87.4    | 79.3                      | 83.4                              | +0.6                            | 85.1                                |                           |
| Dacca ...          | 29.722                  | 29.744                          | -.026                      | SSE                  | 117.0                 | 90.1                | 18th, 20th & 22nd Sept. | 78.2                    | 22nd ..             | 89.3    | 79.8                      | 84.0                              | +0.5                            | 86.1                                |                           |
| Commillah ...      | 29.725                  | 29.761                          | -.024                      | SE                   | 100.3                 | 91.3                | 19th ..                 | 74.8                    | 17th ..             | 89.2    | 76.5                      | 82.9                              | +1.0                            | 84.1                                |                           |
| Mymensingh ...     | 29.704                  | 29.762                          | -.012                      | Calm                 | 75.0                  | 90.3                | 23rd ..                 | 76.1                    | 20th ..             | 87.5    | 77.6                      | 82.6                              | -0.6                            | 83.0                                |                           |
| Bogra ...          | 29.652                  | 29.715                          | —                          | Calm                 | 47.1                  | 89.8                | 20th ..                 | 74.8                    | 20th ..             | 88.6    | 77.6                      | 83.1                              | —                               | 85.1                                |                           |
| Serajgunge ...     | 29.690                  | 29.736                          | -.033                      | Variable             | 60.6                  | 90.1                | 19th ..                 | 72.7                    | 20th ..             | 86.2    | 78.0                      | 83.1                              | -0.3                            | 84.1                                |                           |
| Rampore Beaulah    | 29.667                  | 29.736                          | -.014                      | Variable             | 12.9                  | 91.7                | 20th ..                 | 73.6                    | 20th ..             | 83.6    | 75.6                      | 82.1                              | -1.0                            | 86.7                                |                           |
| Maldah ...         | 29.568                  | —                               | —                          | NW                   | —                     | 91.6                | 21st ..                 | 76.7                    | 22nd ..             | 90.3    | 78.2                      | 84.3                              | —                               | 85.1                                |                           |
| Dinapore ...       | 29.605                  | 29.725                          | -.038                      | NW                   | 73.0                  | 91.6                | 23rd ..                 | 75.6                    | 20th ..             | 89.4    | 78.1                      | 83.8                              | +0.2                            | 85.2                                |                           |
| Ranapore ...       | 29.610                  | 29.735                          | -.074                      | E                    | 46.0                  | 91.8                | 23rd ..                 | 75.7                    | 20th ..             | 89.7    | 78.0                      | 83.9                              | +1.1                            | 84.6                                |                           |
| Julpigoree ...     | 29.451                  | 29.738                          | -.059                      | NE                   | 143.1                 | 92.0                | 23rd ..                 | 70.8                    | 19th ..             | 88.4    | 75.6                      | 83.1                              | +0.8                            | 84.1                                |                           |
| Darjeeling ...     | 22.965                  | —                               | -.092                      | Calm                 | 22.0                  | 67.6                | 19th ..                 | 49.6                    | 23rd ..             | 64.6    | 55.1                      | 59.9                              | -0.2                            | 61.9                                |                           |
| Purneah ...        | 29.627                  | 29.753                          | -.013                      | Calm                 | 23.1                  | 91.2                | 19th, 20th Sept.        | 75.6                    | 20th ..             | 89.1    | 77.2                      | 83.1                              | -1.4                            | 85.3                                |                           |
| Mozufferpore ...   | 29.561                  | 29.728                          | -.006                      | SE                   | 93.0                  | 90.4                | 19th ..                 | 76.5                    | 23rd ..             | 88.2    | 79.1                      | 83.7                              | -0.6                            | 84.4                                |                           |
| Durbhunga ...      | 29.485                  | 29.712                          | -.034                      | Variable             | 168.2                 | 93.2                | 17th, 18th Sept.        | 73.8                    | 20th, 23rd Sept.    | 90.7    | 76.4                      | 83.6                              | +0.3                            | 85.5                                |                           |
| Motihari ...       | 29.522                  | 29.716                          | -.033                      | WNW                  | 7.7                   | 94.5                | 17th ..                 | 74.6                    | 23rd ..             | 90.6    | 77.4                      | 84.0                              | +0.3                            | 86.8                                |                           |
| Dehree ...         | 29.407                  | 29.762                          | +.020                      | Westerly             | 158.8                 | 88.4                | 19th ..                 | 76.0                    | 20th, 22nd Sept.    | 87.3    | 78.0                      | 82.6                              | +0.2                            | 85.7                                |                           |
| Buxar ...          | 29.492                  | 29.734                          | -.020                      | NW                   | 167.7                 | 90.4                | 20th ..                 | 74.8                    | 23rd ..             | 89.0    | 77.0                      | 82.5                              | -1.0                            | 85.2                                |                           |
| Arrah ...          | 29.511                  | 29.708                          | -.030                      | NW                   | 98.4                  | 91.4                | 18th ..                 | 74.1                    | 23rd ..             | 89.7    | 77.3                      | 83.5                              | -0.2                            | 85.5                                |                           |
| Gya ...            | 29.345                  | 29.722                          | -.035                      | Westerly             | 72.0                  | 91.0                | 19th ..                 | 74.8                    | 23rd ..             | 89.9    | 76.8                      | 83.4                              | -1.9                            | 86.8                                |                           |
| Bankipore ...      | 29.551                  | 29.734                          | -.032                      | WSW                  | 75.0                  | 93.4                | 19th ..                 | 74.7                    | 23rd ..             | 89.2    | 78.2                      | 83.7                              | -2.0                            | 84.7                                |                           |
| Bhagulpore ...     | 29.568                  | 29.730                          | -.026                      | E                    | 81.0                  | 90.4                | 19th ..                 | 76.0                    | 20th ..             | 88.7    | 78.3                      | 83.5                              | -0.4                            | 85.0                                |                           |
| Deonika ...        | 29.224                  | —                               | —                          | Calm, NW             | 13.3                  | 91.5                | 20th ..                 | 74.2                    | 20th ..             | 88.4    | 76.3                      | 82.4                              | —                               | 84.5                                |                           |
| Hazuribagh ...     | 27.751                  | 29.752                          | -.007                      | NW                   | 257.0                 | 90.5                | 20th ..                 | 68.7                    | 22nd ..             | 84.1    | 72.3                      | 78.2                              | -0.8                            | 78.8                                |                           |
| Ranchee ...        | 27.823                  | 29.736                          | -.032                      | NNW                  | 175.9                 | 87.0                | 20th ..                 | 66.9                    | 23rd ..             | 83.6    | 70.8                      | 77.2                              | 0                               | 79.1                                |                           |
| Chyabassa ...      | 28.981                  | —                               | —                          | SSW                  | 20.6                  | 91.4                | 20th ..                 | 72.3                    | 23rd ..             | 89.1    | 75.7                      | 82.4                              | —                               | 83.6                                |                           |
| Sitamar ...        | 29.450                  | 29.785                          | -.037                      | SW                   | 61.0                  | 92.1                | 17th, 23rd Sept.        | 76.5                    | 20th, 21st Sept.    | 90.4    | 77.4                      | 83.9                              | 0                               | 82.7                                |                           |
| Dhubri ...         | 29.034                  | 29.752                          | -.071                      | Calm                 | 90.0                  | 89.3                | 22nd ..                 | 75.3                    | 20th ..             | 89.0    | 78.3                      | 83.1                              | +2.7                            | 82.7                                |                           |
| Silchar ...        | 29.655                  | 29.760                          | -.054                      | Variable             | 62.0                  | 93.5                | 23rd ..                 | 74.3                    | 19th ..             | 89.3    | 78.2                      | 83.8                              | -0.4                            | 83.7                                |                           |

the week ending Friday, the 23rd September 1887.

| the week ending Friday the 1st of May 1900. |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |     |   |                         |                            | METEOROLOGICAL DIVISION. |  |
|---|---|--|--------------------|--------------|---------------------|--------------|------------|--------------------|--------------|------------|-------------------------------|------------------------------|-----|---|-------------------------|----------------------------|--------------------------|--|
| DISTRICT OBSERVATIONS.                      |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |     |   |                         |                            |                          |  |
| at 10 A.M.                                  | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | OF WEEK.           |              | RAINFALL.           |              |            |                    |              |            |                               |                              |     |   | Representative station. | DISTRICT.                  |                          |  |
|   |   |  | Mean for district. | Normal mean. | Since 1st of month. |              |            | Since May 15th.    |              |            | Average number of rainy days. | Normal number of rainy days. |     |   |                         |                            |                          |  |
|   |   |  |                    |              | Mean for district.  | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. |                               |                              |     |   |                         |                            |                          |  |
| 76  | 6.4                                       | 0.15                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | —   | — | Gopalpore ...           | Pooree ...                 |                          |  |
| 82  | 7.0                                       | 2.83                                   | —                  | 2.44         | 8.90                | —            | —          | —                  | 43.31        | —          | —                             | —                            | 4.0 | — | False Point ...         | Cuttack ...                |                          |  |
| 72  | 5.9                                       | 1.26                                   | —                  | 2.05         | 8.37                | —            | —          | —                  | 43.06        | —          | —                             | —                            | 3.7 | — | Cuttack ...             | Balasore ...               |                          |  |
| 79  | 7.1                                       | 0.50                                   | —                  | 2.03         | 9.07                | —            | —          | —                  | 43.52        | —          | —                             | —                            | 3.2 | — | Balasore ...            | South-West Midnapore ...   |                          |  |
| 87  | 7.9                                       | 0.76                                   | —                  | 2.25         | 9.20                | —            | —          | —                  | 51.23        | —          | —                             | —                            | 3.2 | — | Saugor Island ...       | South 24-Pergunnahs ...    |                          |  |
| 73  | 4.4                                       | 0.26                                   | 1.18               | 1.91         | 6.90                | 6.59         | +0.31      | 48.69              | 41.60        | +3.19      | 2.0                           | 2.7                          | —   | — | Midnapore ...           | Midnapore ...              |                          |  |
| 79  | 7.6                                       | 3.31                                   | 2.10               | 2.05         | 5.37                | 7.31         | -2.03      | 46.59              | 45.96        | -0.03      | 3.7                           | 3.3                          | —   | — | Calcutta ...            | 24-Pergunnahs ...          |                          |  |
| 74  | 8.3                                       | 1.84                                   | 1.36               | 1.81         | 5.65                | 6.47         | -0.82      | 41.95              | 40.53        | +1.42      | 2.7                           | 2.7                          | —   | — | Burdwan ...             | Howrah ...                 |                          |  |
| 74  | 4.3                                       | 0.45                                   | 1.32               | 1.63         | 4.83                | 6.98         | -2.15      | 47.70              | 45.77        | +1.93      | 2.5                           | 2.8                          | —   | — | Bankoora ...            | Hooghly ...                |                          |  |
| 76  | 5.3                                       | 0.79                                   | 1.90               | 1.87         | 6.71                | 7.97         | -1.26      | 44.33              | 40.01        | -1.68      | 3.0                           | 3.0                          | —   | — | Raneegunge ...          | Burdwan ...                |                          |  |
| 82  | 8.0                                       | 3.95                                   | 2.09               | 2.27         | 9.82                | 8.43         | +1.39      | 54.28              | 42.86        | +11.42     | 2.5                           | 2.8                          | —   | — | Berhampore ...          | West Burdwan ...           |                          |  |
| 80  | 7.7                                       | 4.32                                   | 2.06               | 1.85         | 6.37                | 6.95         | -0.58      | 35.95              | 42.80        | -6.55      | 3.0                           | 2.7                          | —   | — | Krishnagpur ...         | Moorshedabad ...           |                          |  |
| 80  | 7.0                                       | 0.55                                   | 1.23               | 1.95         | 5.12                | 7.35         | -1.93      | 33.36              | 46.89        | -13.53     | 2.6                           | 2.8                          | —   | — | Jessore ...             | Nuddea ...                 |                          |  |
| 78  | 0.7                                       | 2.00                                   | 2.07               | 2.85         | 7.27                | 12.32        | -5.05      | 80.88              | 101.19       | -20.31     | 3.5                           | 3.8                          | —   | — | Chittagong ...          | Khoolna ...                |                          |  |
| 83  | 7.3                                       | 3.22                                   | 3.10               | 2.72         | 8.28                | 9.75         | -0.87      | 48.12              | 07.59        | -19.47     | 3.8                           | 3.6                          | —   | — | Chittagong ...          | Chittagong Hill Tracts ... |                          |  |
| 80  | 3.0                                       | 0.64                                   | 0.20               | 1.86         | 2.55                | 7.37         | -4.82      | 20.89              | 48.67        | -15.78     | 1.0                           | 2.7                          | —   | — | Demagiri ...            | Backergunge ...            |                          |  |
| 79  | 5.1                                       | 0.57                                   | 0.55               | 2.07         | 2.77                | 9.09         | -6.92      | 33.54              | 51.21        | -20.67     | 2.8                           | 3.1                          | —   | — | Barrisal ...            | Noakholly ...              |                          |  |
| 79  | 0.1                                       | 0.32                                   | —                  | 2.03         | —                   | 9.05         | —          | —                  | 62.65        | —          | —                             | 3.6                          | —   | — | Noakholly ...           | Furzedpore ...             |                          |  |
| 86  | 0.9                                       | 1.72                                   | —                  | 2.06         | —                   | 10.13        | —          | —                  | 58.20        | —          | —                             | 3.4                          | —   | — | Furzedpore ...          | Dacca ...                  |                          |  |
| 79  | 0.6                                       | 1.49                                   | 1.81               | 2.16         | 9.74                | 7.46         | +2.28      | 54.44              | 48.95        | -5.49      | 2.3                           | 2.9                          | —   | — | Dacca ...               | Commillah ...              |                          |  |
| 83  | 0.1                                       | 4.71                                   | 2.08               | 2.04         | 7.53                | 8.19         | -0.66      | 38.31              | 46.21        | -7.90      | 3.0                           | 2.8                          | —   | — | Commillah ...           | Mymensingh ...             |                          |  |
| 76  | 4.7                                       | 1.22                                   | —                  | 2.28         | —                   | 8.85         | —          | —                  | 46.17        | —          | —                             | 2.7                          | —   | — | Mymensingh ...          | Bogra ...                  |                          |  |
| 77  | 3.0                                       | 0.78                                   | 0.78               | 1.73         | 8.89                | 8.79         | +0.10      | 43.78              | 47.90        | -4.12      | 3.0                           | 2.7                          | —   | — | Bogra ...               | Putna ...                  |                          |  |
| 81  | 0.1                                       | 1.90                                   | 2.02               | 2.20         | 9.19                | 9.36         | -0.17      | 61.21              | 50.27        | +13.94     | 2.2                           | 3.1                          | —   | — | Serajgunge ...          | Rajshahye ...              |                          |  |
| 81  | 5.1                                       | 2.33                                   | 1.52               | 2.80         | 10.74               | 10.41        | +0.33      | 75.92              | 61.50        | +11.23     | 2.5                           | 3.1                          | —   | — | Ranpore ...             | Maldah ...                 |                          |  |
| 84  | 5.6                                       | 1.26                                   | 0.84               | 5.32         | 17.44               | 17.46        | -0.02      | 111.93             | 99.30        | +12.63     | 1.8                           | 4.0                          | —   | — | Dinapore ...            | Dinapore ...               |                          |  |
| 92  | 7.1                                       | 1.80                                   | 3.62               | 3.57         | 14.55               | 15.02        | -0.29      | 109.53             | 106.57       | +2.96      | 4.8                           | 4.2                          | —   | — | Ranpore ...             | Purneah ...                |                          |  |
| 78  | 3.9                                       | 0.81                                   | 2.24               | —            | 9.80                | 9.67         | +0.23      | 61.15              | 50.73        | +10.37     | 4.0                           | 2.8                          | —   | — | Ranpore ...             | North Bhagalpore ...       |                          |  |
| 80  | 5.3                                       | 1.13                                   | 1.81               | 1.43         | 4.90                | 6.45         | -0.59      | 49.32              | 38.35        | +5.97      | 2.0                           | 2.0                          | —   | — | Mozufferpore ...        | Mozufferpore ...           |                          |  |
| 78  | 6.6                                       | 2.71                                   | 2.22               | 1.53         | 10.35               | 6.01         | +4.34      | 42.11              | 39.16        | +2.95      | 2.0                           | 1.8                          | —   | — | Darbhanga ...           | Darbhanga ...              |                          |  |
| 89  | 2.6                                       | 0.98                                   | 0.76               | 1.58         | 5.50                | 5.66         | -0.33      | 33.86              | 35.95        | -2.09      | 2.3                           | 2.7                          | —   | — | Motihari ...            | Chunar ...                 |                          |  |
| 75  | 2.0                                       | 1.00                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | —   | — | Chupra ...              | Saran ...                  |                          |  |
| 74  | 4.4                                       | 0.38                                   | 1.31               | 1.29         | 4.08                | 5.63         | -0.65      | 32.56              | 34.32        | -1.77      | 3.0                           | 2.5                          | —   | — | Dohree ...              | Shahabad ...               |                          |  |
| 75  | 4.7                                       | 1.77                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | —   | — | Buxar ...               | Gya ...                    |                          |  |
| 67  | 5.1                                       | 4.18                                   | 2.68               | 1.34         | 5.62                | 5.54         | +0.08      | 35.28              | 30.35        | -1.07      | 2.5                           | 2.2                          | —   | — | Arrah ...               | Patna ...                  |                          |  |
| 84  | 7.6                                       | 2.13                                   | 1.61               | 1.30         | 5.02                | 5.36         | -0.34      | 33.42              | 35.71        | -2.29      | 2.8                           | 2.3                          | —   | — | Bankipore ...           | South Bhagalpore ...       |                          |  |
| 78  | 2.9                                       | 0.87                                   | 2.05               | 1.31         | 6.82                | 6.31         | +0.51      | 40.30              | 37.42        | +2.88      | 3.0                           | 2.3                          | —   | — | Bhagalpore ...          | Moulghyr ...               |                          |  |
| 74  | 3.4                                       | 3.84                                   | 2.61               | 2.31         | 8.00                | 8.00         | -0.00      | 40.59              | 44.50        | +5.09      | 4.8                           | 3.0                          | —   | — | Bhagalpore ...          | Sonthal Pergunnahs ...     |                          |  |
| 70  | 7.7                                       | 3.09                                   | 2.26               | 2.16         | 7.07                | 7.76         | -0.69      | 43.96              | 44.59        | -0.43      | 2.4                           | 3.6                          | —   | — | Dumka ...               | Hazaribagh ...             |                          |  |
| 77  | 7.3                                       | 1.78                                   | 1.24               | 1.03         | 6.07                | 6.78         | -0.71      | 42.46              | 41.70        | +0.75      | 2.5                           | 2.9                          | —   | — | Hazaribagh ...          | Lehardugga ...             |                          |  |
| 73  | 6.3                                       | 2.97                                   | 3.15               | 1.32         | 6.15                | 6.65         | -0.50      | 49.30              | 45.07        | +3.03      | 3.0                           | 3.2                          | —   | — | Ranchee ...             | Manbhoom ...               |                          |  |
| 90  | 9.1                                       | 4.78                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | —   | — | Chyebassa ...           | Singbhoon ...              |                          |  |
| 85  | 6.4                                       | 0.80                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | —   | — | Sib sagar ...           | Assam ...                  |                          |  |
| 81  | 8.1                                       | 4.93                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | —   | — | Dhubi ...               | Silchar ...                |                          |  |

— denotes normal mean, and positive when greater.







**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVA-  
TIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
23RD OF SEPTEMBER 1887.**

At the close of the previous week the meteorological conditions were almost normal over the greater part of the province, except that pressure was rather lower than usual. A fairly steady monsoon current was blowing from the Bay of Bengal, and easterly and south-easterly winds were reported from almost all stations. Conditions were almost unchanged on the 17th, and on this day light but rather local rain was reported from the greater part of the province. On the 18th the changes of pressure over the province were a little irregular, and at the western stations winds became rather westerly, showing that the westerly current blowing from the Arabian Sea was again beginning to influence Bengal. On the 18th rainfall was rather irregularly distributed, and the greater part of the centre of the province received little or no rain. On the 19th pressure commenced to fall, the fall being rather large in North Bengal and Assam, and the area of lowest pressure at the Bay stations was transferred to the north-west angle of the Bay and the Orissa Coast; the westerly winds strengthened, and winds became westerly and south-westerly over the greater part of the province. On this day also general and rather heavy rain was received in Behar and North Bengal. On the 20th a brisk fall of pressure took place over parts of South-West Bengal, and pressure became distinctly low, a band of low pressure apparently stretching from South-West Bengal through West Bengal into Behar. Winds also commenced to show a very faint tendency to circulation over Bengal, and rain again fell over a considerable part of Behar and North Bengal. On the 21st pressure continued to fall, and a low pressure area was formed over the whole of the centre of the province, while on the 22nd a distinct barometric depression accompanied by cyclonic circulation of winds had formed over the head of the Bay, the centre being only a short distance south of the Sunderbuns and between Saugor Island and Burrisal. On the 23rd the depression was still only of slight intensity and had scarcely moved its position, and its centre on this day was probably almost over the coast line of the Sunderbuns. During the formation of the depression the monsoon current was as usual prevented from blowing over the province, and rain almost ceased over the interior of Bengal, but at the stations on and near the coast, which were affected by the depression, rather heavy rain fell at the close of the week.

The rainfall of the week has therefore again not been heavy, and all districts have received amounts averaging from about one-and-a-half to two inches. The rainfall has thus been about equal to the normal amount in South-West Bengal, Chutia Nagpur and Behar, while it is seriously in defect in East and North Bengal and Orissa.

**Pressure**—During the previous week averaged about a tenth of an inch below the normal, but for the greater part of the present week pressure was increasing, and it was only at its close that the southern districts of the province were affected by the formation of the depression at the head of the Bay. The mean pressure for the present week has thus been much more nearly normal, and though pressure is at almost all stations below the average, the variations as a rule are not larger than two or three hundredths of an inch. Taking only those stations into consideration from which observations have been received for a considerable period, and which therefore yield reliable averages, the mean pressure of the whole of Bengal for the week has been 0·021 inch below the normal, and the extreme variations are only from a defect of 0·041 inch at Jessore to an excess of 0·004 inch at Cuttack. In Assam pressure has been more largely below the normal, the defect varying from 0·037 inch at Sibsaugor to one of 0·071 inch at Dhubri, the mean defect for Assam for the week being 0·054 inch.

**Temperature**—The variations of temperature from the normal of the week are small and in no district equal a degree. In East Bengal and North Bengal the mean temperature has been above the normal by 0·3° and 0·2° respectively, but all other districts show defects. In Orissa, North Behar and Chutia Nagpur the defects are small and are less than half a degree, but in South-West Bengal and South Behar the defects are larger and equal 0·7° and 0·9° respectively. For the whole of Bengal temperature has been in defect by 0·3°. In Assam temperature has been above the normal by 0·8°.

**Rainfall**—Has been moderate in amount in all districts during the week, and the average rainfall in each of the seven meteorological districts has varied between one-and-a-half and two inches. Rainfall is, however, now becoming decidedly less frequent, and the average number of rainy days in the week has been from 2 to 3 in the various districts. Compared with the normal fall for the period, the rainfall in East Bengal has been most largely in defect; North Bengal has also been largely in defect, while in Orissa the defect has been a little less pronounced. The other districts have received falls nearly equal to or in excess of the normal, but while in South-West Bengal and North Behar the excess amounts are very small, in South Behar the excess is considerable. Compared with the normal, and expressed as a percentage of that amount, the actual rainfall in the seven meteorological districts during the past week has been—in Orissa 62 per cent., in South-West Bengal 101 per cent., in East Bengal 50 per cent., in North Bengal 55 per cent., in North Behar 106 per cent., in South Behar 130 per cent., and in Chutia Nagpur 93 per cent. Taking each of these districts as having an equal value in the calculation, the

average rainfall of the province for the past week has been equal to 85 per cent. of the normal.

The rainfall for the whole of September has been generally deficient in Bengal. This can be most clearly seen by giving the figures representing the rainfall for each week in each of the seven districts expressed as a percentage of the normal fall.

*Rainfall expressed as a percentage of the normal fall.*

| Meteorological District.   |     |     |     | From 2nd<br>September to<br>9th September<br>1887. | From 9th<br>September to<br>16th September<br>1887. | From 16th<br>September to<br>23rd September<br>1887. | Average of<br>the first three<br>weeks of<br>September. |
|----------------------------|-----|-----|-----|--|---|--|---|
| Orissa                     | ... | ... | ... | 23   | 142   | 62   | 76  |
| South-West Bengal          | ... | ... | ... | 42   | 144   | 101  | 96  |
| East Bengal                | ... | ... | ... | 31   | 128   | 50   | 70  |
| North Bengal               | ... | ... | ... | 173  | 36  | 55   | 88  |
| North Behar                | ... | ... | ... | 122  | 20  | 106  | 83  |
| South Behar                | ... | ... | ... | 102  | 63  | 130  | 98  |
| Chutia Nagpore             | ... | ... | ... | 58   | 112   | 93   | 88  |
| Average for whole province |     |     |     | 78   | 92  | 85   | 86  |

All districts except South Behar and South-West Bengal have therefore received a decidedly defective rainfall during September, and in Orissa and East Bengal, and in the northern districts of the province, the defects have been large.

Taking up the rainfall of the province rather more in detail, during the week under review the following districts have received particularly scanty falls:—parts of the Hooghly, Burdwan, Jessore, Khoolna, and Bankoorah districts, the whole of the Furreedpore, Dacca, and Commilla districts and part of Mymensingh, and the Maldah district. The extreme scantiness of the rainfall at some of the stations in East Bengal during the week may be shown by the fact that in the Furreedpore district the average fall for the week has been 0·20 inch, the normal fall for the period being 1·80 inches; in the Dacca district the actual fall has averaged 0·55 inch against the normal 2·67 inches; and in the Commilla district the fall has averaged, so far as the reports have been received up to the present, about a tenth of an inch against the normal 2·63 inches. In fact, since the first of the month up to the 18th the station of Commilla has only received 2·55 inches, while the normal fall is 9·61 inches, and since the 15th of May it has only received 40·91 inches, the normal for the period being 69·30 inches. Chandpore also in the Tipperah district has only received 2·23 inches of rain since the 1st of the month up to the 22nd against the normal fall of 10·24 inches, and since the 15th of May the actual fall has been 32·27 inches against the normal fall of 70·93 inches.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 23rd of September 1887:—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          |                 | RAINFALL.  |                         |                                |            |                     |                 |                      |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 15th May 1887. |                 |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. | Average.             | Normal average. |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |                 |
| Orissa ... ..                | 90·4                          | 74·8                         | 87·9                    | 78·4                   | 83·2                  | —0·1   | 1·00     | 2·58            | —0·98      | 3·1                     | 3·0                            | —0·5       | 6·08                | 5·79            | 37·97                | 43·70           |
| South-West Bengal ... ..     | 92·6                          | 74·4                         | 88·3                    | 78·0                   | 83·2                  | —0·7   | 2·00     | 1·98            | +0·02      | 3·0                     | 2·9                            | +0·1       | 6·03                | 7·48            | 41·96                | 44·93           |
| East Bengal ... ..           | 91·3                          | 74·8                         | 88·0                    | 77·8                   | 82·9                  | +0·3   | 1·40     | 2·81            | —1·41      | 2·7                     | 3·5                            | —0·8       | 6·58                | 10·15           | 47·46                | 65·96           |
| North Bengal ... ..          | 92·0                          | 70·8                         | 80·0                    | 77·3                   | 83·2                  | +0·3   | 1·88     | 2·89            | —1·31      | 2·2                     | 3·1                            | —0·9       | 10·98               | 10·71           | 68·88                | 61·64           |
| North Behar ... ..           | 91·5                          | 73·8                         | 80·7                    | 77·5                   | 83·6                  | —0·2   | 1·75     | 1·65            | +0·10      | 2·8                     | 2·3                            | +0·5       | 7·45                | 7·33            | 47·31                | 41·50           |
| South Behar ... ..           | 93·4                          | 74·1                         | 88·7                    | 77·4                   | 83·1                  | —0·9   | 2·04     | 1·57            | +0·47      | 3·1                     | 2·5                            | +0·6       | 6·26                | 6·40            | 39·29                | 38·16           |
| Chutia Nagpur ... ..         | 90·5                          | 66·9                         | 83·9                    | 71·6                   | 77·7                  | —0·4   | 1·74     | 1·86            | —0·12      | 2·5                     | 3·3                            | —0·8       | 6·34                | 7·29            | 43·37                | 43·44           |
| Assam ... ..                 | 83·5                          | 74·3                         | 88·6                    | 77·3                   | 82·9                  | +0·8   |          |                 |            |                         |                                |            |                     |                 |                      |                 |

\* Chyebassa not included.



## Results of the Meteorological Observations taken at the Alipore Observatory from 18th to 24th September 1887.

| Month. | Date. | Maximum | Minimum | Mean    | Mean | Range. | Minimum. | Mean wet bulb. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. | Rain                     | WEATHER.                                  |
|--------|-------|---------|---------|---------|------|--------|----------|----------------|------------|-----------|-----------------------|-----------------|--------------------------|---|
|        |       |         |         |         |      |        |          |                |            |           |                       |                 |                          |   |
| 1887.  |       | O       |         | inches. | O    | O      | O        | O              | Inches.    | O         | %                     |                 | Inches.                  |   |
| Sept.  | 18th  | 153.5   | 10.6    | 29.706  | 84.1 | 89.0   | 10.2     | 78.8           | 80.1       | 0.978     | 78.4                  | 83              | SSE and SW               | 109 Nil Partially cloudy, d.              |
| "      | 19th  | 148.0   | 5.1     | 673     | 83.2 | 88.5   | 9.3      | 79.2           | 80.1       | .990      | 78.9                  | 87              | SSW and SW by S          | 106 1.00 Partially cloudy, o, g, t, p, d. |
| "      | 20th  | 106.4   | 0.9     | 635     | 80.5 | 83.7   | 4.9      | 78.8           | 78.9       | .968      | 78.2                  | 93              | S and S by W             | 74 1.00 Chiefly cloudy, o, g, t, p, d.    |
| "      | 21st  | 149.9   | 4.6     | 634     | 81.1 | 87.7   | 10.2     | 77.5           | 78.8       | .955      | 77.8                  | 90              | S by W and SE by S       | 56 0.74 Chiefly cloudy, o, g, p, d.       |
| "      | 22nd  | 112.5   | 0.1     | 643     | 80.4 | 83.6   | 5.9      | 77.7           | 78.2       | .936      | 77.2                  | 90              | SE by S and N by W       | 118 0.48 Cloudy, o, g, t, p, d.           |
| "      | 23rd  | 147.4   | 3.5     | 631     | 80.7 | 80.3   | 9.4      | 76.9           | 78.1       | .928      | 77.0                  | 88              | N by W and N             | 137 1.55 Chiefly cloudy, o, g, d p.       |
| "      | 24th  | 149.8   | Nil     | 667     | 79.1 | 84.2   | 7.6      | 76.6           | 75.7       | .843      | 74.1                  | 85              | NW by N, W by N and WSW. | 170 0.28 Chiefly cloudy, o, g, d.         |

The mean pressure of the seven days

The average pressure of the corresponding period for 24 years, S. G.'s Office

The total number of hours of bright sunshine

The maximum possible number of hours of sunshine

The mean temperature of the seven days

The average temperature of the corresponding period for 24 years, S. G.'s Office

The extreme variation of temperature

The maximum temperature

The highest velocity of the wind in one hour

The highest pressure of wind on one square foot

The mean relative humidity

The average relative humidity of the corresponding period for 24 years, S. G.'s Office

The total fall of rain from 18th to 24th September 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

The total fall from 1st January to 24th September 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, t thunder, < lightning, d dew.

A. PENLER,

for Offg. Meteorological Reporter to the Govt. of India.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 18th to 24th September 1887.

| MONTH.    | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|-----------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|           |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.     |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| September | 18th  | 84.3         | 92.5     | 13.5   | 79.0     | 80.9           | 1.010           | 79.6       | 85        | —       |
| "         | 19th  | 83.9         | 91.0     | 11.4   | 79.6     | 81.4           | 1.040           | 80.4       | 89        | 0.75    |
| "         | 20th  | 79.6         | 81.9     | 2.6    | 79.3     | 78.2           | .947            | 77.6       | 93        | 0.12    |
| "         | 21st  | 79.9         | 89.0     | 11.2   | 77.8     | 78.6           | .963            | 78.1       | 94        | 0.73    |
| "         | 22nd  | 79.0         | 85.4     | 7.6    | 77.8     | 78.1           | .951            | 77.7       | 96        | 0.51    |
| "         | 23rd  | 80.1         | 88.0     | 10.3   | 77.7     | 78.1           | .936            | 77.2       | 91        | 2.02    |
| "         | 24th  | 78.0         | 85.2     | 9.4    | 75.8     | 76.2           | .881            | 75.4       | 92        | 0.27    |

|   |     |     |     |               |
|---|-----|-----|-----|---------------|
| The mean temperature of the seven days                  | ... | ... | ... | 80.7          |
| The extreme variation of temperature                    | ... | ... | ... | 16.7          |
| The maximum temperature                                 | ... | ... | ... | 92.5          |
| The mean relative humidity                              | ... | ... | ... | %<br>91       |
| The total fall of rain from 18th to 24th September 1887 | ... | ... | ... | Inch.<br>4.40 |

The mean temperature and humidity are obtained by applying to the mean of the 10a, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA; A. PEDLER,  
The 26th September 1887. for Offg. Meteorological Reporter to the Govt. of India.

Weekly Return of Traffic Receipts on Indian Railways.

EASTERN BENGAL STATE RAILWAY.  
(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)  
Approximate Return of Traffic for week ended 10th September 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated) including steam boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|--|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |  |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.     | Rs. A. P.  | Rs. A. P.       |                          |              |         |
| Total traffic for the week                                | 99,755                | 45,170 0 0         | 5,56,790 0                       | 1,36,760 0 0  | 10,690 0 0                                       | 1,92,590 0 0    | 20,058                   | 24,141       | 44,199  |
| Or per mile of railway                                    | 155                   | 70 0 0             | 910 0                            | 212 0 0       | (a) 1 0 0  | 293 0 0         | .....                    | .....        | .....   |
| For previous 9 weeks of half-year                         | 1,090,744             | 4,53,360 0 0       | 55,08,367 0                      | 8,90,660 0 0  | 1,48,220 0 0                                     | 14,98,230 0 0   | 181,014                  | 197,728      | 379,642 |
| Total for 10 weeks  | 1,190,499             | 4,98,530 0 0       | 60,65,067 0                      | 10,38,420 0 0 | 1,58,670 0 0                                     | 16,90,820 0 0   | 201,972                  | 221,900      | 423,841 |
| COMPARISON.   |                       |                    |                                  |               |  |                 |                          |              |         |
| Total for corresponding week of previous year             | 90,152                | 43,974 0 0         | 5,38,318 0                       | 1,24,257 0 0  | 8,908 0 0  | 1,77,122 0 0    | 17,037                   | 24,023       | 41,060  |
| Per mile of railway corresponding period of previous year | 140                   | 73 0 0             | 888 0                            | 205 0 0       | .....  | 278 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year              | 1,141,603             | 4,74,073 0 0       | 48,31,150 0                      | 8,90,465 0 0  | 1,01,024 0 0                                     | 14,65,561 0 0   | 180,917                  | 199,536      | 380,453 |

(a) Steam-boat earnings, Rs. 10,000, have been excluded from the calculation.  
Note—Dacca and Assam-Bihar approximate returns are also published separately.

FINANCIAL YEAR.  
Approximate Statement of gross receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 11TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 10TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 606   | 1,77,199  | 292              | 645   | 1,92,590  | 299              | 606  | 33,09,002       | 237              | 645  | 34,96,445*      | 235              | 1,77,441                | .....                   |

\* Audited up to 30th June 1887.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 10th September 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 21,825                | 7,270 0 0          | 41,446 0                         | 2,650 0 0  | 250 0 0                     | 10,070 0 0      | 3,501                    | 1,709        | 5,210  |
| Or per mile of railway ...                                    | 173                   | 58 0 0             | 333 0                            | 21 0 0     | 2 0 0                       | 81 0 0          | .....                    | .....        | .....  |
| For previous 9 weeks of half-year ...                         | 220,409               | 70,490 0 0         | 3,08,904 0                       | 28,060 0 0 | 1,130 0 0                   | 95,580 0 0      | 32,547                   | 17,248       | 49,795 |
| Total for 10 weeks ...  | 232,234               | 77,760 0 0         | 4,40,550 0                       | 29,510 0 0 | 1,380 0 0                   | 1,05,650 0 0    | 36,048                   | 18,937       | 55,006 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 19,011                | 6,481 0 0          | 22,064 0                         | 1,680 0 0  | 15 0 0                      | 8,185 0 0       | 4,014                    | 1,196        | 5,210  |
| Per mile of railway corresponding period of previous year ... | 152                   | 52 0 0             | 176 0                            | 13 0 0     | .....                       | 65 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 236,742               | 76,745 0 0         | 1,72,753 0                       | 12,700 0 0 | 25 0 0                      | 80,780 0 0      | 41,107                   | 15,654       | 56,821 |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 11TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 10TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125   | 8,185     | 65               | 125   | 10,070    | 81               | 125  | 2,65,547        | 92               | 125  | 2,70,085*       | 94               | 5,338                   | .....                   |

\* Audited up to week ending 30th June 1887.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 10th September 1887, on 86 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 11,564                | 3,610 0 0          | 8,684 0                          | 820 0 0    | 40 0 0                      | 4,470 0 0       | 2,181                    | 783          | 2,964  |
| Or per mile of railway ...                                    | 134                   | 42 0 0             | 101 0                            | 10 0 0     | .....                       | 52 0 0          | .....                    | .....        | .....  |
| For previous 9 weeks of half-year ...                         | 100,630               | 52,625 0 0         | 1,28,922 0                       | 10,000 0 0 | 1,025 0 0                   | 43,650 0 0*     | 20,146                   | 9,684        | 29,830 |
| Total for 10 weeks ...  | 112,194               | 56,235 0 0         | 1,39,710 0                       | 10,820 0 0 | 1,065 0 0                   | 48,120 0 0      | 22,327                   | 10,467       | 32,794 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 7,739                 | 2,427 0 0          | 5,040 0                          | 2,136 0 0† | 258 0 0                     | 4,821 0 0       | 1,505                    | 616          | 2,150  |
| Per mile of railway corresponding period of previous year ... | 90                    | 28 0 0             | 59 0                             | 25 0 0     | .....                       | 53 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 98,205                | 30,118 0 0         | 62,373 0                         | 7,277 0 0  | 2,121 0 0                   | 39,516 0 0      | 13,496                   | 7,477        | 20,963 |

\* Audited up to week ending 30th June 1887.  
† Includes ballast trains Rs. 1,082.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 11TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 10TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 86  | 4,521     | 56               | 86  | 4,470     | 52               | 86   | 1,05,916        | 54               | 86   | 1,12,846*       | 57               | 6,930                   | .....                   |

\* Audited up to 30th June 1887.

ASSAM-BEHAR-STATE RAILWAY.

PURNEAH SECTION.

Approximate Return of Traffic for week ended 10th September 1887, on 39 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weights carried.                 | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,329                 | 760 0 0            | 5,538 0                          | 490 0 0    | 20 0 0                      | 1,270 0 0       | 668                      | 410          | 1,078  |
| Or per mile of railway ...                                    | 60                    | 19 0 0             | 142 0                            | 13 0 0     | 1 0 0                       | 33 0 0          | .....                    | .....        | .....  |
| For previous 9 weeks of half-year ...                         | 30,979                | 10,750 0 0         | 1,17,028 0                       | 12,630 0 0 | 270 0 0                     | 33,850 0 0      | 6,392                    | 3,718        | 10,010 |
| Total for 10 weeks ...  | 33,308                | 11,510 0 0         | 1,22,566 0                       | 13,320 0 0 | 290 0 0                     | 25,120 0 0      | 6,960                    | 4,128        | 11,088 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | Nil                | Nil                              | Nil        | Nil                         | Nil             | Nil                      | Nil          | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Assam-Bihar State Railway.

| RECEIPTS FOR WEEK ENDING 11TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 10TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 11TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 10TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
| .....   | Nil       | .....            | 39  | Rs. 1,270 | Rs. 33           | .....  | Nil             | .....            | 39   | Rs. 66,355*     | Rs. 73           | Rs. 66,355              | .....                   |

\* Audited up to 30th June 1887.

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

Rs.

|  |     |     |           |
|--|-----|-----|-----------|
| Approximate earnings for week ending 10th September 1887 ... | ... | ... | 8,380     |
| Corresponding week last year ...                             | ... | ... | 9,581     |
| Decrease ...   | ... | ... | 1,201     |
| Receipts from 1st July to 10th September 1887 ...            | ... | ... | 90,232    |
| From 1st July to 11th September 1886 ...                     | ... | ... | 99,281    |
| Decrease ...   | ... | ... | 9,049     |
|  |     |     | Miles.    |
| Miles open, week ending 10th September 1887 ...              | ... | ... | 51        |
| Corresponding week last year ...                             | ... | ... | 51        |
|  |     |     | Rs. A. P. |
| Receipts per mile open, week ending 10th September 1887 ...  | ... | ... | 164 5 0   |
| Corresponding week last year ...                             | ... | ... | 187 13 10 |
| Decrease ...   | ... | ... | 23 8 10   |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 19th September 1887.

W. STEVENSON, Acting Manager, D.-H. Railway.

REGISTERED No. 29.

No. 40 of 1887.



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, OCTOBER 5, 1887.

OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 1st October 1887.

| No.                       | District and date of return. | Rainfall at Sudder Station in inches.   | Character of the weather, state and prospects of the crops, and state of health at date.   |  |      |
|---------------------------|------------------------------|---|--|--|------|
| BENGAL.                   |                              |   |  |  |      |
| Western Districts.        |                              |   |  |  |      |
| BURDWAN DIVN.             | 1 Burdwan, Oct. 1, '87       | 0.63  | Weather—seasonable. Prospects of crops favourable, but more rain wanted. Public health generally good. Cholera reported from Ryna thana. Price of rice stationary.   |  |      |
|                           | Culna                        | 1.37  |  |  |      |
|                           | Cutwa                        | 1.59  |  |  |      |
|                           | Rancegunge                   | 0.01  |  |  |      |
|                           | 2 Bankoora „ 1, '87          | 0.09  |  |  |      |
| 3 Beerbhoom „ 1, '87      | 0.57                         | Weather—seasonable. Rain very much wanted in all parts of the district. <i>Amun</i> crop on high lands will be damaged if it does not rain soon. Prices stationary. Public health good. |  |  |      |
|                           | Rampur Haut                  |   | 1.75   |  |      |
| 4 Midnapur „ 1 '87        | 0.25                         | Weather—dry generally. Prospects of crops hopeful, except partly in thanas Pataspur and Bhagwanpur in Contai sub-division. More rain wanted in Ghatal sub-division. Public health good. |  |  |      |
| 5 Hooghly „ 1, „          | 0.38                         | Weather—hot. State and prospects of all crops favourable, though in places more moisture is required for winter rice. Cholera reported from one village in Serampur sub-division.       |  |  |      |
|                           | Scrampur                     |   | 1.97   |  |      |
| Howrah „ 1, '87           | 0.14                         | Weather—sultry with clear sky Prospects of rice crop fair, but more rain required. Sugarcane on high lands doing well. <i>Aus dhun</i> and jute harvest continues.                      |  |  |      |
| Oolooberiah               | Nil                          |   |  |  |      |
| Central Districts.        |                              |   |  |  |      |
| PRESIDENCY DIVN.          | 6 24-Pergas., Oct. 1, '87    | 0.44  | Weather—seasonable. <i>Aus</i> harvest practically over Sugarcane and jute doing well. Prospects of <i>amun</i> crop have improved with the recent rain. Public health generally good.   |  |      |
|                           | 7 Nudda „ 1, „               | 1.73  |  | Weather—hot with showers, especially in the early part of the week. Prospects good. <i>Amun</i> , sugarcane, <i>til</i> , <i>arhar</i> and chillies doing well. Flood level falling steadily. Public health good, except that there is still a good deal of fever. |      |
|                           |                              | Kushten   |  |  | 3.62 |
|                           |                              | Meherpur  |  |  | 4.99 |
|                           |                              | Chundanga   |  |  | 4.85 |
|                           | 8 Khoolna „ 1, '87           | 3.12  |  | Weather—hot with some rain in the first part of the week. Prospects continue favourable owing to recent rain. Public health good.  |      |
|                           |                              | 1.88  |  |  |      |
|                           | 9 Jessore „ 1, „             | 2.91  |  | Weather—hot and bright after good showers. The early morning is tolerably cool. Harvesting of <i>aus</i> is finished. Prospect of <i>amun</i> is good, and the late showers seem to promise a good deal of benefit towards this crop. Public health good.          |      |
|                           |                              | 2.38  |  |  |      |
|                           |                              | Jhenidah  |  |  | 1.2  |
| Magurah                   |                              | 2.9   |  |  |      |
| 10 Moorsheadabad „ 1, '87 | 7.65                         | Weather—seasonable. Prospects of <i>amun</i> good. Sowing of <i>til</i> and <i>kalai</i> going on. Public health generally good.  |  |  |      |
|                           | 0.59                         |   |  |  |      |
|                           | Kandi                        |   | 0.58   |  |      |
| Jungipur                  | 0.71                         |   |  |  |      |
| RAJSHAHYE DIVN.           | 11 Dinagepur „ 1, '8         | 1.01  | Weather—seasonable. State and prospects of <i>haimanti</i> paddy good. Harvesting of jute nearly finished. Rice 18 to 26 seers per rupee.  |  |      |
|                           | Takurgaon                    | 0.51  |  |  |      |
|                           | 12 Rajshahye „ 1, '87        | 1.88  | Weather—clear and bright. Prospects of <i>amun</i> paddy and other crops continue generally good. Public health fair.  |  |      |
|                           |                              | 2.70  |  |  |      |
|                           | Natore                       | 1.96  | Weather—seasonable. Transplanting of <i>amun</i> is over. Harvesting of jute continues. Public health fair.  |  |      |
|                           | Nowgong                      | 1.69  |  |  |      |
|                           | 13 Rungpur „ 1, „            | 1.07  | Weather—cooler day by day. Sunny days with cool winds. Transplantation of <i>amun</i> is nearly over. Harvesting of <i>aus</i> and jute-steepling going on. Public health generally good. Cow-pox continues to be reported from Sherpur thana. |  |      |
|                           |                              | Nilphamari  |  | 0.85   |      |
|                           |                              | Gaibanda  |  | 1.26   |      |
|                           | 14 Bogra „ 1, '87            | 1.41  | Weather—seasonable. Rivers have fallen. Public health and prospect of crops good.  |  |      |
| Sherpur                   |                              | 2.92  |  |  |      |
| Nowkhilla                 |                              | 2.65  |  |  |      |
| 15 Pubna „ 1, '8          | 1.45                         | Weather—fine on the whole. State and prospects of crops good. Lands are being prepared for winter crops. Cattle-disease yet prevails in Rajganj and Moynagori. Public health good.      |  |  |      |
| 16 Darjeeling „ 1, '87    | 2.66                         |   |  |  |      |
| 17 Julpigoree „ 1, „      | 2.64                         |   |  |  |      |
| Eastern Districts.        |                              |   |  |  |      |
| DACCA DIVISION.           | 18 Dacca, Oct. 1, '87        | Nil   | Weather—seasonable. Harvesting of jute nearly completed; that of <i>aus</i> paddy rapidly going on. Cultivation for mustard and pulses commenced. Prospects of crops good. Public health fair.   |  |      |
|                           | Manickgunge                  | 0.81  |  |  |      |
|                           | Munshigunge                  | 1.04  |  |  |      |
|                           | Nraingunge                   | 0.7   |  |  |      |
|                           | 19 Furreedpur „ 1, '87       | 1.42  |  | Weather—cloudy with occasional showers. Prospects of <i>amun</i> crop good. Public health good. Rivers falling.  |      |
|                           |                              | Goalundo  |  |  | 1.21 |
|                           | Madaripur                    | 0.77  |  | Report not received.   |      |
|                           | 20 Backergunge               | .....   |  |  |      |
|                           | 21 Mymensingh Sept., 30, '87 | 3.55  |  |  |      |
|                           | Jamalpur                     | 1.34  |  | Rain on four days; 1.65 inches on 29th. Weather cloudy. Prospects of crops good.   |      |
| Kishoregunge              | 0.67                         |   |  |  |      |
| Attea                     | 0.80                         |   |  |  |      |
| Netrokona                 | 3.47                         |   |  |  |      |

| No                                 | District and date of return     | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date  |
|------------------------------------|---------------------------------|---------------------------------------|--|
| <b>BENGAL—contd.</b>               |                                 |                                       |  |
| <i>Eastern Districts—contd.</i>    |                                 |                                       |  |
| CHITTAGONG DIVN.                   | 22 Chittagong, Oct. 4, '87      | 0.6                                   | Weather—seasonable. <i>Amun</i> and sugarcane thriving. Cholera reported; public health otherwise good. Prices stationary.   |
|                                    | 23 Noakholly Sept. 30, "        | 2.50                                  | Weather—seasonable. Prospects of <i>amun</i> fair. New <i>aus</i> rice has come to market, and its price has fallen to 27 seers per rupee. General health fair.  |
|                                    | 24 Tipperah " 29, "             | 1.23                                  | Weather—seasonable and occasionally cloudy. The little rain has done some good. Prospects of crops still pretty fair. Paddy on comparatively high lands has begun to suffer, and unless there is heavy rainfall soon the crop in general will be considerably affected.  |
|                                    | Brahmanbariah " " "             | 1.43                                  |  |
|                                    | Chanapur " " "                  | 0.50                                  |  |
| CHITTAGONG DIVN.                   | Chittagong Hill Tracts, " 27, " | 3.67                                  | Weather—rainy during the middle of the week, cold at night. Foggy this morning (27th). Cotton doing well. Harvesting of joom paddy continues. Transplanting of plough-paddy over. Prospects of sugarcane good.   |
|                                    | 25 Hill Tipperah " 28, "        | 1.95                                  | Weather—rainy and stormy. Prospects of <i>amun</i> paddy and sugarcane fair. Jute and joom crops being reaped. Public health good.   |
| <b>BEHAR.</b>                      |                                 |                                       |  |
| PATNA DIVN.                        | 26 Patna Oct. 1, '87            | Nil                                   | West wind; sky clear. Prospects of rice crop fair, but more rain wanted on high lands. <i>Rahar</i> and cotton doing well. Lands being prepared for other <i>rubbi</i> crops. No cholera cases reported from Behar sub-division.   |
|                                    | 27 " " " 1, "                   | Nil                                   | Weather—fair. Paddy suffering for want of rain. Cholera and fever reported from some stations.   |
|                                    | 28 Shahabad " 1, "              | Nil                                   | Weather—seasonable. Harvesting of <i>bhadoi</i> crops almost completed. Paddy coming up well, but more rain wanted. Public health generally good. Prices stationary.   |
|                                    | 29 Darbhanga " 1, "             | 0.05                                  | Weather—days hot and mornings cool. Harvesting of <i>bhadoi</i> completed. More rain needed for rice crop, which is, however, very promising. <i>Usid</i> coming up well. Price of common rice averages 19 seers per rupee. Public health generally good. Some fever about.  |
|                                    | 30 Mozufferpur " 1, "           | Nil                                   | Weather—clear. Rain wanted for rice crop. Harvesting of <i>bhadoi</i> in progress, and prospects of all crops excellent.   |
| PATNA DIVN.                        | 31 " " " 1, "                   | Nil                                   | Weather—days hot, mornings cool. Prospects of crops continue good, but rain much wanted for <i>aghani</i> paddy. Fields are being prepared for <i>rubbi</i> sowings. Public health on the whole good.  |
|                                    | 32 Champaran " 1, "             | Nil                                   | Weather—hot. Harvesting of <i>bhadoi</i> crops nearly completed. Prospects of <i>aghani</i> crops promising, but more rain wanted on high land. Mahai of indigo finished. Prices stationary. Public health good.   |
|                                    | 33 Munger " 1, "                | Nil                                   | Weather—days hot, mornings cool. Prospects of winter rice continue promising, but rain still wanted for a good crop. A few cases of cholera reported from the Sudder and Begosera sub-divisions. Prices easy.  |
|                                    | 34 Begosera " 1, "              | 1.12                                  |  |
|                                    | 35 " " " 1, "                   | Nil                                   | Weather—warm, but getting cool in the morning. Sky clear. Harvesting of <i>marus</i> completed, that of early rice going on with good outturn. Late rice doing well, but a good shower of rain wanted.   |
| PRESIDENCY DIVN.                   | 36 " " " 1, "                   | Nil                                   | Weather—continues hot. <i>Bhadoi</i> has been harvested. <i>Aghani</i> promises well. Lands for tobacco and rapeseeds are being prepared.  |
|                                    | 37 " " " 1, "                   | 0.23                                  |  |
|                                    | 38 " " " 1, "                   | 0.22                                  | Weather—fine and hot. Harvesting of <i>bhadoi</i> nearly completed with good outturn. Winter paddy still very promising, but more rain will be needed. <i>Kalai</i> thriving. Common rice selling at 23 seers per rupee. Fever very prevalent.   |
|                                    | 39 " " " 1, "                   | 0.23                                  |  |
|                                    | 40 " " " 1, "                   | 0.51                                  |  |
| PRESIDENCY DIVN.                   | 41 " " " 1, "                   | 0.5                                   |  |
|                                    | 42 " " " 1, "                   | Nil                                   | Weather—northerly breeze; clouds gathering; days hot. Indian-corn harvested. Rain generally wanted for all crops. Public health fair.  |
|                                    | 43 " " " 1, "                   | 1.18                                  |  |
|                                    | 44 " " " 1, "                   | 0.24                                  |  |
|                                    | 45 " " " 1, "                   | 0.24                                  |  |
| <b>ORISSA.</b>                     |                                 |                                       |  |
| ORISSA DIVN.                       | 36 Cuttack Sept. 30, '87        | Nil                                   | Weather—fair. <i>Beali</i> being cut and gathered. <i>Sarad</i> growing well. Cases of cholera still reported; otherwise public health good. Price of rice unchanged.  |
|                                    | 37 Pooree " 29, "               | 0.04                                  | Weather—hot and cloudy. Weeding of <i>sarad</i> in progress. Sufficient rain wanted for <i>sarad</i> crop. Common rice 20 seers 8 chittacks per rupee in Sudder sub-division, and 20 seers 2 chittacks in Khorda sub-division. Public health good.   |
|                                    | 40 Balasore " 30, "             | 0.30                                  | Weather—seasonable. <i>Beali</i> paddy being harvested. Weeding of <i>sarad</i> crop has greatly advanced. Prospects of crops generally good. Public health generally good.  |
| <b>CHOTA NAGPORE.</b>              |                                 |                                       |  |
| <i>South-West Frontier Agency.</i> |                                 |                                       |  |
| CHOTA NAGPORE DIVN.                | 41 Hazaribagh, Sept. 30, '87    | Nil                                   | Weather—bright. Rain urgently wanted all over the district. Rice on higher lands reported to be suffering for want of rain. <i>Bhadoi</i> being harvested with fair outturn generally. General health good.  |
|                                    | 42 Lohardugga Oct. 1, "         | Nil                                   | Weather—hot and cloudy. Rain urgently required all over the district. Prospects of crops depend on further rainfall. Prices steady. Cholera decreasing.  |
|                                    | 43 Singbhum Sept. 30, "         | Nil                                   | Weather—clear; cool in the morning and hot during the day. In some parts want of rain for paddy crop is very keenly felt. <i>Gora dhan</i> harvested; outturn estimated at 12 annas on average. <i>Bhadoi</i> crop reaped with fair outturn. Sugarcane thriving. Cattle-disease in Seraikella, and fever to some extent in thanas Chybassa and Seraikella. Public health otherwise good. |
|                                    | 44 Manbhum Oct. 1, "            | Nil                                   | Weather—cool and pleasant. Rain urgently wanted for high land paddy. Public health fair.   |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 4th October 1887.P. NOLAN,  
Secy. to the Govt. of Bengal.

## Meteorological Report of the Province of Beng

| METEOROLOGICAL DIVISION. | DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                       |       |                     |       |                           |                                   |                                 |                                     |              |
|--------------------------|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|-----------------------|-------|---------------------|-------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|--------------|
|                          |                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.          |       |                     |       |                           |                                   |                                 |                                     |              |
|                          |                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week.  | Date. | Lowest during week. | Date. | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean 10 A.M. |
|                          |                        |                         |                                 |                            |                      |                       |                     |                       |       |                     |       |                           |                                   |                                 |                                     |              |
| Pooree                   | Gopalpore              | 29°802                  | 29°852                          | +0°20                      | N                    | 65°0                  | 95°2                | 30th Sept.            | 76°8  | 27th Sept.          | 91°1  | 78°9                      | 85°0                              | +1°9                            | 89°                                 |              |
|                          | False Point            | 29°817                  | 29°839                          | +0°10                      | W                    | 151°0                 | 93°0                | 30th ..               | 75°1  | 30th ..             | 88°2  | 76°8                      | 82°5                              | -0°3                            | 88°                                 |              |
| Cuttack                  | Cuttack                | 29°747                  | 29°824                          | +0°12                      | Calm                 | 34°0                  | 93°0                | 30th ..               | 75°3  | 30th ..             | 90°0  | 76°5                      | 83°2                              | -0°8                            | 86°                                 |              |
| Balasore                 | Balasore               | 29°766                  | 29°826                          | 0                          | NW                   | 89°0                  | 92°9                | 30th ..               | 74°8  | 27th and 30th Sept. | 89°2  | 76°2                      | 82°7                              | +1°0                            | 84°                                 |              |
| South-West Midnapore     | Saugor Island          | 29°798                  | 29°824                          | -0°04                      | NW                   | 278°0                 | 89°7                | 30th ..               | 76°5  | 24th ..             | 87°0  | 79°2                      | 83°1                              | -0°8                            | 83°                                 |              |
| South 24-Pergunnahs      | Midnapore              | 29°692                  | 29°812                          | +0°06                      | Calm                 | 63°8                  | 92°3                | 29th ..               | 74°3  | 25th ..             | 89°5  | 75°8                      | 82°7                              | +0°4                            | 85°                                 |              |
| 24-Pergunnahs            | Calcutta               | 29°787                  | 29°808                          | -0°37                      | W                    | 82°0                  | 90°0                | 30th ..               | 76°5  | 24th ..             | 87°1  | 77°7                      | 82°5                              | +0°1                            | 83°                                 |              |
| Howrah                   | Burdwan                | 29°731                  | 29°831                          | -0°14                      | NW                   | 51°0                  | 91°6                | 30th ..               | 75°4  | 25th ..             | 89°7  | 76°8                      | 83°2                              | -0°8                            | 84°                                 |              |
| Hoochly                  | Bankoora               | 29°504                  | -                               | -                          | WNW                  | 21°0                  | 12°                 | 25th, 30th Sept.      | 73°0  | 30th ..             | 89°9  | 75°2                      | 82°5                              | -                               | 85°                                 |              |
| Burdwan                  | Beerbhoom              | 29°481                  | 29°739                          | -0°01                      | WNW                  | 80°6                  | 93°5                | 30th ..               | 72°9  | 25th and 30th Sept. | 89°7  | 74°4                      | 82°0                              | -0°3                            | 83°                                 |              |
| West Burdwan             | Raneegunge             | 29°735                  | 29°802                          | -0°18                      | W                    | 71°0                  | 89°6                | 29th 30th Sept.       | 73°8  | 25th ..             | 87°3  | 77°7                      | 82°6                              | -1°7                            | 83°                                 |              |
| Moorsheadabad            | Nuddes                 | 29°739                  | 29°806                          | -                          | Westerly             | 75°9                  | 90°8                | 29th, 30th Sept.      | 69°9  | 25th ..             | 83°2  | 76°0                      | 82°1                              | -                               | 84°                                 |              |
| Jessore                  | Jessore                | 29°775                  | 29°808                          | -0°25                      | Variable             | 56°0                  | 91°8                | 30th ..               | 72°4  | 25th ..             | 88°6  | 76°9                      | 82°8                              | -0°8                            | 83°                                 |              |
| Khoolna                  | Chittagong             | 29°763                  | 29°833                          | -0°15                      | SE                   | 106°0                 | 87°1                | 24th, 28th Sept.      | 76°5  | 25th ..             | 85°0  | 74°2                      | 79°6                              | -1°5                            | 82°                                 |              |
| Chittagong Hill Tracts   | Demagiri               | 29°785                  | 29°797                          | -0°42                      | Southerly            | 96°8                  | 89°3                | 28th ..               | 70°4  | 25th ..             | 87°0  | 76°0                      | 81°5                              | +0°6                            | 82°                                 |              |
| Backergunge              | Barisal                | 29°730                  | 29°783                          | -                          | Calm                 | 38°0                  | 89°5                | 24th 29th, 30th Sept. | 69°9  | 25th ..             | 86°7  | 75°3                      | 80°5                              | -                               | 83°                                 |              |
| Noakholly                | Furreedpore            | 29°702                  | 29°802                          | -0°30                      | Southerly            | 95°0                  | 89°0                | 30th ..               | 73°8  | 26th ..             | 86°5  | 77°0                      | 81°8                              | -0°1                            | 83°                                 |              |
| Dacca                    | Dacca                  | 29°784                  | 29°806                          | -0°23                      | SSE                  | 151°0                 | 90°1                | 24th, 30th Sept.      | 72°6  | 25th ..             | 87°5  | 77°2                      | 82°4                              | -0°8                            | 82°                                 |              |
| Commillah                | Commillah              | 29°760                  | 29°796                          | -0°36                      | ESE                  | 138°0                 | 89°4                | 24th, 30th Sept.      | 68°8  | 25th ..             | 86°3  | 75°1                      | 80°7                              | -0°9                            | 81°                                 |              |
| Mymensingh               | Mymensingh             | 29°774                  | 29°834                          | -0°01                      | SE                   | 117°0                 | 89°3                | 29th Sept.            | 72°1  | 25th ..             | 85°3  | 75°4                      | 80°4                              | -1°8                            | 80°                                 |              |
| Bogra                    | Bogra                  | 29°708                  | 29°772                          | -                          | Variable             | 67°4                  | 88°8                | 30th ..               | 71°3  | 26th ..             | 85°5  | 75°4                      | 80°5                              | -                               | 81°                                 |              |
| Pubna                    | Seraingunge            | 29°746                  | 29°783                          | -0°45                      | S                    | 83°5                  | 90°6                | 30th ..               | 70°7  | 26th ..             | 86°8  | 75°8                      | 81°3                              | -0°4                            | 82°                                 |              |
| Rajahahye                | Rampore Beaulah        | 29°738                  | 29°808                          | -0°02                      | Variable             | 81°7                  | 90°3                | 29th ..               | 71°7  | 25th and 26th Sept. | 87°1  | 74°3                      | 80°7                              | -0°9                            | 84°                                 |              |
| Maldah                   | Maldah                 | 29°625                  | -                               | -                          | NE                   | 2°8                   | 90°0                | 24th ..               | 74°4  | 26th ..             | 88°8  | 76°2                      | 82°5                              | -                               | 83°                                 |              |
| Dinapore                 | Dinapore               | 29°662                  | 29°782                          | -0°46                      | NNW                  | 78°6                  | 92°1                | 24th ..               | 74°1  | 26th ..             | 88°0  | 76°7                      | 82°4                              | +0°4                            | 83°                                 |              |
| Rungpore                 | Rungpore               | 29°661                  | 29°787                          | -0°91                      | E                    | 43°0                  | 90°8                | 24th ..               | 75°7  | 25th and 27th Sept. | 87°9  | 77°4                      | 82°8                              | +2°3                            | 83°                                 |              |
| Julpigoree               | Julpigoree             | 29°467                  | 29°755                          | -0°91                      | SE                   | 361°7                 | 90°9                | 24th ..               | 73°8  | 25th and 26th Sept. | 88°7  | 74°4                      | 81°6                              | +2°3                            | 73°                                 |              |
| Cooch Behar              | Darjeeling Hill Tracts | 29°885                  | -                               | -0°85                      | Calm                 | 59°0                  | 68°6                | 24th ..               | 53°6  | 30th ..             | 63°6  | 54°8                      | 60°3                              | +0°7                            | 59°                                 |              |
| Purneah                  | Purneah                | 29°692                  | 29°819                          | -0°19                      | Calm                 | 15°3                  | 90°2                | 30th ..               | 74°6  | 26th ..             | 87°9  | 76°0                      | 82°0                              | -1°1                            | 84°                                 |              |
| North Bhagulpore         | Mozufferpore           | 29°674                  | 29°803                          | -0°14                      | ESE                  | 62°0                  | 89°9                | 28th, 29th Sept.      | 75°5  | 25th ..             | 88°5  | 76°8                      | 82°7                              | -1°7                            | 82°                                 |              |
| Durbhanga                | Motihari               | 29°557                  | 29°784                          | -0°29                      | Variable             | 145°9                 | 91°7                | 29th ..               | 70°9  | 24th ..             | 90°0  | 74°9                      | 81°5                              | +0°1                            | 85°                                 |              |
| Chumpanan                | Chupra                 | 29°593                  | 29°788                          | -0°02                      | WNW                  | 1                     | 91°5                | 29th, 30th Sept.      | 71°4  | 26th ..             | 90°3  | 73°9                      | 82°1                              | -0°6                            | 86°                                 |              |
| Saran                    | Dehra                  | 29°502                  | 29°856                          | +0°47                      | NW, W                | 184°3                 | 88°9                | 28th ..               | 72°5  | 26th and 30th Sept. | 87°8  | 75°1                      | 81°5                              | -0°9                            | 86°                                 |              |
| Shahabad                 | Buxar                  | 29°509                  | 29°811                          | +0°15                      | WNW                  | 171°7                 | 92°4                | 30th ..               | 70°8  | 25th ..             | 90°4  | 73°9                      | 82°3                              | -0°8                            | 86°                                 |              |
|                          | Arrah                  | 29°689                  | 29°787                          | -0°10                      | Westerly             | 47°1                  | 92°9                | 30th ..               | 71°2  | 26th ..             | 90°2  | 72°5                      | 81°2                              | -1°9                            | 84°                                 |              |
| Gya                      | Gya                    | 29°401                  | 29°778                          | -0°31                      | WNW                  | 72°0                  | 91°9                | 30th ..               | 72°8  | 24th ..             | 89°3  | 75°4                      | 82°4                              | -1°7                            | 87°                                 |              |
| Patna                    | Bankipore              | 29°618                  | 29°802                          | -0°03                      | WNW                  | 29°0                  | 91°9                | 28th ..               | 73°2  | 24th ..             | 90°1  | 74°7                      | 82°4                              | -1°7                            | 85°                                 |              |
| South Bhagulpore         | Bhagulpore             | 29°639                  | 29°802                          | -0°29                      | W                    | 61°4                  | 89°9                | 30th ..               | 74°0  | 30th ..             | 88°0  | 75°8                      | 81°9                              | -0°5                            | 84°                                 |              |
| Monghyr                  | Deonika                | 29°291                  | -                               | -                          | Calm                 | 11°2                  | 91°1                | 30th ..               | 72°3  | 30th ..             | 88°5  | 74°3                      | 81°6                              | -                               | 84°                                 |              |
| Southal Pergunnahs       | Hazaribagh             | 27°824                  | 29°825                          | +0°25                      | W & N W              | 230°0                 | 85°9                | 30th ..               | 66°2  | 26th ..             | 84°0  | 67°2                      | 75°6                              | -1°8                            | 79°                                 |              |
| Hazaribagh               | Ranchow                | 27°694                  | 29°810                          | +0°06                      | NNW                  | 167°3                 | 85°5                | 30th ..               | 66°4  | 27th and 30th Sept. | 83°6  | 67°2                      | 75°4                              | -1°4                            | 79°                                 |              |
| Lohardugga               | Chyehassa              | 29°061                  | -                               | -                          | SSW                  | 21°3                  | 91°2                | 26th ..               | 70°6  | 30th ..             | 90°0  | 72°1                      | 81°2                              | -                               | 85°                                 |              |
| Manbhoom                 | Sitabgar               | 29°800                  | 29°835                          | -0°35                      | SW                   | 53°0                  | 90°6                | 26th ..               | 75°0  | 24th, 25th Sept.    | 87°6  | 76°5                      | 82°1                              | +1°0                            | 82°                                 |              |
| Singbhoom                | Dhubri                 | 29°699                  | 29°807                          | -0°77                      | Calm                 | 130°0                 | 89°2                | 26th ..               | 74°8  | 26th ..             | 86°4  | 76°7                      | 81°6                              | +1°7                            | 83°                                 |              |
|                          | Milohar                | 29°732                  | 29°837                          | -0°51                      | Calm                 | 65°0                  | 89°5                | 28th ..               | 73°3  | 26th and 27th Sept. | 87°5  | 75°0                      | 81°3                              | -0°6                            | 83°                                 |              |

Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the past ten



the week ending Friday, the 30th September 1887.

| DISTRICT OBSERVATIONS. |   |  |                    |              |                     |              |            |                    |              |            |                               |                              | Representative station. | DISTRICT.                | METEOROLOGICAL DIVISION. |
|------------------------|---|--|--------------------|--------------|---------------------|--------------|------------|--------------------|--------------|------------|-------------------------------|------------------------------|-------------------------|--------------------------|--------------------------|
| at 10 A.M.             | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | OF WEEK.           |              | RAINFALL.           |              |            |                    |              |            |                               |                              |                         |                          |                          |
|                        |   |  | Mean for district. | Normal mean. | Since 1st of month. |              |            | Since May 15th.    |              |            | Average number of rainy days. | Normal number of rainy days. |                         |                          |                          |
|                        |   |  |                    |              | Mean for district.  | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. |                               |                              |                         |                          |                          |
| 30                     | 2.4                                       | Nil                                    | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | —                       | Gopalpore                | ORISSA.                  |
| 65                     | 3.7                                       | 0.07                                   | 0.15               | 1.77         | 0.01                | 10.07        | -3.76      | 35.35              | 45.10        | -9.75      | 0.5                           | 3.3                          | False Point             | Pooree                   |                          |
| 63                     | 3.0                                       | Nil                                    | 0.12               | 1.59         | 0.30                | 9.06         | -3.66      | 40.72              | 44.82        | -4.10      | 0.4                           | 3.2                          | Cuttack                 | Cuttack                  |                          |
| 71                     | 5.9                                       | 0.22                                   | 0.17               | 2.54         | 0.11                | 11.01        | -5.30      | 38.54              | 47.00        | -8.52      | 0.7                           | 2.8                          | Balwore                 | Balasore                 |                          |
| 81                     | 5.9                                       | 0.54                                   | 0.90               | 2.13         | 10.00               | 11.42        | -1.33      | 40.04              | 53.30        | -3.70      | 2.3                           | 3.0                          | Saugor Island           | South-West Midnapore     | SOUTH-WEST BENGAL.       |
| 66                     | 2.8                                       | 0.38                                   | 0.08               | 1.57         | 0.08                | 8.16         | -1.18      | 48.17              | 46.17        | +2.00      | 0.3                           | 2.5                          | Midnapore               | Midnapore                |                          |
| 74                     | 6.4                                       | 2.05                                   | 0.80               | 1.33         | 0.27                | 8.67         | -2.40      | 47.40              | 46.00        | +0.53      | 1.8                           | 3.3                          | Calcutta                | Howrah                   |                          |
| 68                     | 6.0                                       | 0.68                                   | 1.00               | 1.20         | 0.65                | 7.73         | -1.04      | 42.95              | 41.70        | +1.16      | 2.3                           | 2.7                          | Burdwan                 | Burdwan                  |                          |
| 63                     | 2.3                                       | 0.08                                   | 0.35               | 1.00         | 0.18                | 8.58         | -3.40      | 48.05              | 47.32        | +0.73      | 0.4                           | 2.4                          | Bankoora                | Bankoora                 | EAST BENGAL.             |
| 73                     | 4.0                                       | Nil                                    | 0.03               | 2.08         | 7.34                | 10.05        | -2.71      | 44.00              | 48.10        | -3.23      | 1.5                           | 3.3                          | Ranagunge               | Boerghoom                |                          |
| 78                     | 6.6                                       | 0.40                                   | 0.88               | 1.94         | 10.70               | 10.37        | +0.33      | 55.16              | 44.64        | +10.48     | 2.3                           | 3.2                          | Berhampore              | Moorsheadabad            |                          |
| 72                     | 6.0                                       | 1.70                                   | 3.18               | 1.50         | 9.55                | 8.54         | -1.01      | 30.13              | 44.40        | -5.27      | 2.2                           | 3.0                          | Krishnagpur             | Nuddea                   |                          |
| 80                     | 6.0                                       | 4.81                                   | 2.91               | 1.05         | 8.39                | 9.00         | -0.61      | 30.33              | 48.40        | -12.07     | 2.9                           | 3.0                          | Jessore                 | Jessore                  | NORTH BENGAL.            |
| 80                     | 6.9                                       | 0.79                                   | —                  | 2.32         | —                   | 14.04        | —          | —                  | 105.02       | —          | —                             | —                            | Chittagong              | Chittagong               |                          |
| 84                     | 7.3                                       | 2.87                                   | —                  | 2.70         | —                   | 12.87        | —          | —                  | 71.73        | —          | —                             | —                            | Demagiri                | Chittagong Hill Tracts   |                          |
| 79                     | 5.1                                       | 2.09                                   | 1.75               | 2.66         | 8.50                | 17.36        | -8.80      | 63.10              | 59.45        | -36.35     | 3.5                           | 3.0                          | Naakholly               | Naakholly                |                          |
| 82                     | 3.0                                       | 1.96                                   | 1.25               | 1.97         | 3.80                | 9.34         | -5.54      | 31.14              | 51.00        | -19.86     | 3.0                           | 3.0                          | Furzedpore              | Furzedpore               | NORTH BENGAL.            |
| 80                     | 6.4                                       | 1.22                                   | 0.78               | 1.43         | 3.55                | 11.12        | -7.57      | 34.32              | 55.65        | -21.33     | 3.3                           | 3.0                          | Dacca                   | Dacca                    |                          |
| 81                     | 6.3                                       | 1.11                                   | —                  | 2.40         | —                   | 12.05        | —          | —                  | 64.50        | —          | —                             | —                            | Commillah               | Commillah                |                          |
| 85                     | 7.7                                       | 3.88                                   | 2.10               | 3.27         | 0.51                | 13.40        | -3.80      | 55.44              | 61.52        | -6.08      | 3.6                           | 3.4                          | Mymensingh              | Mymensingh               |                          |
| 84                     | 8.0                                       | 1.13                                   | 1.74               | 2.81         | 11.48               | 10.27        | +1.21      | 56.18              | 51.80        | +4.38      | 4.0                           | 3.1                          | Bogra                   | Bogra                    | NORTH BENGAL.            |
| 84                     | 7.1                                       | 1.60                                   | 1.47               | 2.31         | 0.00                | 10.50        | -1.50      | 30.78              | 48.48        | -8.70      | 5.0                           | 3.4                          | Serajunge               | Pubna                    |                          |
| 78                     | 4.3                                       | 1.79                                   | 2.20               | 2.08         | 10.23               | 11.53        | -1.30      | 45.85              | 48.82        | -2.97      | 3.0                           | 3.4                          | Rampore Beaulah         | Rajshahye                |                          |
| 76                     | 3.0                                       | 0.22                                   | 0.23               | 2.40         | 0.12                | 11.25        | -2.13      | 44.01              | 56.33        | -6.42      | 1.5                           | 3.0                          | Maldah                  | Maldah                   |                          |
| 81                     | 5.3                                       | 0.47                                   | 0.42               | 2.07         | 9.61                | 11.43        | -1.82      | 64.63              | 51.70        | +12.94     | 2.2                           | 2.0                          | Dinapore                | Dinapore                 | NORTH BENGAL.            |
| 79                     | 4.6                                       | 0.97                                   | 0.92               | 3.18         | 11.60               | 13.59        | -1.93      | 76.84              | 67.09        | +9.75      | 2.5                           | 3.3                          | Rungpore                | Rungpore                 |                          |
| 77                     | 6.3                                       | 1.50                                   | 3.13               | 4.30         | 20.57               | 21.82        | -1.25      | 115.06             | 103.72       | +11.34     | 3.8                           | 3.7                          | Julpigoree              | Julpigoree               |                          |
| 94                     | 8.6                                       | 2.62                                   | 2.60               | 3.02         | 17.33               | 18.64        | -1.31      | 112.13             | 113.33       | -1.20      | 5.5                           | 4.2                          | Darjeeling              | Darjeeling Hill District |                          |
| 75                     | 2.4                                       | 0.01                                   | 0.09               | 2.97         | 9.80                | 12.64        | -2.63      | 61.24              | 53.73        | +7.51      | 0.4                           | 2.5                          | Purneah                 | Purneah                  | NORTH BENGAL.            |
| 76                     | 3.0                                       | 0.05                                   | 0.02               | 2.62         | 5.01                | 9.52         | -4.51      | 46.34              | 40.68        | +5.66      | 0.3                           | 2.4                          | Mosufferpore            | Mosufferpore             |                          |
| 86                     | 3.1                                       | Nil                                    | Nil                | 3.21         | 10.35               | 9.22         | +1.13      | 42.11              | 42.32        | -0.21      | 0.0                           | 2.3                          | Durbhunga               | Durbhunga                |                          |
| 83                     | 0.0                                       | Nil                                    | Nil                | 1.98         | 5.90                | 7.54         | -1.65      | 35.86              | 37.83        | -3.97      | 0.0                           | 1.9                          | Motihari                | Chumpran                 |                          |
| 84                     | 1.1                                       | Nil                                    | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Chupra                  | Sarun                    | NORTH BENGAL.            |
| 85                     | 1.6                                       | Nil                                    | Nil                | 1.40         | 4.06                | 7.03         | -2.05      | 32.55              | 35.83        | -3.28      | 0.0                           | 2.2                          | Dehree                  | Shahabad                 |                          |
| 86                     | 1.7                                       | Nil                                    | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Arrah                   | —                        |                          |
| 87                     | 5.0                                       | Nil                                    | Nil                | 1.32         | 5.02                | 6.86         | -1.24      | 35.28              | 37.76        | -2.48      | 6.0                           | 2.0                          | Gya                     | Gya                      |                          |
| 89                     | 3.4                                       | Nil                                    | Nil                | 1.80         | 5.02                | 7.16         | -2.14      | 33.42              | 37.30        | -3.94      | 0.0                           | 2.2                          | Bankipore               | Patna                    | SOUTH BENGAL.            |
| 71                     | 1.4                                       | Nil                                    | 0.20               | 1.86         | 7.08                | 7.07         | -0.80      | 40.50              | 39.09        | +1.47      | 0.4                           | 2.4                          | Banarpore               | South Bhagulpore         |                          |
| 86                     | 1.7                                       | Nil                                    | 0.23               | 1.73         | 8.23                | 10.38        | -2.10      | 40.82              | 46.06        | +3.76      | 0.8                           | 2.8                          | Dumka                   | Southal Pergunnahs       |                          |
| 84                     | 2.6                                       | Nil                                    | Nil                | 1.80         | 7.07                | 9.50         | -2.49      | 43.06              | 40.18        | -2.22      | 0.0                           | 2.7                          | Hazaribagh              | Hazaribagh               |                          |
| 40                     | 4.3                                       | Nil                                    | 0.02               | 1.43         | 6.69                | 8.21         | -1.62      | 42.47              | 48.13        | -0.66      | 0.3                           | 2.8                          | Ranecoe                 | Lohardugga               | SOUTH BENGAL.            |
| 87                     | 2.5                                       | Nil                                    | Nil                | 1.80         | 6.16                | 8.45         | -2.30      | 40.30              | 47.13        | +2.17      | 0.0                           | 3.6                          | Chybamra                | Manbhoom                 |                          |
| 88                     | 7.7                                       | 3.37                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Sibauger                | Assam                    |                          |
| 79                     | 4.4                                       | 1.16                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Dibri                   | —                        |                          |
| 79                     | 3.1                                       | 1.90                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Silchar                 | —                        |                          |





Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 30th of September 1887—*concl.*

| Met. orological Division.      | District.           | Station.            | RAINFALL                  |                         |                         |                          |                            |                           |                         | TOTAL                 |                   | Total rainfall since 1st of month. | Average total rainfall from 1st of month. | Total rainfall since 1st May 1887. | Average rainfall from 1st May to date. |
|--------------------------------|---------------------|---------------------|---------------------------|-------------------------|-------------------------|--------------------------|----------------------------|---------------------------|-------------------------|-----------------------|-------------------|------------------------------------|---|------------------------------------|--|
|                                |                     |                     | Saturday, 24th September. | Sunday, 25th September. | Monday, 26th September. | Tuesday, 27th September. | Wednesday, 28th September. | Thursday, 29th September. | Friday, 30th September. | Number of rainy days. | Rainfall in inch. |                                    |   |                                    |  |
| NORTH BEHAR— <i>continued.</i> | Narad               | Gopalgunge          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 0.07                               | 0.08                                      | 36.36                              | 37.8                                   |
|                                |                     | Sawan               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 0.02                               | 0.77                                      | 32.94                              | 39.4                                   |
| SOUTH BEHAR                    | Shahabad            | Chunar              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 2.48                               | 7.13                                      | 33.27                              | 36.11                                  |
|                                |                     | Buxar               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 5.31                               | 7.30                                      | 28.82                              | 34.4                                   |
|                                |                     | Denrue              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 5.71                               | ?   | 35.24                              | ?                                      |
|                                |                     | Bhubanah            | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 4.81                               | 0.65                                      | 35.3                               | 30.0                                   |
|                                |                     | Sameram             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 5.83                               | 7.10                                      | 31.01                              | 36.2                                   |
|                                |                     | Arrah               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 5.06                               | 6.90                                      | 34.46                              | 39.0                                   |
|                                |                     | Mohania             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 4.90                               | ?   | ?                                  | ?                                      |
|                                | Gya                 | Aurungabad          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 3.33                               | 7.50                                      | 29.35                              | 39.13                                  |
|                                |                     | Gya                 | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 0.27                               | 7.21                                      | 41.40                              | 39.05                                  |
|                                |                     | Nowadah             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 4.57                               | 7.00                                      | 33.45                              | 36.40                                  |
|                                |                     | Jehanabad           | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 6.31                               | 5.80                                      | 36.07                              | 36.25                                  |
|                                |                     | Arwal               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 4.28                               | ?   | 34.58                              | ?                                      |
|                                |                     | Daudnagar           | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 2.77                               | ?   | 25.11                              | ?                                      |
|                                |                     | Sherrghati          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 6.20                               | ?   | 34.88                              | ?                                      |
|                                |                     | Kajauli             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | ?                                  | ?   | ?                                  | ?                                      |
|                                |                     | Pakri Barawan       | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 5.97                               | ?   | 20.82                              | ?                                      |
|                                | Patna               | Patna               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 3.51                               | 7.28                                      | 31.16                              | 33.11                                  |
|                                |                     | Dinapore            | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 3.93                               | 7.03                                      | 34.73                              | 37.46                                  |
|                                |                     | Bohar               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 5.27                               | 6.63                                      | 33.34                              | 37.90                                  |
|                                |                     | Barh                | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 7.35                               | 7.70                                      | 32.41                              | 35.34                                  |
|                                |                     | Bickram             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 2.95                               | ?   | 30.05                              | ?                                      |
|                                |                     | Hilsa               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 2.83                               | ?   | 30.16                              | ?                                      |
|                                | Munshyr             | Begoonah            | ...                       | ...                     | ...                     | 1.13                     | ...                        | ...                       | ...                     | 1                     | 1.12              | 0.59                               | 7.10                                      | 40.35                              | 35.36                                  |
|                                |                     | Monshyr             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 0.97                               | 9.11                                      | 43.00                              | 42.06                                  |
|                                |                     | Jamui               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 6.45                               | 7.5                                       | 36.92                              | 39.06                                  |
|                                |                     | Gogri               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 10.78                              | ?   | 42.03                              | ?                                      |
|                                |                     | Sheikpura           | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 7.02                               | ?   | 26.13                              | ?                                      |
|                                | South Bhagulpore.   | Bhagulpore          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 5.01                               | 7.11                                      | 39.18                              | 39.16                                  |
|                                |                     | Hauka               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | 1                     | 0.20              | 6.43                               | 8.33                                      | 36.40                              | 39.36                                  |
|                                |                     | Kolgaug             | ...                       | 0.20                    | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 5.76                               | ?   | 42.10                              | ?                                      |
|                                | Sonthal Pergunnahs. | Rajmehal            | ...                       | 0.47                    | ...                     | ...                      | 0.16                       | ...                       | ...                     | 2                     | 0.63              | ?                                  | 12.66                                     | ?                                  | 43.17                                  |
|                                |                     | Godna               | ...                       | 0.24                    | ...                     | ...                      | ...                        | ...                       | ...                     | 1                     | 0.24              | 5.16                               | 9.83                                      | 47.79                              | 41.08                                  |
|                                |                     | Pakour              | ...                       | 0.27                    | ...                     | ...                      | 0.21                       | ...                       | ...                     | 2                     | 0.48              | 10.62                              | 12.42                                     | 71.38                              | 44.61                                  |
|                                |                     | Nya Doocha          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 9.50                               | 10.71                                     | 41.87                              | 43.92                                  |
|                                |                     | Dooknur             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 4.97                               | 8.05                                      | 44.11                              | 45.01                                  |
|                                |                     | Jamara              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 5.55                               | 7.41                                      | 36.57                              | 43.00                                  |
|                                |                     | Simra               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | ?                                  | ?   | ?                                  | ?                                      |
|                                |                     | Nonthal             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 12.10                              | ?   | 34.81                              | ?                                      |
| CHUTIA NAG-PUR.                | Hazaribagh          | Rachmehal (Giridi). | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 7.11                               | 8.05                                      | 40.07                              | 43.00                                  |
|                                |                     | Hazaribagh          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 6.53                               | 8.42                                      | 42.94                              | 41.75                                  |
|                                |                     | Semtaipuram         | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 8.42                               | 8.05                                      | 42.15                              | 42.15                                  |
|                                |                     | Santhi Hills        | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | ?                                  | ?   | 44.85                              | ?                                      |
|                                |                     | Jhoomrah Hills      | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 8.04                               | 12.79                                     | 50.00                              | 57.52                                  |
|                                |                     | Barh                | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 6.50                               | ?   | 37.11                              | ?                                      |
|                                |                     | Chakra              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 10.39                              | ?   | 40.90                              | ?                                      |
|                                |                     | Karagaha            | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 12.46                              | ?   | 70.86                              | ?                                      |
|                                |                     | Kanghar             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | ?                                  | ?   | ?                                  | ?                                      |
|                                | Lohardugga          | Lohardugga          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 6.26                               | ?   | 52.28                              | ?                                      |
|                                |                     | Hanchi              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 6.87                               | 9.36                                      | 54.90                              | 47.51                                  |
|                                |                     | Pannaow             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 8.34                               | 7.98                                      | 40.07                              | 39.76                                  |
|                                |                     | Silli               | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 5.83                               | ?   | 41.96                              | ?                                      |
|                                |                     | Bainmat             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | ?                                  | ?   | ?                                  | ?                                      |
|                                |                     | Bussanabad          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 3.05                               | ?   | 33.74                              | ?                                      |
|                                |                     | Gerswah             | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 3.75                               | ?   | 48.00                              | ?                                      |
|                                | Singbhoom           | Chyenasa            | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 6.15                               | 6.45                                      | 49.30                              | 47.17                                  |
|                                |                     | Chakradhar          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 3.00                               | ?   | 30.31                              | ?                                      |
|                                |                     | Chakralla           | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 10.30                              | ?   | 53.09                              | ?                                      |
|                                |                     | Baharapura          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 7.51                               | ?   | 36.92                              | ?                                      |
|                                | Manbhoom            | Parali              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 6.28                               | 6.23                                      | 41.25                              | 45.16                                  |
|                                |                     | Gobindpore          | ...                       | ...                     | ...                     | ...                      | 0.00                       | ...                       | ...                     | 1                     | 0.00              | 5.22                               | 7.37                                      | 27.72                              | 41.14                                  |
|                                |                     | Kaghunathpore.      | ...                       | ...                     | ...                     | ...                      | 0.30                       | ...                       | ...                     | 1                     | 0.30              | 6.77                               | ?   | 34.78                              | ?                                      |
|                                |                     | Burrabhoom          | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | ?                                  | ?   | ?                                  | ?                                      |
|                                |                     | Jhanda              | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | 7.77                               | ?   | 39.65                              | ?                                      |
|                                |                     | Chas                | ...                       | ...                     | ...                     | ...                      | ...                        | ...                       | ...                     | Nil                   | Nil               | ?                                  | ?   | ?                                  | ?                                      |

Explanation.—Indicates that no rain has fallen.

CALCUTTA, the 4th October 1887.

**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVA-  
TIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
30TH OF SEPTEMBER 1887.**

On the last day of the previous week a feeble cyclonic storm or barometric depression, which had formed over the head of the Bay, had partly advanced over the land, and its centre was at 10 A.M. of the 23rd almost over the coast line of the Sundorbans, and between Saugor Island and Burrisal. The feeble storm was, as usual, accompanied by distinct cyclonic circulation of winds, but the wind force at the land stations was moderate only, though at the head of the Bay squally weather generally prevailed. With the existence of the depression over the extreme south of the province, the monsoon winds were as usual prevented from extending over the province, and thus, though conditions were favourable for rainfall over the south and south-east of Bengal, the greater number of the northern and western stations were almost absolutely rainless. On the 24th the depression advanced slowly in a northerly or north-north-easterly direction, and at 10 A.M. its centre was near Burrisal and between this station and Jessore. Pressure fell rapidly at Burrisal, the fall almost equalling a tenth of an inch, and with the advance of the feeble storm inland, strong winds set in at the coast stations at the head of the Bay and moderate to heavy rain fell over the greater part of the south of the province. The following decidedly heavy rainfalls were recorded on the 24th in connection with the feeble storm:—in South-West Bengal Ranaghat 1·80 inches, Meherpore 1·82 inches, Kooshtea 1·50 inches, Satkhira 3·30 inches, Jessore 2·49 inches, Jhenida 1·51 inches, and Bongong 2·70 inches; in East Bengal Cox's Bazar 1·75 inches, Kutubdia 2·12 inches, Burrisal 2 inches, Bauphal 1·96 inches, and Perozepore 1·80 inches; and in North Bengal Cooch Behar 1·54 inches, Mikligunge 3·53 inches, Matabhanga 2·48 inches, and Siliguri 1·55 inches. The feeble storm continued its advance in a northerly direction, and at 10 A.M. of the 25th its centre was in North Bengal between Serajunge and Rampore Beaulah. It was still well defined, but the depression was decidedly shallower than on the previous day, and it was evidently filling up. With the advance of the depression into North Bengal, conditions became more favourable for rainfall in the eastern and northern districts, and good general rain fell on this day, but it was not as a rule heavy. On the 26th the depression had practically filled up, the cyclonic circulation of winds accompanying the feeble storm had disappeared, and winds became rather irregular in direction, while pressure generally rose, but rain showers were again fairly numerous in East and North Bengal. On the 25th and 26th the following heavy falls of rain were reported:—in South-West Bengal Choodanga 3·40 inches, Patkabaree 3·10 inches on the 25th and 4 inches on the 26th, Bongong 2·80 inches, Kooshtea 2·12 inches; and the following stations received between one and two inches:—Meherpore, Bagirhat, Khoolna, Narail, Jessore and Azimgunge; in East Bengal the following stations received between 1 and 2 inches in the two days:—Bhola, Noakholly, Ramgunge, Pakour, Netrokona, Subournakhally, while in North Bengal Nattore, Naogan and Darjeeling received heavy falls.

With the disappearance of the depression conditions became at once less favourable for rainfall, and for the remainder of the week generally local showers only were reported, principally from the east and north of the province. From the 27th to the end of the week pressure has almost steadily risen, westerly and south-westerly winds also set in at the western stations and gradually forced back the southerly winds previously blowing until, at the close of the week, north-westerly winds were blowing over the whole province except at the eastern stations, where still south-easterly and southerly winds were reported. With the setting in of the dry north-westerly winds humidity rapidly decreased, until at several of the western stations the saturation was less than fifty per cent. of the possible amount. Cloud proportion also decreased rapidly, while temperature generally increased, and at the close of the week the conditions over the greater part of the province were distinctly those which mark the close of the rainy season, and the commencement of the transition conditions which obtain previous to the setting in of the north-east monsoon or the cold weather season in Bengal.

For the whole province the week has again been one of deficient rainfall. The central districts, it is true, have received good rain owing to the action of the depression, but elsewhere the falls have been small. In Orissa, Chutia Nagpur, and the greater part of Behar rainfall has been so small in amount as to be almost practically absent; in South-West Bengal the fall has been nearly equal to the normal, but in East and North Bengal the amounts have only been from about two-thirds to one half the usual amount.

**Pressure.**—The variations of pressure for the first three days were mainly due to the movement of the depression, but for the second-half of the week pressure rose almost uninterruptedly. The mean pressure for the week has, however, not varied very largely from the normal, though at most stations pressure has been slightly below it. Taking only those stations into consideration which have furnished observations for many years, and which therefore yield reliable averages, the mean pressure of the whole province of Bengal for the week has been below the normal by 0·01 inch. Generally speaking the western stations show excess pressures, and at Hazaribagh the excess is 0·025 inch, while the largest defects are at such stations as Burrisal, where it is 0·042 inch, and at Calcutta, where it is 0·037 inch. Some of the stations in North Bengal, such

as Darjeeling, Julpigoree, Rungpore, and Dinagepore, show even a larger defect than these. In Assam also pressure has been decidedly below the normal, the defects ranging from 0·051 inch at Silchar to 0·077 inch at Dhubri, and the general defect for Assam has been 0·06 inch.

**Temperature**—Has generally been in defect of the normal over the greater part of the province. Orissa and North Bengal show a slight excess temperature of about half a degree, but all other districts show defects, and in South Behar and Chutia Nagpur the defects range between 1° and 2°. For the whole of Bengal the average temperature of the week has been 0·6° below the normal. In Assam, on the other hand, the mean temperature has been 0·6° above the normal.

**Rainfall.**—The general distribution of the rainfall has already been referred to in the previous summary. The actual average rainfalls in South-West Bengal, East Bengal, and North Bengal have ranged from 1·36 inches up to 1·51 inches; while the next largest amount is 0·15 inch in Orissa and 0·12 inch in South Behar. Finally, in North Behar and Chutia Nagpur the amounts are only a few hundredths of an inch. Compared with the normal fall, and expressed as a percentage of that amount, the actual average rainfall in each of the seven large meteorological districts for the week has been—Orissa 7 per cent., South-West Bengal 83 per cent., East Bengal 62 per cent., North Bengal 51 per cent., North Behar 1 per cent., South Behar 8 per cent., and Chutia Nagpur 1 per cent.; or taking each of these districts as having an equal value in the calculation, the rainfall of the whole of Bengal for the week has been equal to only 30 per cent. of the normal quantity. Taking up the rainfall rather more in detail, all districts in Orissa have received extremely defective falls; in South-West Bengal the following districts have received fairly good falls:—Burdwan, Nuddea, Jessore, Khoolna, while in Midnapore, 24-Pergunnahs, Howrah, Hooghly, Bankoorah, Beerbhoom and Moorshedabad the falls have been decidedly scanty; in East Bengal, the Chittagong, Backergunge, Noakholly and Mymensingh districts have received moderate falls, Furreedpore and Dacca have received smaller and rather scanty falls, while the greater part of Tipperah is again largely in defect. The station of Comilla has received a moderate fall of 1·23 inches, but Chandpore has only received 0·48 inch and Brahmanberiah up to the 26th September only 0·32 inch. The actual fall at Comilla for the whole of September has been only 3·78 inches, against the normal 11·91 inches, at Chandpore it has been 2·71 inches, against the normal of 13·27 inches, and at Brahmanberiah up to the 26th September it has been 3·52 inches, while the normal fall for September is 12·17 inches. For the whole of the monsoon period the falls in the Tipperah district have been only equal to about half the normal amount.

In North Bengal the districts of Pubna, Bogra, Rajshahye, Julpigoree, Cooch Behar and Darjeeling have received good rain, while Maldah, Dinagepore, and Rungpore are largely deficient. In North Behar all districts are largely in defect, rainfall being practically absent; in South Behar, the only district which has received rain is Southal Pergunnah, and in Chutia Nagpur rainfall has also been practically absent.

The rainfall in Bengal throughout September has been very considerably in defect, as has been pointed out in previous summaries. The table below contains the numbers representing the rainfall for the four weeks of September, the figures given being the actual rainfall of each of the seven large meteorological districts expressed as a percentage of the normal fall for the period:—

*Rainfall for September 1887 expressed as a percentage of the normal fall for the period.*

| Meteorological district.   | From 2nd<br>to 9th Sep-<br>tember 1887. | From 9th<br>to 16th Sep-<br>tember 1887. | From 16th<br>to 23rd Sep-<br>tember 1887. | From 23rd<br>to 30th Sep-<br>tember 1887. | Average of<br>four weeks,<br>2nd to 30th<br>September.<br>1887. |
|----------------------------|---|--|---|---|---|
| Orissa ... ..              | 23                                      | 142                                      | 62  | 7   | 59  |
| South-West Bengal ...      | 42                                      | 144                                      | 101                                       | 83  | 93  |
| East Bengal ... ..         | 31                                      | 128                                      | 50  | 62  | 68  |
| North Bengal ... ..        | 173                                     | 36                                       | 55  | 51  | 79  |
| North Behar ... ..         | 122                                     | 20                                       | 106                                       | 1   | 62  |
| South Behar ... ..         | 102                                     | 63                                       | 130                                       | 8   | 76  |
| Chutia Nagpur ... ..       | 58                                      | 112                                      | 93  | 1   | 66  |
| Average for whole Province | 78                                      | 92                                       | 85  | 30  | 72  |

The defective rainfall is therefore becoming decidedly more pronounced, and in all districts, except South-West Bengal, rainfall during September has been decidedly scanty.

In Assam during the week fairly good rain has fallen. Sibsangor has received 3·37 inches, Silchar 1·99 inches, and Dhubri 1·16 inches.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 30th of September 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          |                 | RAINFALL.  |                         |                                |            |                     |                 |                      |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 15th May 1887. |                 |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. | Average.             | Normal average. |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |                 |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |                 |
| Orissa ... ..                | 95.2                          | 74.8                         | 89.6                    | 77.1                   | 83.4                  | +0.5   | 0.15     | 2.03            | -1.87      | 0.3                     | 3.0                            | -2.5       | 6.23                | 10.81           | 38.12                | 45.79           |
| South-West Bengal ...        | 93.5                          | 69.8                         | 89.6                    | 70.6                   | 82.6                  | -0.3   | 1.36     | 1.03            | -0.29      | 2.0                     | 3.1                            | -1.1       | 7.09                | 9.13            | 43.32                | 46.81           |
| East Bengal ... ..           | 90.1                          | 68.8                         | 86.2                    | 75.8                   | 81.0                  | -0.8   | 1.50     | 2.43            | -0.93      | 3.1                     | 3.4                            | -0.3       | 8.08                | 12.58           | 48.86                | 68.31           |
| North Bengal ... ..          | 92.1                          | 70.7                         | 87.6                    | 75.7                   | 81.7                  | +0.7   | 1.51     | 2.96            | -1.45      | 3.2                     | 3.2                            | -0.0       | 12.40               | 13.67           | 70.39                | 64.60           |
| North Behar ... ..           | 91.7                          | 70.9                         | 80.2                    | 74.9                   | 82.1                  | -0.8   | 0.03     | 2.67            | -2.04      | 0.1                     | 2.3                            | -2.2       | 7.48                | 10.00           | 47.34                | 44.14           |
| South Behar ... ..           | 92.9                          | 70.3                         | 80.2                    | 74.5                   | 81.0                  | -1.2   | 0.12     | 1.00            | -1.48      | 0.3                     | 2.4                            | -2.1       | 6.38                | 8.09            | 39.41                | 39.80           |
| Central Provinces ... ..     | 85.9*                         | 66.2*                        | 83.8*                   | 67.2*                  | 75.5*                 | -1.0*  | 0.01     | 1.03            | -1.31      | 0.1                     | 2.8                            | -2.7       | 6.35                | 8.91            | 43.37                | 45.65           |
| Assam ... ..                 | 90.6                          | 73.3                         | 87.2                    | 76.1                   | 81.7                  | +0.6   |          |                 |            |                         |                                |            |                     |                 |                      |                 |

\* Chyebassam not included.

METEOROLOGICAL OFFICE, BENGAL : A. PEDLER,  
The 4th October 1887. Offg. Meteorological Reporter to the Govt. of Bengal.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 25th September to 1st October 1887.

| MONTH.    | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRI.     |            |           | Rain.   |
|-----------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|           |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
|           |       |              |          |        |          |                |                 |            |           |         |
| 1887.     |       |              |          |        |          |                | Inches.         |            | %         | Inches. |
| September | 25th  | 80.0         | 86.0     | 9.2    | 76.8     | 76.9           | .885            | 75.5       | 80        | 0.17    |
| "         | 26th  | 83.3         | 91.2     | 13.9   | 77.3     | 78.5           | .912            | 76.5       | 80        | —       |
| "         | 27th  | 80.6         | 89.0     | 10.4   | 78.6     | 78.3           | .902            | 78.1       | 92        | 0.75    |
| "         | 28th  | 84.3         | 92.0     | 13.4   | 78.6     | 78.9           | .916            | 76.6       | 77        | —       |
| "         | 29th  | 83.6         | 92.2     | 15.2   | 77.0     | 78.2           | .893            | 75.8       | 77        | —       |
| "         | 30th  | 84.9         | 92.3     | 15.0   | 77.8     | 78.1           | .871            | 75.1       | 73        | —       |
| October   | 1st   | 84.4         | 92.5     | 15.7   | 76.8     | 78.0           | .873            | 75.1       | 71        | —       |

The mean temperature of the seven days ... .. 83.0  
The extreme variation of temperature ... .. 16.0  
The maximum temperature ... .. 92.8  
The mean relative humidity ... .. %  
80  
Inch.  
The total fall of rain from 25th September to 1st October 1887 ... 0.92

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ; A. PEDLER,  
The 3rd October 1887. for Offg. Meteorological Reporter to the Govt. of India.

Results of the Meteorological Observations taken at the Alipore Observatory from 25th September to 1st October 1887.

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 35° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                  |                 | Rain.   | WEATHER.                    |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|------------------------|-----------------|---------|-----------------------------|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction.  | Miles recorded. |         |                             |
| 1887.  |       | °               |                                     | Inches                               | °            | °        | °      | °        | °              | Inches          | °          | %         |                        |                 | Inches. |                             |
| Sept.  | 25th  | 132.4           | Nil                                 | 29.695                               | 80.0         | 83.8     | 6.7    | 77.1     | 76.9           | 0.884           | 75.5       | 87        | WSW ...                | 71              | 0.03    | Chiefly cloudy, o, g, d.    |
| "      | 26th  | 145.3           | 10.5                                | .695                                 | 82.3         | 88.6     | 11.5   | 77.1     | 78.5           | .926            | 76.9       | 84        | WSW and S by W         | 78              | Nil     | Partially cloudy, d.        |
| "      | 27th  | 152.8           | 3.3                                 | .786                                 | 81.7         | 87.5     | 9.4    | 78.1     | 79.0           | .956            | 77.9       | 88        | S by W and W by N      | 51              | 0.26    | Chiefly cloudy, o, g, p, d. |
| "      | 28th  | 153.5           | 7.0                                 | .758                                 | 83.4         | 89.4     | 10.5   | 78.9     | 78.3           | .919            | 76.7       | 81        | W by N and SSE ...     | 83              | Nil     | Partially cloudy, d.        |
| "      | 29th  | 145.3           | 8.1                                 | .793                                 | 83.3         | 89.8     | 11.8   | 78.0     | 78.5           | .914            | 76.5       | 81        | WSW, WNW and W.        | 90              | "       | Partially cloudy, d.        |
| "      | 30th  | 144.2           | 10.4                                | .801                                 | 83.1         | 89.5     | 11.1   | 78.4     | 77.7           | .880            | 75.4       | 79        | W, W by S and NW by W. | 77              | "       | Chiefly clear, d.           |
| Oct.   | 1st   | 145.5           | 10.2                                | .814                                 | 82.8         | 89.9     | 12.7   | 77.2     | 77.6           | .880            | 75.4       | 80        | W by S and WNW.        | 100             | "       | Chiefly clear, d.           |

|  |     |         |                 |
|--|-----|---------|-----------------|
| The mean pressure of the seven days  | ... | Inches. | 29.756          |
| The average pressure of the corresponding period for 24 years, S. G.'s Office          | ... | ...     | 29.744          |
| The total number of hours of bright sunshine   | ... | Hours.  | 49.5            |
| The maximum possible number of hours of sunshine                                       | ... | ...     | 83.7            |
| The mean temperature of the seven days   | ... | ...     | 82.4            |
| The average temperature of the corresponding period for 24 years, S. G.'s Office       | ... | ...     | 83.2            |
| The extreme variation of temperature   | ... | ...     | 12.8            |
| The maximum temperature  | ... | ...     | 89.9            |
| The highest velocity of the wind in one hour   | ... | Miles.  | 10              |
|  | ... | Fms.    |                 |
| The highest pressure of wind on one square foot  | ... | ...     | Not measurable. |
| The mean relative humidity   | ... | %.      | 83              |
| The average relative humidity of the corresponding period for 24 years, S. G.'s Office | ... | ...     | 84              |
| The total fall of rain from 25th September to 1st October 1887                         | ... | Inches. | 0.29            |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ...     | 1.70            |
| The total fall from 1st January to 1st October 1887                                    | ... | ...     | 55.26           |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ...     | 58.97           |

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph. The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground. The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office. The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula. The directions and the movement of the wind are taken from the trace of a Beckley's anemograph. The mouth of the rain-gauge is one foot above the ground. o overcast, g gloomy, d drizzling rain, p passing temporary showers, Δ dew.

A. PEDLER,  
for Offg. Meteorological Reporter to the Govt. of India.



## CIRCULAR AND EASTERN CANALS.

*Approximate return of traffic for the week ending Saturday, the 24th September 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.      | WEEK ENDING SATURDAY, THE<br>24TH SEPTEMBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>25TH SEPTEMBER 1886. |                     |          |
|-----------------------|---|---------------------|----------|---|---------------------|----------|
|                       | Number of<br>boats.                               | Weight of<br>cargo. | Tollage. | Number of<br>boats.                               | Weight of<br>cargo. | Tollage. |
|                       | No.   | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy ... .. | 538   | 90,475              | 1,502    | 373   | 61,056              | 1,015    |
| Jute ... ..           | 90  | 36,045              | 657      | 126   | 57,175              | 988      |
| Firewood ... ..       | 80  | 45,150              | 670      | 175   | 88,025              | 1,287    |
| Other articles ... .. | 746   | 1,47,410            | 2,657    | 825   | 1,85,085            | 3,004    |
| Total ... ..          | 1,454   | 3,19,090            | 5,486    | 1,499   | 3,91,341            | 6,294    |

## CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 1st October 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.      | WEEK ENDING SATURDAY, THE<br>1ST OCTOBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>2ND OCTOBER 1886. |                     |          |
|-----------------------|--|---------------------|----------|--|---------------------|----------|
|                       | Number of<br>boats.                            | Weight of<br>cargo. | Tollage. | Number of<br>boats.                            | Weight of<br>cargo. | Tollage. |
|                       | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... .. | 609  | 1,34,412            | 1,911    | 465  | 76,503              | 1,156    |
| Jute ... ..           | 140  | 63,130              | 1,149    | 144  | 58,040              | 1,103    |
| Firewood ... ..       | 184  | 94,850              | 1,473    | 138  | 58,585              | 890      |
| Other articles ... .. | 703  | 1,19,725            | 1,947    | 924  | 2,16,052            | 2,918    |
| Total ... ..          | 1,636  | 4,12,117            | 6,480    | 1,671  | 4,09,180            | 6,067    |

C. M. BROWNE, Col., R.E.,

*Offy. Secy. to the Govt. of Bengal, P. W. Dept.*

DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 17th September 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,774                 | 480 1 0            | 6,541 20                         | 149 6 0    | 6 0 0                       | 615 0 0         | 414½                     | 79           | 493½   |
| Or per mile of railway ...                                  | .....                 | 38 5 5             | .....                            | 12 7 1     | 0 8 0                       | 51 4 6          | .....                    | .....        | .....  |
| For previous 10 weeks of half-year ...                      | 20,835                | 5,205 0 0          | 87,952 20                        | 2,049 5 0  | 93 7 0                      | 7,347 12 0      | 3,042                    | 1,134        | 5,076  |
| Total for 11 weeks ...                                      | 23,129                | 5,685 1 0          | 94,494 0                         | 2,198 10 0 | 99 7 0                      | 7,963 2 0       | 4,350½                   | 1,213        | 5,569½ |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,576½                | 424 14 0           | 6,792 30                         | 131 7 0    | 4 14 3                      | 561 3 3         | 430                      | 63           | 493    |
| Per mile of railway corresponding week of previous year ... | .....                 | 35 6 6             | .....                            | 10 15 3    | 0 6 6                       | 46 12 3         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 29,806½               | 4,970 4 11         | 1,13,129 20                      | 2,257 0 0  | 93 8 0                      | 7,329 12 11     | 4,400                    | 1,436        | 5,836  |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 18TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 18TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 17TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         | Rs.                     |
| 12  | 681       | 47               | 22  | 615       | 51               | 12   | 24,002          | 2,000            | 12   | 22,563          | 1,880            | .....                   | 2,039                   |

DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 24th September 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,784                 | 471 9 0    | 8,060 10                         | 164 4 0    | 7 0 0                       | 642 13 0        | 415½                     | 78           | 493½   |
| Or per mile of railway ...                                  | .....                 | 39 4 9     | .....                            | 13 11 0    | 0 9 4                       | 53 9 1          | .....                    | .....        | .....  |
| For previous 11 weeks of half-year ...                      | 23,129                | 5,685 1 0  | 94,494 0                         | 2,198 10 0 | 99 7 0                      | 7,963 2 0       | 4,350½                   | 1,213        | 5,569½ |
| Total for 12 weeks ...                                      | 25,913                | 6,156 10 0 | 1,02,554 10                      | 2,362 14 0 | 106 7 0                     | 8,005 16 0      | 4,772                    | 1,291        | 6,063  |
| COMPARISON.   |                       |            |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,804                 | 465 1 2    | 5,421 0                          | 113 0 0    | 2 1 0                       | 579 2 2         | 422                      | 71           | 493    |
| Per mile of railway corresponding week of previous year ... | .....                 | 38 12 1    | .....                            | 9 5 4      | 0 2 9                       | 48 4 2          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 32,610½               | 5,444 6 1  | 1,18,550 20                      | 2,369 0 0  | 96 9 0                      | 7,008 15 1      | 4,891                    | 1,507        | 6,398  |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 25TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 24TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 25TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 24TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         | Rs.                     |
| 12  | 579       | 48               | 12  | 643       | 54               | 12   | 25,181          | 2,098            | 12   | 22,206          | 1,934            | .....                   | 1,975                   |

## SINDIA STATE RAILWAY.

*Approximate Return of Traffic for week ended 17th September 1887, on 74½ miles open.*

|  | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|--|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|  | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|  |                       | Rs. A. P.   | MDS. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                 | 4,367                 | 3,090 0 0   | 84,791 0                         | 3,422 1 0   | 118 11 0                    | 7,029 12 0      | 600                      | 1,984½       | 2,044½  |
| Or per mile of railway ...                                     | .....                 | 41 4 9      | .....                            | 51 1 6      | 1 9 5                       | 93 15 8         | .....                    | .....        | .....   |
| For previous 10 weeks of half-year ...                         | 50,332                | 38,901 15 0 | 9,02,154 16                      | 34,642 13 0 | 751 6 0                     | 74,356 2 0      | 7,119                    | 13,705½      | 20,914½ |
| Total for 11 weeks ...   | 54,699                | 42,050 15 0 | 10,46,945 10                     | 38,464 14 0 | 870 1 0                     | 81,385 14 0     | 7,818                    | 15,789½      | 23,607½ |
| COMPARISON.  |                       |             |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...              | 3,869                 | 2,025 1 8   | 83,235 30                        | 2,716 11 0  | 40 9 6                      | 5,691 6 0       | 661                      | 864          | 1,519   |
| Or per mile of railway corresponding week of previous year ... | .....                 | 80 1 8      | .....                            | 36 5 2      | 0 10 7                      | 76 1 5          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...               | 54,757                | 40,167 12 5 | 8,52,093 10                      | 29,708 10 0 | 1,086 3 9                   | 71,052 10 2     | 8,001                    | 11,445       | 19,446  |

*Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 18TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 18TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 17TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Rs.                     |                         |
| 74½   | Rs. 5,691 | 76               | 74½   | Rs. 7,030 | 94               | 71½  | Rs. 1,07,427    | 2,238            | 74½  | Rs. 1,05,387    | 2,612            | Rs. 27,960              | .....                   |

\* Deducted Rs. 194 on account of supplemental returns to 3rd June 1887.

## SINDIA STATE RAILWAY.

*Approximate Return of Traffic for week ended 24th September 1887, on 74½ miles open.*

|  | COACHING TRAFFIC.     |              | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|--|-----------------------|--------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|  | Number of passengers. | Receipts.    | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|  |                       | Rs. A. P.    | MDS. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                 | 4,941                 | 3,686 15 0   | 81,092 0                         | 4,492 0 0   | 105 7 0                     | 8,284 6 0       | 700                      | 2,176½       | 2,876½  |
| Or per mile of railway ...                                     | .....                 | 49 4 8       | .....                            | 60 0 10     | 1 6 7                       | 110 12 1        | .....                    | .....        | .....   |
| For previous 11 weeks of half-year ...                         | 54,699                | 42,050 15 0  | 10,46,945 10                     | 38,464 14 0 | 870 1 0                     | 81,385 14 0     | 7,818                    | 13,783½      | 23,601½ |
| Total for 12 weeks ...   | 59,640                | 45,737 14 0  | 11,28,987 10                     | 42,056 14 0 | 973 8 0                     | 89,070 4 0      | 8,518                    | 17,000½      | 26,478½ |
| COMPARISON.  |                       |              |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...              | 5,025½                | 3,076 2 6    | 90,487 30                        | 2,731 5 0   | 71 2 6                      | 6,471 10 0      | 661                      | 990          | 1,651   |
| Or per mile of railway corresponding week of previous year ... | .....                 | 40 2 4       | .....                            | 36 6 9      | 0 15 3                      | 86 8 4          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...               | 59,785½               | 43,843 14 11 | 9,49,171 0                       | 32,522 15 0 | 1,157 6 3                   | 77,524 4 2      | 8,063                    | 12,435       | 21,097  |

*Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 25TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 24TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 25TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 24TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Rs.                     |                         |
| 74½   | Rs. 6,472 | 87               | 74½   | Rs. 8,284 | 111              | 74½  | Rs. 1,73,800    | 2,325            | 74½  | Rs. 2,03,671    | 2,723            | Rs. 20,773              | .....                   |

## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 17th September 1887, on 22½ miles open.

|  | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|-------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.   | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week Or per mile of railway          | 14,226                | 4,143 7 0   | 5,253 0                          | 177 10 0   | 6 0 0                       | 4,627 1 0       | 943                      | 26           | 969    |
| For previous 10 weeks of half-year                         | 108,031               | 44,271 11 0 | 39,706 0                         | 1,376 7 0  | 44 12 0                     | 45,718 14 0     | 9,516½                   | 595½         | 10,112 |
| Total for 11 weeks   | 122,257               | 48,711 2 0  | 44,959 0                         | 1,554 1 0  | 50 12 0                     | 50,345 15 0     | 10,488½                  | 621½         | 11,110 |
| COMPARISON.  |                       |             |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year              | 13,783                | 3,290 14 1  | 3,100 30                         | 116 1 0    | 3 11 3                      | 3,406 10 4      | 944                      | 24           | 968    |
| Per mile of railway, corresponding period of previous year | .....                 | 147 7 3     | .....                            | 5 3 6      | 0 2 8                       | 152 13 5        | .....                    | .....        | .....  |
| Total to corresponding date of previous year               | 178,167½              | 43,507 8 7  | 44,369 20                        | 1,243 13 0 | 59 13 0                     | 44,811 5 1      | 10,910                   | 244          | 11,154 |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 18TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 18TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 17TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½   | 3,401     | 153              | 22½   | 4,627     | 208              | 22½  | 1,17,544        | 5,283            | 22½  | *1,27,418       | 5,727            | 9,974                   | .....                   |

\* Added Rs. 16 on account of supplemental returns to 30th June 1887.

## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 24th September 1887, on 22½ miles open.

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week Or per mile of railway       | 15,850                | 4,700 2 0  | 2,356 20                         | 101 2 0   | 6 6 0                       | 4,807 10 0      | 943                      | 25           | 968    |
| For previous 11 weeks of half-year                      | 122,257               | 48,711 2 0 | 44,959 0                         | 1,554 1 0 | 50 12 0                     | 50,345 15 0     | 10,488½                  | 621½         | 11,110 |
| Total for 12 weeks                                      | 138,107               | 53,441 4 0 | 47,915 20                        | 1,655 3 0 | 57 2 0                      | 55,153 9 0      | 11,431½                  | 646½         | 12,078 |
| COMPARISON.   |                       |            |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year           | 14,782                | 3,752 9 5  | 2,123 20                         | 87 7 0    | 2 12 0                      | 3,843 12 5      | 954                      | 14           | 968    |
| Per mile of railway corresponding week of previous year | .....                 | 168 11 3   | .....                            | 3 14 10   | 0 2 0                       | 172 12 1        | .....                    | .....        | .....  |
| Total to corresponding date of previous year            | 198,230½              | 47,261 2 0 | 36,493 0                         | 1,431 6 0 | 62 9 6                      | 48,455 1 0      | 11,904                   | 258          | 12,162 |

Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 25TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 24TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 25TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 24TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½   | 3,814     | 173              | 22½   | 4,908     | 216              | 22½  | 1,21,388        | 5,456            | 22½  | 1,32,220        | 5,943            | 10,833                  | .....                   |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 17th September 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| traffic for the week ...                                    | 1,790                 | 781 8 9            | 11,165 20                        | 709 6 0     | 15 0 0                      | 1,505 14 9      | 413                      | 175          | 588    |
| per mile of railway ...                                     | ...                   | 18 0 9             | ...                              | 16 14 3     | 0 5 8                       | 35 13 8         | ...                      | ...          | ...    |
| previous 10 weeks of half-year ...                          | 22,203                | 9,523 11 9         | 77,331 20                        | 5,819 14 0  | 240 4 0                     | 15,593 13 9     | 3,191                    | 2,851        | 6,048  |
| Total for 11 weeks ...                                      | 24,002                | 10,305 4 6         | 88,697 0                         | 6,529 4 0   | 255 4 0                     | 17,889 12 6     | 3,607                    | 3,029        | 6,636  |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| for corresponding week of previous year ...                 | 2,315                 | 1,039 1 10         | 20,300 20                        | 2,319 6 0   | 54 6 0                      | 3,412 14 7      | 213                      | 375          | 588    |
| per mile of railway corresponding week of previous year ... | ...                   | 24 11 10           | ...                              | 55 15 0     | 1 4 9                       | 81 15 7         | ...                      | ...          | ...    |
| total to corresponding date of previous year ...            | 24,104                | 11,805 2 0         | 87,459 20                        | 10,450 10 0 | 264 2 0                     | 22,697 14 9     | 3,491                    | 2,829        | 6,321  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1887.*

| RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 18TH SEPTEMBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 17TH SEPTEMBER 1887. |                  |        | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|--------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Receipts.                                     | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. |        |                         |                         |
|   | Rs.       | Rs.              | Rs.   | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              | Rs.    | Rs.                     |                         |
| 42  | 3,443     | 82               | 42  | 1,506            | 36                   | 48,771   | 1,160            | 42                   | 64,800   | 1,545            | 16,161 | ...                     | ...                     |

\* Deducted Rs. 1,922 on account of supplemental returns to 30th June 1887.

## INDIAN MIDLAND RAILWAY.

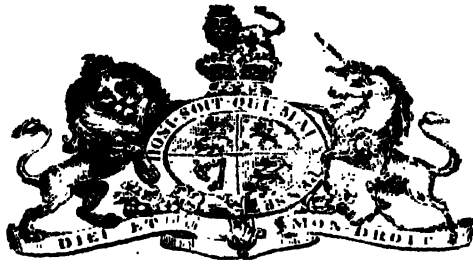
*Approximate Return of Traffic for week ended 21st September 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| total traffic for the week ...                              | 2,062                 | 919 5 9     | 10,240 10                        | 408 2 0     | 15 0 0                      | 1,342 7 9       | 413                      | 175          | 588    |
| per mile of railway ...                                     | ...                   | 21 14 3     | ...                              | 9 11 6      | 0 5 8                       | 31 15 5         | ...                      | ...          | ...    |
| previous 11 weeks of half-year ...                          | 24,002                | 10,305 4 6  | 88,697 0                         | 6,529 4 0   | 255 4 0                     | 17,889 12 6     | 3,607                    | 3,029        | 6,636  |
| Total for 12 weeks ...                                      | 26,064                | 11,224 10 3 | 98,937 10                        | 6,937 6 0   | 270 4 0                     | 18,432 14 3     | 4,020                    | 3,204        | 7,224  |
| COMPARISON.   |                       |             |                                  |             |                             |                 |                          |              |        |
| total for corresponding week of previous year ...           | 2,475                 | 1,034 7 4   | 23,365 0                         | 1,944 5 0   | 36 5 0                      | 2,919 14 4      | 208                      | 380          | 588    |
| per mile of railway corresponding week of previous year ... | ...                   | 24 11 7     | ...                              | 49 14 7     | 0 13 10                     | 69 8 0          | ...                      | ...          | ...    |
| total to corresponding date of previous year ...            | 26,064                | 12,361 9 4  | 1,10,824 20                      | 12,294 15 0 | 309 7 0                     | 25,577 0 1      | 4,099                    | 3,209        | 7,308  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1887.*

| RECEIPTS FOR WEEK ENDING 25TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 24TH SEPTEMBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 25TH SEPTEMBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 24TH SEPTEMBER 1887. |                  |        | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|--------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Receipts.                                     | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. |        |                         |                         |
|   | Rs.       | Rs.              | Rs.   | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              | Rs.    | Rs.                     |                         |
| 42  | 2,919     | 70               | 42  | 1,342            | 32                   | 51,640   | 1,231            | 42                   | 60,214   | 1,377            | 15,584 | ...                     | ...                     |





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, OCTOBER 12, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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### RESOLUTION ON THE REPORT ON THE LUNATIC ASYLUMS IN BENGAL FOR THE YEAR 1886.

#### MEDICAL.

*Darjeeling, the 21st September 1887.*

#### RESOLUTION.

READ—

The Report on the Lunatic Asylums in Bengal for the year 1886.

Read also—

The Report for the year 1885, and the Resolution recorded upon it.

Although the Report, which was due on the 1st May last, was not received by Government till the 14th July, yet no explanation of the delay in its submission has been furnished. The Lieutenant-Governor trusts that the Inspector-General of Civil Hospitals will in future pay more attention to the orders of Government regarding the punctual submission of reports.

2. The total number of persons who were in confinement in all the asylums in Bengal, with the exception of the European Asylum at Bhowanipore, on the 1st January 1886 was 955, of whom 757 were males and 198 females. The numbers of admissions and re-admissions during the year were 200 and 18 respectively. Of all those under treatment, 87 persons were discharged cured, 41 were transferred to the care of friends, 4 were discharged and 85 died, leaving 956 persons in the asylums on the 31st December 1886. The daily average population was 963.9 against 939.62 in 1885. The percentage of recoveries calculated on the daily average strength was 9.02 against 9.89 in the previous year.

3. The number of criminal lunatics in the asylums on the 1st January 1886 was 387, of whom 349 were males and 38 females. During the year there were 81 new admissions and 12 re-admissions; 60 persons were discharged or transferred, and 23 died, leaving 397 in the asylums at the close of the year. This number is the highest on record within the past decade. In 1876 the number was only 232, and there has been a steady increase since that year, the number having increased by nearly 100 during the last quinquennial period from 1882 to 1886. In drawing attention to the steady increase in the number of this class of lunatics, the Inspector-General of Civil Hospitals observes that the figures are open to objection, as they represent not altogether cases of genuine insanity, but possibly cases in which insanity has been successfully pleaded in Court, and cases of crime committed under mere intoxication. The Superintendent of the Dullunda Asylum, referring to the increase in the number of criminal lunatics in that institution, remarks that "the increase in the criminal population is due to the necessity of retaining a prisoner in the institution after he has been declared sane longer than is the case with the non-criminal." Sir Stuart Bayley thinks it possible that non-homicidal lunatics have in some cases been detained for longer periods than was necessary. The statement of admissions and "crimes charged" shows that out of the total number of 81 admissions, 25 were charged with murder and attempts to commit murder, five with culpable homicide, four with grievous hurt, two with hurt, one with attempt to commit suicide, 20 with theft, one with receiving stolen property, three with trespass, one with mischief by fire, one with exposure of child, two with house-breaking, one with criminal trespass, one with lurking house trespass, five with house trespass, and one for each of the following offences:—namely, forgery, hurt, vagrancy, highway robbery, trespass and assault, wrongful confinement, obstruction on railway, and exposure of person. It is evident that many of these offences were comparatively trivial, and if the lunatics were harmless, there was no necessity for sending them to an asylum at all; in any case, if they are not dangerous, there appears to be no reason for prolonged detention. During the year 17 per cent. of the non-criminal population and 8 per cent. of the criminal class were discharged from the Dullunda Asylum. From this the Superintendent concludes that, while the non-criminals form, as it were, a floating population, the criminals are gradually, but surely, filling the asylums. He suggests the advisability of establishing a separate criminal asylum, as it is difficult to segregate, manage or control criminal lunatics in an ordinary asylum. The Inspector-General of Civil Hospitals agrees in this view, but he does not think that the want of an asylum for criminal lunatics is so much a question of importance as separate accommodation for dangerous lunatics, or those whom it is found troublesome and difficult to manage. The Lieutenant-Governor is of opinion that it would be advisable to have a separate asylum for criminal lunatics only, but the expense both directly and indirectly caused by transfers would be so large, that the proposition is one which cannot be entertained at present.

4. The usual difficulty was experienced in regard to the classification of the insanes. During the year, however, 97 persons were returned under the head of "Acute mania," 78 under "Chronic mania," 11 under "Melancholia," 1 under "Acute dementia," 15 under "Chronic dementia," 2 under "Imbecility," and 14 as "not insane."

5. The health of the asylums was fairly good. Of the principal diseases treated during the year, dysentery was most prevalent and increased in all the asylums, particularly in Dacca and Patna. Next in order come phthisis, fever, pneumonia and cholera. The last-named disease was reported only from the Berhampore Asylum. The number of injuries sustained by the lunatics in confinement was comparatively few. There were only two cases of injuries inflicted by one lunatic on another. As regards the causes of insanity, 256 cases are said to have been due to ganja, 5 to bhang and churras, 53 to spirits, 7 to opium, 26 to fever, 38 to heredity, 25 to epilepsy, and 6 to childbirth. The mortality in the asylums increased from 73 in 1885 to 85 in 1886. Of the total number of deaths, 30 were returned from Dullunda, 16 from Dacca, 18 from Patna, 10 from Cuttack, and 11 from Berhampore. The principal causes of death were dysentery, phthisis, exhaustion from mania, apoplexy and diarrhoea. The high rate of mortality in asylums is of course partly due



to the fact that all the patients are lunatics, and also to the advanced age and chronic infirmities of many of them.

6. The space available in the Dullunda, Dacca and Cuttack Asylums was found to be insufficient to accommodate all the lunatics sent to those asylums during the year. In Dullunda the deficiency of accommodation was in the female ward. Under recent orders the number of districts supplying insanes to the asylum has been considerably reduced, and it is hoped that this will have the effect of preventing any over-crowding for some time to come. In Dacca and Cuttack additional accommodation is being provided to meet the increased demand. No over-crowding was reported from Patna, but some of the lunatics are said to have been accommodated in the verandahs of the building, and this has been taken into account in calculating the capacity of the asylum. The Lieutenant-Governor would wish to be informed of the extent to which the verandahs have been so utilized, and whether the lunatics are subjected to any discomfort by being so lodged. The remarks of the Inspector-General of Civil Hospitals regarding the condition of the asylum building at Patna, and the improvements required to be made in it, will be communicated to the Public Works Department for consideration.

7. The receipts and expenditure of the asylums for the year are shown in the following statement:—

*Receipts and Expenditure of each Asylum for the year 1886.*

| 1          | 2                       | 3                  | 4                                  | 5  | 6   | 7  | 8  | 9         | 10              | 11        | 12             | 13             |
|------------|-------------------------|--------------------|------------------------------------|--|---|--|--|-----------|-----------------|-----------|----------------|----------------|
| ASYLUMS.   | Daily average strength. | Total expenditure. | Realised from friends of patients. | Actual profit from manufacture department. | Average cost of each patient as per column 5. | Average cost of each patient, deducting columns 4 and 5. | AVERAGE COST OF EACH PATIENT IN RELATION TO— |           |                 |           |                |                |
|            |                         |                    |                                    |  |   |  | Establishment.                               | Diet.     | Bazar medicine. | Clothing. | Contingencies. | Other charges. |
|            |                         |                    |                                    |  |   |  | Rs. A. P.                                    | Rs. A. P. | Rs. A. P.       | Rs. A. P. | Rs. A. P.      | Rs. A. P.      |
| Dullunda   | 271.2                   | 29,297 5 7         | 1,199 15 7                         | 593 14 8                                   | 108 0 5                                       | 98 5 9   | 41 11 1                                      | 45 15 1   | 0 2 9           | 4 8 9     | 11 14 11       | 8 11 10        |
| Dacca      | 230.42                  | 20,823 14 2        | 173 2 3                            | 1,826 14 1                                 | 94 7 7  | 85 6 4   | 33 10 3                                      | 35 1 1    | 0 0 2           | 2 4 7     | 4 4 11         | 19 2 7         |
| Patna      | 241.57                  | 17,572 13 5        | 257 15 9                           | 2,037 11 0                                 | 71 14 7                                       | 62 6 7   | 34 15 6                                      | 27 4 10   | 0 0 4           | 2 15 8    | 2 8 2          | 4 2 1          |
| Cuttack    | 54.75                   | 4,058 14 7         | 41 13 3                            | 555 2 2                                    | 90 15 0                                       | 80 0 6   | 39 9 3                                       | 25 8 2    | 0 0 9           | 1 13 10   | 1 5 0          | 2 9 0          |
| Berhampore | 175.40                  | 15,696 11 10       | .....                              | 927 14 8                                   | 88 13 10                                      | 81 14 2  | 45 10 2                                      | 29 9 10   | 0 1 4           | 1 4 1     | 3 13 1         | 9 7 4          |
| Total      | 963.9                   | 88,109 11 7        | 1,672 14 10                        | 5,941 8 7                                  | 91 6 6  | 82 5 4   | 39 16 5                                      | 34 7 5    | 0 1 2           | 2 14 2    | 5 11 10        | 8 5 6          |

The total expenditure was Rs. 88,110 against Rs. 86,279 in 1885. The increase was due to extraordinary expenditure on repairs and alterations to the asylum buildings during the year. The cost of establishment and superintendence was Rs. 20,061 and Rs. 18,400, respectively, or nearly the same as it was in the previous year. Dullunda is still by far the most costly of all the asylums. The total amount expended on diet was Rs. 22,060 against Rs. 20,613 in 1885, showing an increase of Rs. 1,447, which was distributed among the Dullunda, Dacca, Cuttack, and Berhampore Asylums, and was mainly due to the rise in the price of provisions. The value of articles of diet made over from the Manufacture Department during the year was less than that of the previous year. The average cost of a lunatic's daily diet was one anna and five pies, against one anna and six pies in 1885. The cost of clothing and bedding, including articles received from the Manufacture Department, was Rs. 2,780, against Rs. 3,103 in 1885. The expenditure on account of manufactures was Rs. 22,791 against Rs. 29,248 in the previous year.

8. The foregoing paragraphs do not refer to the European Asylum at Bhowanipore the figures for which are given separately. There were in this asylum on the 1st January 1886, 29 lunatics, of whom 13 were males and 16 females. During the year 17 persons were admitted and 1 readmitted; of these 16 were from the civil population and two soldiers; four persons were discharged cured, one was made over to the Military authorities, four were despatched to Europe under the Merchant Shipping Act, six were transferred to the care of friends, one was sent to Europe as still insane, and two died, leaving 29 patients under treatment in the asylum at the close of the year. "Heredity" and

"Intemperance" were found to be the chief causes of insanity. The total expenditure incurred in the asylum during the year was Rs. 20,271 against Rs. 19,731, the expenditure of the previous year. The receipts from paying patients fell from Rs. 9,233 in 1885 to Rs. 6,722 in 1886.

9. The management of the asylums appears to have been conducted with efficiency, and the subordinate establishments are favourably reported on. The insanes were well cared for and kindly treated.

ORDER—Ordered that a copy of this Resolution, together with a copy of the Report, be submitted to the Government of India, in the Home Department, for information.

Ordered also that a copy of this Resolution be forwarded to the Inspector-General of Civil Hospitals, Bengal, for information and guidance; and that extract paragraph 6 of the Resolution, and paragraph 5 of the Report, be forwarded to the Public Works Department for consideration.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

*Offg. Chief Secy. to the Government of Bengal.*

### LOSS OF THE S. S. "SIR JOHN LAWRENCE."

MUNICIPAL DEPARTMENT.—MARINE.

RESOLUTION.

*Darjeeling the 30th September 1887.*

READ—

A report dated 8th instant, from the President and Members of the Court appointed under Government Resolution of 29th July to enquire into all the circumstances connected with the loss of the *Sir John Lawrence*.

At daybreak on the morning of the 25th May, the *Sir John Lawrence*, Captain Irvine, left her moorings and steamed down the Hooghly bound for Chandbally, with over 700 passengers on board. For several days previous to this, it had been notified day by day, in the Meteorological Report published every afternoon, that a cyclone had formed in the Bay and was moving in a north-westerly direction. As the *Sir John Lawrence* proceeded down the river, the weather became thick and squally and exceedingly threatening, and at the safe anchorage of Kedgerree she passed the *Curlew* and the *Tyrone*, which had anchored in consequence of the appearance of the weather; no signals were exchanged, but she went, under steam and with her sails set, out to sea. Further down she is reported to have been observed by the telegraph signal-master off Saugor Island, and this was certainly the last seen of her.

2. In a few days it became apparent that the vessel had been lost with all on board, and in view of the strong public feeling which the disaster had excited, and the fact that at the same time statements regarding the seaworthiness of the vessel, which had previously been enquired into departmentally, were repeated, the Lieutenant-Governor decided to hold a thorough and public enquiry. Accordingly a Special Court was appointed, under section 7 of Act V of 1883 (the Indian Merchant Shipping Act), to enquire into "all the circumstances connected with the loss of the steam-ship *Sir John Lawrence*."

3. The object of this enquiry was twofold. It was desired, in the first place, to have the opinion of the Court on the causes which actually led or contributed to the disaster. And it was desired, in the second place, to ascertain whether any improvements in existing practice could be suggested whereby the risk of danger to seagoing vessels under certain meteorological conditions might be lessened, or the security of the passengers of the different steamers plying between Calcutta and Orissa might be enhanced. The report of the Court is now before the Lieutenant-Governor. Although the enquiry was greatly protracted, the voluminous record of the depositions has been submitted without the revision necessary to make them readily intelligible. Before proceeding to notice the report in detail, the Lieutenant-Governor must first advert to an

observation of the Court that, when such an enquiry is likely to involve a protracted hearing, a firm of solicitors might be entrusted with the duty of preparing the case beforehand. The circumstances, however, of this case were very exceptional, and rendered it necessary for the Court to examine all the evidence which might be offered. What was required, in fact, was an enquiry into the evidence at first hand, and not a trial of a case prepared on behalf of Government. The object of the enquiry was not merely a decision on evidence known to be available, but the discovery of such further evidence as might prove to be available, and it was impossible for Government to foresee that the task imposed on the Court would be so protracted and arduous as it proved to be.

4. The following are the conclusions of the Court:—

1. That the *Sir John Lawrence* foundered at sea with all hands on board, probably between the Ridge Light and Palmyra Point; that Captain Irvine, who perished in the vessel, committed an act of foolhardiness, almost criminal in its nature, in taking the vessel out to sea on the morning of the 25th of May.

2. That the vessel, with the exception of the plating in her upper structure, which was abnormally thin, was in other respects seaworthy.

3. That the *Sir John Lawrence* carried more than her proper complement of passengers when she started on her last voyage, but that such overcrowding, in the face of the violent cyclone she encountered, aided very little, if anything, in hastening the disaster which befell her.

4. That the method of survey adopted under the auspices of the Port Commissioners and Port Officer is extremely unsatisfactory, and in urgent need of speedy and thorough reform.

5. That the Storm Signal code can be amended with advantage; that cable communication should be established between the Andamans and main land; and that the cable already in existence between Diamond Island and Bassein should be overhauled and placed in a state of thorough repair.

5. The first two findings practically dispose of the first part of the enquiry, and, with the modification which will be noted below, the Lieutenant-Governor fully accepts them. It is clear that the vessel was seaworthy, that she foundered because the Commander rashly took her out into a cyclone in spite of the clearest indications of danger, and that no fault of those responsible for her equipment contributed to her loss. It is conclusively shown that the storm which she encountered was one of unusual violence. In the same storm perished the *Retriever*, a new and powerful tug-steamer; and there can be no question that the temerity of the Commander, Captain Irvine, was the cause of the lamentable destruction of life which attended the loss of the *Sir John Lawrence*.

The allegations of Mr. Nuestein, a dismissed servant of the owners of the vessel, were considered by Sir Rivers Thompson some months ago, but were not credited by him. As, however, they were reiterated after the loss of the vessel, Sir Stuart Bayley deemed it right to cause them to be laid before this Court of Enquiry in order that there might be no possibility of evasion or concealment. The result is that on all material points the correctness of Sir Rivers Thompson's judgment has been established.

The Court have come to the conclusion that the plating in the upper structure of the vessel was "abnormally thin," though it is not suggested that this defect was the cause of the disaster. The finding of the Court is based mainly, but not entirely, on the evidence given as to the condition of one of the plates. The evidence both as to the thickness and as to the position of that plate is described as hopelessly conflicting, and though the Court incline to accept Loech's evidence that it was only one-eighth of an inch thick, they finally decide that this particular plate was nearer three-sixteenths than one-fourth of an inch. For a plate in that position one-fourth of an inch is accepted by Lloyds' Surveyor as quite safe. The evidence is perhaps somewhat slender to support the assertion that the plates in the upper structure of the vessel were below the standard of safety.

6. The conclusion of the Court regarding those responsible for the vessel's equipment is that she "was supplied with all needful stores and material, and that the owners and agents did not on any occasion exhibit the slightest reluctance to comply with any reasonable request for repairs or stores made upon them by the Chief Engineer or Captain." The Government is therefore now mainly concerned with the second part of the enquiry.

## 7. The points which call for notice are—

- (1) The Police and Sanitary arrangements connected with the passenger traffic;
- (2) The system of survey of Native passenger vessels; and
- (3) The system under which meteorological observations at selected points in and on the coast of the Bay of Bengal are communicated and published to the shipping.

8. (1) *Police and Sanitary Arrangements.*—The number of passengers which “Native Passenger Ships” are authorized to carry on short voyages is regulated by section 18 of Act X of 1887. This number was for the *Sir John Lawrence*, in seasons of fair weather, 735. The Police Corporal states that the full number was carried on her last voyage. It appears, however, from the evidence of Mr Mackenzie, the representative of the firm of Agents, that a considerable number of these passengers cannot have held tickets. On this point the Court make the following observations:—“Mr. Mackenzie tells us that the sale of tickets to passengers for the *Sir John Lawrence* on the occasion of her last voyage began at Rs. 3 and gradually rose to Rs. 6. He also informs us that his firm sold 710 tickets for that voyage: of these some 30 or 40 passengers went by the *Mahratta*. He also tells us that he refunded money on 21 of these tickets after the vessel had started. It is therefore obvious that the *Sir John Lawrence* started that morning with only 669 passengers holding tickets. The police, however, tell us that the *Sir John Lawrence* left with her full complement—735 all told. It must therefore follow with mathematical certainty that there were at least 66 passengers on board who had no tickets.” The Court here appear to have misapprehended Mr. Mackenzie’s evidence. Mr. Mackenzie says that he sold 731 tickets and gave refunds on 21 of these, leaving 710 passengers still holding tickets. Of these 30 or 40 went by the *Mahratta*, and the remaining 670 or 680 by the *Sir John Lawrence*. The number of passengers on board without tickets would, therefore, on the theory that the full number of 735 was carried, be between 55 and 65.

Baboo Chandra Kumar Bhattacharjee states that he, with a party of 20 persons holding tickets, was refused admission to the vessel at 9 or 9-30 P.M. on the night before she started. The Court have not correctly described this gentleman’s evidence as “quite uncontradicted.” The Corporal denies that any one was turned away before 3 A.M., though he states that eight or ten boats full of passengers were then compelled to return to the shore. There can, however, be no doubt that Baboo Chandra Kumar Bhattacharjee’s statement should be accepted, and it is a reasonable inference that he was refused admission because there was no space available. The aggregate fares to be collected on board from the passengers who would thus appear to have been received without tickets would, at the rate of Rs. 6, the price to which the tickets had risen in the evening, amount to between Rs. 330 to Rs. 390, not to Rs. 396 as stated by the Court. Mr. Currie, on behalf of the Agents, states that the “deck collections” paid in by the Captain on his return from Chandbally only occasionally amounted to as much as Rs. 100. The Court remark on the “ominous contrast” between these figures, and appear to draw the conclusion that the Captain carried a larger number of passengers than was authorized, and that he appropriated a portion of the profit. They seem to have overlooked the special circumstances of the occasion both in regard to numbers and in regard to price. Mr. Currie says: “The morning of the 25th May was the first big rush of the season.” And it would appear that the increase in the price of the tickets from the ordinary rate of Rs. 2 to Rs. 6 was quite exceptional and was the result of this pressure. He also says:—“In competition times the deck collections were infinitesimal, because passengers could get tickets for 4 annās, and they could not go on board without them, when they would have to pay Rs. 2;” and it is in evidence that competition, i.e., the competition of steamers for passengers, had ceased before the occasion in question. In the Lieutenant-Governor’s opinion these considerations leave open to doubt the inference which the Court would apparently draw from the contrast between the deck collections habitually paid in by Captain Irvine and the amount which he may be supposed to have collected on this particular trip; the more so as such an inference would be distinctly at variance with the evidence which has been offered of Captain Irvine’s character and of the estimation in which he was held by his employers and his friends.

Similarly the Lieutenant-Governor finds the view of the Court that the *Sir John Lawrence* carried on her last voyage a number of passengers which exceeded the legal limit to be based rather on an inference of what was *a priori* probable than on actual evidence; but he admits the *a priori* probability of the view. Quite enough has certainly been shown to prove that the police arrangements for the control of this traffic, both at Calcutta and at Chandbally, and both on the departure and arrival of the vessels, are most unsatisfactory, and that facilities are offered for disregarding the requirements of the law. As regards counting on arrival in Calcutta, there is a distinct conflict between the evidence of Captain Moore and that of Superintendent Robertson. The Commissioner of Police, Calcutta, and the Commissioner of Orissa, have been asked to report fully upon the whole subject with a view to the early introduction of more stringent regulations.

The Court are of opinion that in no case should passenger space have been permitted between decks on the *Sir John Lawrence*. The reason given is that the ventilation was imperfect. The Lieutenant-Governor does not fully understand the recommendation, as the provision of this accommodation is recognized in the law. The Health Officer of the Port will be required to report generally on the sanitary arrangements of the vessels plying to Chandbally.

It is stated in the evidence of Mr. Augier, late Customs Officer at Chandbally, that no reports of deaths which occur on the voyage are made to the authorities at the port of arrival. Under section 21 of Act VIII of 1876 (section 20 of Act X of 1887) the Port Officers were, by notification of 5th October 1877, appointed to receive such reports. Orders will now be issued to ensure that the penal provisions of section 34 of the present Act are strictly enforced in case of default by the commanders.

9. 21 *Surveys*.—The Court observe that “the requirements of the law as they obtained on the date when the *Sir John Lawrence* foundered at sea are to be found in the *Inland Steam-vessels’ Act of 1884*, the *Indian Steam-ships’ Act of the same year*, the *Native Passenger Act of 1876*, and in the *Indian License Act Amendment Act of 1880*.” They proceed to state that they are not aware whether the officer to whom the duty of delivering certificates under Act VII (Indian Steam-ships’ Act) is assigned is the Vice-Chairman of the Port Commissioners or the Port Officer. After remarking that they are informed by Mr. Bushby that the officer authorized by the Local Government “under the Native Passenger Act of 1876” to receive from masters, owners, or agents notice of an intention to carry Native passengers “happens to be the Port Officer, Captain Stiffe,” they proceed: “The conclusions we draw from this exposition of the law as it existed at the time is that at any rate so far back as the year 1884 it was the intention of the Legislature that there should be two separate and distinct surveys made in the case of steam-ships which at the same time happened to be Native passenger steam-ships—one conducted by a Surveyor under the direct control of the Port Commissioners, and the other conducted by Surveyors (not one surveyor, as in the former case), for which the Port Officer is directly responsible.” And they animadvert on the action of the Port Officer in accepting for the purposes of Certificate A under “the Act of 1876” materials furnished to him by the Port Commissioners’ office, “and apparently taken from the declaration made by their Surveyor after his survey held under one or other of the Steam-ship Acts of 1884.”

The reference to the “*Inland Steam-vessels’ Act, 1884*,” is unnecessary, as that Act could not apply to the *Sir John Lawrence*, which was not “a steam-vessel which ordinarily plies on inland water.” The Vice-Chairman of the Port Commissioners was appointed under Notification dated 6th July 1886 to be the officer to deliver certificates under section 13 of Act VII of 1884, and the Port Officer was appointed under Resolution dated 7th September 1877 to be the officer authorized under section 7 of Act VIII of 1876 (section 7 of Act X of 1887) to receive notices that ships are to carry Native passengers. Two surveys are not required under Act VII of 1884 and Act X of 1887 (Act VIII of 1876). Every steam-ship, with the exceptions noted in section 5, is required to obtain a certificate of survey under Act VII of 1884; and, under sections 13 and 14 of Act X of 1887 (sections 13 and 14 of Act VIII of 1876), such a certificate, if it is in force and if it states, as such certificates must practically state, “that the ship is seaworthy and properly equipped, fitted and ventilated, and the

number of passengers that she is capable of carrying." takes the place of Certificate A under that Act, unless the Port Officer considers that the certificate has, from any cause, become invalid after its issue. It was in view of these considerations that Government issued the orders dated 16th January 1884, to which the Court refer.

The only questions for consideration, therefore, are (a) the system under which and the manner in which surveys are performed and certificates granted by the Port Commissioners and their officers under Act VII of 1884, and (b) the manner in which Certificates B are prepared by the Port Officer under Act X of 1887.

10. The Court remark upon the circumstance, disclosed in the evidence, that Mr. John MacKellar makes independent surveys of vessels, both as Engineer-Surveyor and as Ship Surveyor. It would appear that Mr. MacKellar was appointed to be Assistant Engineer-Surveyor to the Port Commissioners in accordance with the sanction conveyed in Government order No. 2707T—G, dated 23rd October 1884. He was not, however, gazetted to exercise the powers of a Surveyor. In June 1885 the Port Commissioners decided to grant three months' leave to Mr. Bushby, their Engineer-Surveyor; and in their letter No. 854, dated 25th June 1885, they asked that Mr. John MacKellar "should be gazetted to enable him to perform so much of Mr. Bushby's duties as relate to the entire survey of inland steamers and the survey of the engines and boilers of ocean-going steamers." In the Notification published in the Gazette Mr. MacKellar was by inadvertence appointed "Surveyor of steam-vessels in the Port of Calcutta under Acts V of 1862 and I (B.C.) of 1868, and of steam-vessels under Act VIII of 1876," without any proper limitation either as to the duties to be performed or as to the period for which they were to be performed; but the Government letter referred fully to the limitations. It is apparently under this Notification that he has continued to exercise independent powers since Mr. Bushby's return. The Port Commissioners will be asked to submit a report on the full and permanent exercise by Mr. John MacKellar of powers which, as the correspondence with Government shows, it was only intended that he should exercise partially and as a temporary expedient.

11. As regards the payment of Rs. 1,000 to Mr. Bushby by Messrs. Macneill and Company, for professional advice given by him in regard to the alterations required in the hull of the *Sir John Lawrence*, the Lieutenant-Governor must abstain from passing any orders till he has received the explanation of Mr. Bushby, which the Port Commissioners will be desired to submit. The Lieutenant Governor observes, however, that though the Court sat for two days after Mr. Mackenzie's evidence on this point had been taken, they did not recall and examine Mr. Bushby on his action. Such an examination might have enabled them to express a matured opinion on the transaction with a full knowledge of the surrounding circumstances.

12. It has already been observed that under the provisions of sections 13 and 14 of Act X of 1887 (sections 13 and 14 of Act VIII of 1876), a certificate under Act VII of 1884 takes the place, in ordinary circumstances, of certificate A. For certificate B, however, the responsibility rests entirely with the Port Officer. Captain Stiffe states that he makes the survey personally for the purpose of this certificate when the vessel concerned is about to start on a long voyage. As regards ships going on short voyages, he sometimes goes on board. As a rule, however, it appears that, on a declaration being submitted by the Agents that the requirements of the law have been complied with, a certificate in his name is issued by his Chief Clerk. The Lieutenant-Governor cannot consider that this lax system of procedure is a sufficient compliance with the requirements of the law. If Captain Stiffe found it impossible to inspect personally every steamer starting for Chandbally to ascertain if the necessary provision of fuel, water and the like had been made, he should have represented the matter to Government; but he should certainly not have allowed a formality prescribed by the law to degenerate into a mechanical device.

13. (3) *Meteorological Observations and Storm Signals*.—The fifth conclusion of the Court relates to the storm signals, and on this they submit their recommendations that the Storm Signal Code can be amended with advantage; that cable communication should be established between the Andamans and



the main land; and that the cable already in existence between Diamond Island and Bassein should be overhauled and placed in a state of thorough repair.

14. These three questions have been recently under the consideration of Government, and on the day following that on which Mr. Pedler gave his evidence, a revised code of storm signals was published in the *Calcutta Gazette*, on the recommendation of the Meteorological Reporter, the Port Officer and the Port Commissioners, amending and simplifying the former Code, and bringing into force in the port of Calcutta the system of signals used for the river approaches to the port. Mr. Pedler in his evidence observes that it might be desirable to have one or two more general signals, and the subject will be further considered with reference to this question. The recommendation of the Court is that a new signal should be added to the Code, which, irrespective of the nature and probable position of an approaching cyclone, should, when hoisted, serve as an imperative prohibition to any ship, whatever her draft or size, from going to sea. When the Code of Storm Signals was originally drawn up, it was at first proposed to issue as prohibitions the warnings which were finally added to each signal. A correspondence on this subject took place between Government and the Chamber of Commerce, and it was ultimately decided that only warnings, and not prohibitions, should be issued. The Lieutenant-Governor has carefully considered the subject in the light thrown on it by the evidence in the present case, and especially by the evidence of the Commander of the *Tyrone*, one of the passenger steamers plying between Calcutta and Chandbally. Captain Spence says: "I considered the conduct of the Captain a little rash on the ground that he had a large number of passengers on board, and however well the ship itself would weather the storm, the passengers might be put not only to inconvenience, but be knocked about and even killed." This evidence, coming as it does from the Commander of one of these steamers is entitled to much weight, and it shows that in some cases the Captain may safely put to sea so far as the steamer is concerned, but not so far as the passengers are concerned. The Lieutenant-Governor has directed, therefore, that the subject should be reconsidered and that the opinions of the Port Commissioners, the Chamber of Commerce, the Port Officer, the Commissioner of Police, Calcutta, and the Commissioners of Chittagong and Orissa should be obtained on this question. Should it be found desirable to introduce penal provisions, a change in the law would be necessary.

15. The question of establishing cable communication between the Andamans and the main land has been fully considered. The Government of India is fully alive to the importance of this; but hitherto financial considerations have not admitted of any action in this direction. The recommendation of the Court will, however, again be brought to the notice of the Government of India.

16. The Court consider that the cable already in existence between Diamond Island and Bassein should be overhauled and placed in a state of thorough repair. The repeated interruption of communications with Diamond Harbour at the most critical times is a very important question and affects every port which benefits by the storm warnings from Calcutta. It has been ascertained, however, that these interruptions have been due, not to any injury to the submarine cable, but to rupture of connection on land caused by the fall of trees in the forest through which the line passes. This question is at present the subject of a correspondence between this Government and the Government of India.

17. The acknowledgments of the Government are due to the Court for their careful and laborious investigation of this case, which extended over 27 days, and was carried out in the face of great difficulties.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

*Secretary to the Government of Bengal.*

*Proceedings of a Marine Court of Enquiry held under Section 7 of Act V of 1883 (The Indian Merchant Shipping Act), at the instance of the Government of Bengal, to investigate all the circumstances connected with the loss of the S.S. "Sir John Lawrence" in the Bay of Bengal on the 25th May 1887.*

PORT OFFICE, CALCUTTA, THE 11TH JULY 1887.

PRESENT :

|   |                |
|---|----------------|
| C. H. REILLY, Esq., Chief Presidency Magistrate   | ... President. |
| CAPTAIN H. DE SMIDT, Marine Surveyor  | } Members.     |
| E. TREILAWNY, Esq., Superintendent, Peninsular and Oriental Steam Navigation Company                |                |
| MR. G. C. KILBY, Deputy Legal Remembrancer, appears to conduct the enquiry on behalf of Government. |                |
| MR. ORR, Attorney-at-Law, appeared on behalf of Messrs. Macneill & Co.                              |                |

*Roxborough Spence sworn, saith to Mr. Kilby.*—I am in command of the *Tyrone*. She is a native passenger steamer which plies between Calcutta and Chandbally. I went down the river with my steamer on Wednesday, the 25th May, the day of the cyclone. I anchored at Kedgeroe. I did so because the weather was threatening and the storm signals were up. I first saw the storm signals at half-past 10 A.M. when at Mud Point. The signals were visible from Kedgeroe for half an hour after I anchored there. After that time the weather became thick, and then I could not see them. The *Curlew* followed me, and anchored about ten minutes after I did at Kedgeroe. I anchored about 11 o'clock. The warning signals were then still visible with a powerful glass. No. 8 signal was hauled up; it indicated that a small cyclone, such as is usual in the rains, was passing to the westward of Saugor. There are several other signals which indicate severer cyclones. The *Sir John Lawrence* passed us at 1 P.M. while we were anchored. She must have come past Mud Point; it may have been too thick for the Master to have seen them when he passed Mud Point. When the *Sir John Lawrence* passed me the weather was very threatening, the wind was from the north-east increasing. I have been a number of years on this river, since 1871 in command. Before that time I was in command of the *Night Hawk* for a year. I have been in country vessels trading out of Calcutta since 1864. I have been in two or three cyclones. When the *Sir John Lawrence* passed me, the weather in my opinion indicated that a cyclone was coming up. The *Sir John Lawrence* passed us between a quarter and a half mile off. The river was smooth. The river gave us no indication what the sea was like outside. When storm signal No. 8 is up it is optional for vessels of light draughts to go to sea. The directions say that only light vessels can go to sea. The signal was an inverted cone over a ball. I did not signal the *Sir John Lawrence*. After the *Sir John Lawrence* passed, the squalls increased gradually in strength from the north-east, and the barometer fell steadily until 4 A.M. in the morning, the 26th May, 29.34; it fell from 11 A.M. on the 25th from 29.60 to 29.34 at 4 A.M. on the 26th May. The wind from 8 P.M. on the 25th gradually hauled south-east through east in very heavy squalls. At 4 A.M. the wind went still more to the southward, and the barometer began to rise again a little. The wind increased in force from this till noon, when the barometer registered 29.45. From noon hauled to S.S.-W. and gradually abated. I remained at anchor till the morning of the 27th, and I then got underweigh at 6 A.M. and proceeded on my voyage, reached at eleven that night. We had a very heavy sea in the Western Channel; much smoother to the westward. I had no reason to suppose that *Sir John Lawrence* would founder judging from the specimen of the weather we experienced, but we were not in the centre of the storm. I thought she would have drifted down the coast, so hardly expected to find her at Chandbally. I saw no wreckage on my way to Chandbally or on my way back. The following week I passed a few dead bodies, three altogether, in the Western Channel. The following week they had turned white. I imagine they were natives. The *Sir John Lawrence* has not been heard of since. I do not think there is a doubt that she foundered in that cyclone. I have always believed the *Sir John Lawrence* to be a good sea-boat: she has always proved herself to be so. I have been on board her several times. I believe the *Sir John Lawrence* was well fitted, and found, so far as I could see, this was so. In foul weather season we carry 886 passengers. The tickets to passengers are sold at the office of various companies to whom the steamers belong. No one on board sells tickets or on vessels; tickets are not supplied us for that purpose. If the full complement of tickets has not been sold at the office, we take in passengers who pay their money on board. We receive instructions directly the full complement of tickets has been issued. I know of no instance where an application has been made by a passenger without a ticket for a passage before we receive intimation as to the sale of the tickets at the office. We do not usually, indeed very seldom, get our full complement of passengers. We generally receive a notice in the evening from the office as to the number of tickets sold, about 5 o'clock. After 5 or 6 o'clock no more tickets are sold at the office. If any one comes for a passage after that time we take the money on board and receive him as a



passenger. We take our passengers in after our cargo. It so happens that we usually begin taking in our passengers at 8. p. m., it may be a bit earlier sometimes; it all depends on the time when we have finished taking in cargo. I have never taken\* a passenger on board the *Tyrone* without a ticket during the time when the office is open. The police invariably count every passenger on board before we start.

\*Witness substitutes "I do not remember to have taken" for the words "I have never taken."

The police count the passengers as they come up to the gangway. The passengers are counted by the police, so it would be impossible for a Master to carry more than the authorised amount of passengers without the police knowing it. It did once happen some years ago that I carried more than my authorised number of coolies. I was heavily fined for doing so. The police counted out 60 more at Chandbally. I was fined Rs 990. I do not remember the Captain of the *Sir John Lawrence* being fined for carrying excess passengers.

To the President.—I saw no storm signals at Diamond Harbour. I passed Diamond Harbour at 8-30 a. m. If I had proceeded on my voyage on the 25th, I should have expected to see signals at Saugor. The *Sir John Lawrence* ought to have been near enough to have seen the storm signals on that day at Saugor at quarter past 2. Taking the ordinary course down the western channel, the *Sir John Lawrence* would have been 8 miles distant from the signal station at Saugor. In my opinion the weather was too thick to permit the *Sir John Lawrence* to see the storm signal hoisted at Saugor. According to my calculation the *Sir John Lawrence* must have been passing the signal station at Mud Point about half-past 1. She would have passed them about 4 to 5 miles off. I think it is quite possible that the Master of the *Sir John Lawrence* did not see the storm signals at Mud Point. I had made up my mind before I saw the storm signals at Mud Point that I would anchor at Kedgerree, and I should have done this, whether the storm signals were up or not. I had made up my mind to do this before I had got to Fisherman's point. When I saw the *Sir John Lawrence* continuing her voyage on the 25th, I did think the conduct of the Captain was a little rash and that wholly unconnected with the fact whether the Captain of the *Sir John Lawrence* saw the storm signals or not. I thought the conduct of the Captain a little rash on the ground that he had a large number of passengers on board, and however well the ship itself would weather the storm the passengers might be put not only to inconvenience, but be knocked about and even killed. Though I did not think the vessel would founder, I thought it would be put to a severe strain which would do her no good, and there was in my opinion no serious necessity for exposing the ship or the passengers to those risks. In my opinion up to half-past 11 when I saw the last of the storm signal, I thought No. 8 was the most appropriate signal which could be hoisted to indicate the state of the weather at that time. On one occasion last year I went out to sea when storm signal No. 7 was hoisted at Saugor. I should not in any case have gone out to sea if I saw No. 8 signal hoisted. If I had been in command of the *Sir John Lawrence* on the morning of the 25th May, I should not have gone to sea whatever had been the nature of the cargo and passengers I carried. The *Sir John Lawrence* was in light trim. I could see this when she passed us that morning. The counting of the passengers on board a ship is done by a native jamadar and a constable crew. The police boat stays alongside till we start. The police invariably count the passengers out at Chandbally. This precaution is very strictly carried out. I had some conversation with the Captain of the *Curlew* at Mud Point. We made up our minds to go back to Diamond Harbour if the storm signals were up. This was before I saw the storm signal at Mud Point. Half an hour after we saw the storm signal, the *Curlew* turned round with the intention of going back. I kept on with the intention of making Kedgerree, No. 8 being hoisted. I thought I should be perfectly safe there; the *Curlew* afterwards followed me.

To Captain de Smidt.—I don't know the draught of water the *Sir John Lawrence* drew. On the 25th May the *Sir John Lawrence* did not appear crank, she had a jib and two try-sails set. She had her awnings spread over the upper deck. Her decks did not look overcrowded. She seemed to have the usual complement of passengers on board. The *Sir John Lawrence* had an open deck with a rail round it; the only protection against a sea breaking over the open deck would be the rail and nettings. She had an open deck and main deck as far as I know.

To Mr. Treawney.—There was no rivalry at that time between the different companies carrying native passengers to Chandbally. There is no inducement held out to Captain to make "smart" passages irrespective of weather.

To Mr. Orr.—I knew the Chief Officer of the *Sir John Lawrence*, Mr. Smith; he was about three years in the Chandbally trade. Immediately before, he was in charge of a tug boat. I consider him a man experienced in navigating a vessel at the Sandheads and the Bay of Bengal. The name of the Captain was Peter Irvine. We had a 'tween-deck; the passengers were on deck and 'tween-decks. We did not batten down hatches. I remember the *Sir John Lawrence* being in one cyclone before in 1874—in October 1874. The 1874 was a more extensive cyclone. Captain Baldwin was in command of the *Sir John Lawrence*. Peter Irvine was the Chief Mate I believe. The *Sir John Lawrence* was missing for some days, but came out of it with the loss of her boats.

Re-examination.—I do not think any lives were lost on the *Sir John Lawrence* in the cyclone of 1874.

The 11th July 1887.

R. SPENCE.

William Henry Neustein, sworn, saith to Mr. Kilby.—I was Chief Officer on board the *Sir John Lawrence* for over 13 months. I left that service on the 25th October 1886. On

the 28th of October 1886 I sent in a letter addressed to the Lieutenant-Governor of Bengal, put in and marked B. The letters attached to B are --

- (1).—Letter addressed by me to the Health Officer.
- (2).—Letter addressed by me to Assistant Government Surveyor.
- (3).—Letter addressed by me to Port Officer.
- (4).—List of repairs I was ordered to make out by the Captain in order to instruct Messrs. Macneil & Co. what repairs were necessary at the coming docking of the vessel.

I wrote another letter to His Honour the Lieutenant-Governor of Bengal, dated 4th June 1887, after the loss of the *Sir John Lawrence*. With it I enclosed two copies of letters previously sent in, viz. to the Port Officer and the Assistant Government Surveyor, put in and marked (C).

I consider the state of the windlass on board of the *Sir John Lawrence* as contributing to the general unseaworthiness of the vessel. I last saw the windlass on the evening of the 25th October 1886. The starboard side of the gipsy, had worn itself some three quarters of an inch with the wooden bits which supported the spindle. In consequence the windlass would not go round, and you could not get up chain or use the starboard anchor. The metal casting which supported the spindle in the centre was also broken, and the whole body of the windlass forced over to starboard. On or about the same date, on attempting to moor the ship at the Salt Golahs, we were compelled to take all the chain up from the port side, as it was impossible to use the starboard chain. Mr. Mathewson, the Harbour-Master in charge of the vessel at the time, tried all he could to make the starboard side of the windlass work, and failed to do so. The Harbour-Master said it was a rascally condition for a vessel to be in just after survey. It was a double windlass working on a screw, working on a diagonal cog-wheel. This is the most serious charge I have to bring against the owners of *Sir John Lawrence*. I next wish to say something of the state of the scuppers. The leaden pipe was just flanged out over the iron plate, and had no iron lip-guards to clamp them to the side. These were in existence when the ship was new. They had long since been knocked away. If necessary when the ship was new, they were a great deal more necessary as the ship grew older. The ship had three decks: I am speaking of the main deck. The bolts of the lip guards were left in the side; in some cases broken off half through the plate; hence the leaden pipe might be forced in at any moment by the sea, as it was repeatedly pushed in by boat-hooks used against it in port. These leaden pipes led into the hold. There were holes in one of them

\* Witness adds, as far as I can recollect at the time of the survey. There were four leaden pipes on each side.\*

In a rough sea, the state of these leaden pipes constituted in my opinion, a great danger to the ship. On occasions I had to build them up with cement: it was an easy matter to mend these. Nothing was done in my time beyond casting one of the pipes.\*

The next thing is the state of the pumps. There was a survey of the vessel held shortly after. I joined about the first week in September 1885. In order to try the pumps, water was poured down them. The after-pump worked fairly well: the forward pump the water ran through as fast as you poured it in. Subsequently I discovered that the pipes had never been connected with the pumps. They were laying

† Witness adds or 1884.

‡ Witness substitutes "eighteen."

over the beams bent and dented in. About the end of March 1883† the *Sir John Lawrence* was supposed to have undergone thorough repair. Before that, for about a twelve‡ month she lay at the buoys doing nothing. Before these repairs were effected, the pumps had three connections—one to each bilge, and one to the sea; the latter to be utilized for the purpose of washing deck, or on the occasion of a fire. After the ship's repairs were completed, I discovered that the connection with the two bilges and the sea were done away with; one single pipe to the centre of the vessel substituted instead. The pumps bear on to the main deck. There are no connections at all with the forehold pump; the pipes had never been attached. Under these circumstances, the vessel could only be pumped out when she was on even keel, and that by the after-pump only. Subsequently the forward pump was connected. The forward pump was before the engine-room; the after-pump abaft the engine-room. The *Sir John Lawrence* collided with the *Indore* shortly before I joined, or about September 1885, and had a hole knocked in her starboard bow between wind and water. The patch, which was irregular in shape, was about two feet square; an iron patch. The plating to which patch was rivetted was too thin to support the patch. I learnt this from the engineers employed who assisted us in putting on the patch (identifies Mr. Leech). I saw the *Sir John Lawrence* shortly before she foundered on her last voyage. At that time I noticed the patch; this was about three months before she foundered. I saw the patch still on and the lip-guards unrepaired. The proper way to repair the damaged plate would have been to remove the plate and put a new one. Had one plate been pulled out, it would have been necessary to pull out 40 plates, the ship was so old.

W. H. NEUSTEIN.

The 11th July 1887.—Court adjourned till to-morrow.

C. H. REILLY.

The 12th July 1887.—Examination continued.—On or about the 25th of October 1886 when the last survey was held the *Sir John Lawrence* lost a boat in the collision with the *Indore*. It was replaced by another good boat until the day when we passed the survey,

when it was removed shortly after and an utterly useless boat was sent by Mr. Young's orders alongside. This boat was leaking so badly, we had to hoist up one end to get the water out. All subsequent efforts to make it water-tight failed, and on attempting to land passengers by this leaky boat, it filled alongside, and this boat passed two subsequent surveys in that condition. The last of these two surveys was on the 28th October 1886. The collision was about three months or so before I joined, which was in September '85. Six or eight months before I left the *Sir John Lawrence* she grounded on the shoal at the entrance to the river Dhamrah. We were on shore four or five days. Some of the passengers were landed by the ship's boats. We had over a thousand passengers on board. It was on this occasion that the bad boat sank alongside. It would have gone to the bottom but for the tackle to which it was attached. The boat was the cutter. We had two life-boats. They were both in good order, also the jolly-boat. The passengers became clamorous and threatened my life. They wanted to be put on shore. We put some of them on shore. In the same collision the bowsprit was carried away—the end of the bowsprit, and with it the band, bobstay, and bowsprit shrouds. These were never replaced. It is impossible for any ship which carries a bowsprit to be equipped properly without these fittings. There was a bowsprit, without band, bobstay and bowsprit shrouds. The span was bent up on the edge of the bow-plate without any support below. The bobstay is the key and support to all masts, more especially the raking masts of a steamer which, like the *Sir John Lawrence*, depends so much on sail. The removal of iron bulkhead took place, I believe because I could see marks where these bulkheads had been fixed, and the bulkhead had disappeared when I was on board. I mean bulkhead between the stokehole and the engine-room, not an entire bulkhead, because it has a passage to the stoke-hole through it. As a matter of fact, the steamer has a collision bulkhead, a bulkhead before the stoke-hole, another one abaft the engine-room, and a small collision bulkhead aft. There are no rudder braces. There had been rudder braces previously. I know this because of the shackle and the places still existed where they were braced up. These were the more necessary, because the rudder head was old and worn in the trunk gearing and the pintles were old, patched up, and might have been carried away at any moment. I am speaking of the after-part of the rudder. By braces I mean the stays on the after part of the rudder. The inner keelson in the wake of the hatchways, the angle-irons on both sides have been long since knocked off. I heard the surveyor remark this. The rails round the vessel on the upper deck, which were meant to protect passengers in case of heavy rolling, was so ill-supported, it was not safe to lean against them in the wake of the gangway; the covering board with which the stanchions were fixed were so rotten that the screws would not hold. On one occasion a cow rolled overboard through the rails carrying away the stanchion. There is no wire-netting on the rail: it was a rotten rope-netting. The windlass has been gradually getting worse through a period of eight months before the last survey I witnessed on board. It passed two surveys in this condition. About five months before I left we were in a cyclonic storm fifteen miles to the northward of Chandbally. We anchored in about eight fathoms water and dragged to about five fathoms till we were almost in the breakers, because I could not use the starboard anchor because the chain would not revolve round the windlass. I ordered steam at 2 o'clock, and had the wind not shifted we should all have been lost. There were a large number of native passengers on board; many of these passengers were knocked about. I was in hospital myself for a fortnight after, through illness brought about by exposure and anxiety. I understood, when the Harbour-Master took charge of the ship, that the survey had been completed. I believe it was Mr. Bushby who tried the pumps on the occasion when water was

\* Witness adds assisted by Mr. McKellar.

surveyed the vessel. It was said at the time you cannot get water out of the ship when there is none in it. The surveyor was satisfied with the experiment and nothing was done. The pump-hoses were afterwards taken ashore and repaired, and the pipe was connected below. When I was on board the *Sir John Lawrence*, I frequently thought she would roll over. I considered her a lively ship, top heavy. I never was in a ship which rolled so much. This was in my opinion owing to extra deck and house added. I could see that a deck had recently been added. I always felt nervous when the steamer was driving into a heavy sea. I do not think her hull was in a safe condition. The Captain (Irvine) ordered me not to go near the surveyor. Mr. Young said to me I will get you sacked, you know too much about the ship. Mr. Young is the Superintending Engineer of Macneill and Company. I was dismissed by a letter dated the 23rd October. It was not, however, given to me till after the survey at 10 o'clock on the night of the 25th. I saw three surveys made while I was on the steamer. The deck survey was made by Mr. Bushby.\*

\* Witness adds Mr. Bushby assisted by.

Mr. McKellar did the engine-room survey as assistant to Mr. Bushby. The second survey was carried out exactly in a similar way. In the last survey Mr. Bushby did the hull and part of the deck survey on the 24th October the steamer being

† Witness adds in correction "the same day."

‡ Of the main deck in the Nautical Department.

in dock, and when the steamer came out of dock the next day† Mr. McKellar finished the deck survey. He then went into the engine-room. During the whole of the thirteen months I never saw Mr. Bushby below the hatches.‡ He went out of the engine-room. I put lamp rockets, life-buoys, buckets, fire-engine and hose, and appliances of a similar kind, which he looked at. He had the boats lowered to the rail, so that he could look into them. He went round the deck, then went on the main deck, looked down the hatches. He never went below the main deck hatches

He then went down into the engine-room. I did not follow him there. This survey occupied ten or fifteen minutes. When the ship was in dock Mr. Bushby walked round the deck and examined the outside of the ship. On the first occasion the chains were got out. The chains were not surveyed in the last survey in dock. On the third survey I was not permitted to accompany the surveyor; so I do not know whether the state of the windlass was pointed out to him. Captain Irvine attended to the passenger business entirely himself. I was told not to take part in the matter. The passengers began to drop alongside in boats from about 3 P.M., and at Poojah times there were several hundreds on board by 5 P.M. In fine weather, on those days, the *Sir John Lawrence* was entitled to carry 1,038 exclusive of crew. During Poojah times the deck was so crowded at 4 P.M. it was difficult to move about or clear a space opposite the hatchway to allow the cargo to be taken in. About 5 P.M. a large boat used to come alongside the gangway and a police boat lay alongside the boat, but often when they arrived there were many passengers on board. The Captain had a staff of old hands who were used to his way of doing business, with whom I was requested not to interfere. One man nominally stood at the gangway and was supposed to tally the men on board, but since passengers were taken in at all the ports where the dinghy might happen to come and by tipping the lascars the passengers were allowed to come in through the port. Nominally an order was given to the ghat serang not to allow passengers to come aboard till a stated time, generally 6 or 7 P.M. There were generally thirty or forty boats moored to the buoys and hanging about the ship. The passengers on these boats were, after bribing the lascars, permitted to get on board through the ports. The passengers continued to come on board during the whole of the night; tickets were not looked at. No one was prevented from coming on board. If 730 tickets were sold, that number would probably represent two-thirds of the passengers actually on board. The Captain used to collect the tickets after the ship had gone down the river. He went round the vessel with an attendant called a *panneewalla*. Those who had not tickets had to pay. Invariably the number of tickets sold was no criterion whatsoever of the number of passengers who actually travelled. The police boat was there, but I never saw the police attempt to count the passengers. The police boat stayed alongside pretty late. As far as I know the whole arrangement of the passenger traffic on board the vessel was left to the Captain. On Poojah days the crowd of passengers are so dense on the steamers, I could not walk along the deck without treading upon them, and had to walk on the rail holding by the awning and so get on to the bridge. The crowd was composed of men, women, and children, the majority were women. In process of time the deck became a seething mass of humanity and filth. I consider this crowd on board did endanger the safety of the steamer, so that it completely hampered the crew on the upper deck in carrying out the orders of the Captain and officers in dirty weather. When the steamer reached Chandbally, she was supposed to moor herself opposite a landing stage. A constable would come on board with a board and a piece of chalk, but it was absolutely impossible to count the living stream of passengers as they rushed by, so the counting was a farce. When the excess number was very palpable, a number was concealed about the cabin and saloon and let out after the policeman had gone. Sometimes we struck on a sand bank, and then there was no attempt at counting the passengers. They landed as they could. On Poojah days I should say we carried between thirteen to fourteen hundred passengers. The steamers on these occasions are properly full; completely full. The free board of the steamer, if she was deeply laden, say up to 13 feet 6 inches, would be about 3 feet from the main deck to the water. In heavy weather the water broke over the steamer. The after-part of the main deck was quite unprotected at the sides. I have seen half a dozen bodies thrown overboard between Diamond Harbour and Garden House Point.

*To Captain de Smidt.*—I cannot tell you how much dead weight we required to go to sea. We sometimes carried about 30 tons of cargo. Six hundred maunds of coal took us to Chandbally and back. Our draught aft, when run light, was 10 feet 6 inches to 11 feet. The screw was fairly under the water. If we broke down we had sufficient sail to take us into port. With a propeller disconnected, she might have gone two knots in the hour. On a favourable trip we get to Chandbally steaming twenty hours. Two four-hundred gallon tanks with water were carried between-decks. The *Sir John Lawrence* has a Master and the Mate. I believe Captain Irvine had a Master's certificate. I say it is impossible for one man, the Captain, to do Harbour-Master, Pilot, and Captain's work alone. The Captain of the *Sir John Lawrence* had so much to do that I have seen him frequently asleep on the bridge on the most dangerous parts of the river, crossing the James and Mary for instance. When the *Sir John Lawrence* was deep, she drew 13' 4". I heard that the boilers had been renewed. Some parts of the engine were worn. I had a sextant and navigating instruments on board. There was a barometer and aneroid in the Captain's cabin. There were seven openings on the upper deck. It would be quite a guess, but I think the steamer had ten lascars, three *sencunnies*, a *serang*, a *tindal*, a *plumb-walla*, two *topazes*, a Chinese carpenter, a *masalchee*, two saloon boys, and the butler. We had not enough lascars to properly man four boats in case of accidents. No life rafts, but six life buoys on board. All the boats were hanging on davits.

W. H. NEUSTEIN.

Case adjourned till Tuesday, the 19th July at half-past 12 o'clock.

O. H. REILY.

Mr. Kilby for the Government.

Mr. Lal Mohun Ghose to watch the case on behalf of the relatives of Mr. O. C. Mullick and others, who are alleged to have been lost at sea.

*William Henry Neustein recalled, to Mr. Kilby.*—I never knew any European official come on board the *Sir John Lawrence* with the object of satisfying himself whether the vessel was overcrowded or not. I am speaking of the Calcutta end of the voyage. On the Chandbally end a European, a Mr. Augier, used to come on board, and was supposed to see that the police constables did count the passengers. I believe he did this spontaneously. I know Mr. Augier made a report to the Calcutta Police. After he sent in that report he was suspended.

*To Mr. Ghose.*—Since the *Sir John Lawrence* was certified to carry passengers, a number of houses, cabins, and lockers were built on deck which encroached on the main deck curtailing passenger space. Two hundred superficial feet of space was encroached upon. As far as I know there were no deductions made in the number of passengers permitted to be carried by the vessel. There was no condenser on board in my time. There had been one before. I had no pilot's certificate. The Captain was the only man who had a Pilot's certificate, and therefore the Captain had to be on watch all the time we were on the river. The *Sir John Lawrence*, two\* years before she came under the supervision of Mr. Young,

\* Witness substitutes "some."

carried a Captain, 1st, 2nd, and 3rd Officers. She was not generally employed in the Chandbally trade at that time. There would be water enough on board for four days' consumption if the passengers consented to drink it. My letters to the Local Government, which are put in this enquiry, were not acknowledged any way. I was not prosecuted by Messrs. Macneill and Company for defamation. I have the best testimonials from Messrs Macneill and Company; also from the deceased Captain. His testimonials put in, marked (D) and (E). My letter of discharge was dated the 23rd October and handed to me not till 10 P.M. on the 25th October after the survey was over.

*Cross-examination to Mr. Orr.*—I should not be surprised to hear that an enquiry was ordered upon the receipt of my complaints, an enquiry by the persons implicated in my strictures. I never heard of any Government Resolution on the results of those enquiries. I should not be surprised to hear that Government made the remarks you allege them

+ Witness adds of those people implicated in the negligence.

to have made under the advice of the whole of the people implicated on the negligence I had commented upon. If it was a malicious libel, I am surprised I was not prosecuted

at the time, for the vessel was then afloat to corroborate the truth of my statement. I hold a certificate of Master Mariner since 7th March 1874. I came out to this country in 1861, as an apprentice. I was Chief Officer of the *Gosforth* belonging to W. Smith of London, in 1873-74. I think I next went as Chief Officer in the *Abigail*, a brig. I cannot remember when I left the *Abigail*. I was afterwards in some steamers trading up the Baltic. I came to Bombay in 1878. I came as second officer in a steamer called the *Proponis* to Bombay. I came from England to Bombay. I left her in March 1878. I joined the British India Steam Navigation Company in March 1878. I went up the Persian Gulf; then carried troops to Malta. In April 1882, so far as I can remember, I left the service of the British India Company in London. I left of my own accord most emphatically. When I arrived in Calcutta I discovered that instructions had been sent to the Agents here that I was not to be employed again by the Company. I had previously received a legal discharge certifying to my good conduct and ability—a copy from the ship's log-book. I heard various reasons given for the refusal by the Company to employ me further. I was not aware that I lost six months' seniority while in the service of the British India General Steam Navigation Company in my grade as Chief Officer; my service in the British India Steam Navigation Company was one of constant promotion. I heard a rumour there had been a sort of fracas between myself and the junior officer on board the *Henzada* at Rangoon or Moulmein. I have no official intimation of my loss of seniority conveyed to me. I left the *Henzada*. I was removed to the *Arabia* because I would not serve on board the *Henzada* without a rise in pay. Captain Flower was my Captain at the time. He told me I would not get an increase of pay for six months, because I had lost my seniority for that period. When I found myself standing in Calcutta without a farthing, I applied to the Agents of the British India Steam Navigation Company for employment. On my arrival at Madras I heard for the first time that I was dismissed. I received a letter from Captain Atkinson, the Marine Superintendent of the British India Steam Navigation Company at Madras. I can best describe its contents by saying it contained almost every possible slander you could address to a nautical man. None of these, however, had been entered in the official log-book. I did not make any attempt to vindicate my character because I was penniless.

*Witness adds*—I was about five months fitting out the S.S. *Arabia*, and was after this promoted to Chief Officer of the S.S. *Navarino* and proceeded to Europe. It was when I returned to India as a passenger in the S.S. *Merkara*, I found myself without a farthing.

*Witness adds*—Of sufficient importance to be entered in the official log-book.

A few days after I got employment in the Eastern Bengal Railway. I was a Flat Commander for about eight months. I then got command of a steamer on Rs. 300 a month. This was in 1884-85. I held that post for a year and six months, as far as I can remember. I had a number of engineers, one more obstreperous than the other—one in particular, whom I informed the Eastern Bengal Railway, if they sent with me, a collision between us must inevitably take place. In spite of my protest the man Gordon was sent on board. In 20 minutes I had to put him off duty, and as he refused to go into his cabin, I had to attempt to put him there. I was not dismissed till about seven months after this occurrence. This was some four or five months after the Government took over the Eastern Bengal Railway. I have, I think, applied for work since to the Eastern Bengal Railway. I next took a return ticket



\* *Witness adds*—Acting as the surveyor did when he received my letter dated 24th October 1886.

in the P. & O. *Kaisar-i-Hind*. I was in England 20 days, and came back in the same vessel. On my return I was in hospital with a broken leg for some time. I had lots of money when I came back. I had better sense than to try and vindicate my character.\* When I got well, I got the post of Chief Officer to the *Sir John Lawrence*. I believe I joined the *Sir John Lawrence* on the 1st September 1885. A few months after I joined the *Sir John Lawrence*, she went into dock. I do not think she was in dock more than two nights and a day. The *Sir John Lawrence* might have been in dock a week on that occasion. I have absolutely forgotten who were the surveyors on that occasion. With the exception of Mr. Bushby and Mr. McKellar, I have seen no other surveyor on board that I can remember. I was on that occasion in attendance upon the surveyors during the time they were investigating the deck department. I attempted to follow them when they continued their investigation on the outside of the vessel, but was told to go and look after a dog. I cannot tell you the name of the person who told me to look after the dog. Mr. Young was in attendance on the surveyors on this occasion, I believe. I remember well it was not Mr. Young; he was away in England at the time. To the best of my belief, Mr. Taylor is the man who accompanied the surveyor on that occasion. I am not quite certain whether the deck survey on that occasion was held when the ship was in dock; it may have been the next day. On that occasion I recollect many things which ought to have been done at the survey, but which were not done—the ceiling of the vessel in the main hold. A large part of the ceiling was in a fearfully rotten condition, although I believe it was supposed to have been new about 18 months before. Just before I left there were some 30 or 40 planks sent down for the purpose of repairing the ceiling. The ceiling is the planking which follows the curve of the vessel, and keeps the cargo from contact with the iron hold of the vessel. The removal of the ceiling would materially tend to weaken the stability of an old vessel like the *Sir John Lawrence*. I would not consider the *Sir John Lawrence* a first class vessel without a ceiling. At the survey of the steamer in October 1885, I suggested that the ceiling should be repaired. The ceiling was not repaired after the first survey: a patch may have been put in here and there. I also complained about the star-board water-tank as not being connected with the deck; also the forward pump. I brought nothing to the notice of the surveyors, because I am not permitted to speak to them on the threat of instant dismissal. I never communicated in any way with the surveyors, because I dared not do so. I was not positively told not to speak to the surveyors, but my own common sense told me what would be the result if I did. I hold this belief on the fact that the condition of the vessel was such in October 1885, that to mention the matter even to Mr. Young or Mr. Taylor would be to court instant dismissal. Mr. Young never paid any attention to my suggestions about nautical repairs. I, at the instance of the Captain, previous to the first survey of the *Sir John Lawrence* in October 1885, drew up a list of required repairs. The list was signed by the Commander and was handed over to Mr. Taylor. The list was, I believe, addressed to Mr. Taylor. I have no copy of that list. The following items were included in that list to the best of my belief.—A bowsprit required the band bobstay and bowsprit shrouds. Next the tanks' lids required repairing. I do not remember any other items. The bowsprit was never repaired, nor were the bobstays and bowsprit shrouds ever refitted. The tank lids were repaired some months afterwards. The next survey of the *Sir John Lawrence* was held six months after April 1886. I do not know whether that was a survey afloat or a dry-dock survey. The last and third survey during my time was held about two days before I left, about 24th or 25th October 1886. The last survey was in dry-dock. Part of the deck survey was completed after we came out of dock. I do not think the intermediate survey was a dry-dock survey. I do not know when Mr. Young returned. I am inclined to think that Mr. Young had returned before the second survey was held. I was in the habit of sending a monthly letter of indent directed to the Superintending Engineer, and in that indent I entered what I required for the ship in the shape of stores. Besides this, a carpenter on behalf of the firm used to come on board often to take orders. I used to point out to him the nature of the repairs required. His name was Mr. McDougal. There was also an engineer who came on board in the same way about the metal part of the ship. The indents were certainly confined to stores. From time to time I made out repair lists also under the Captain's orders. I made out these repairs certainly once a month—sometimes oftener. The indents I sent in were sometimes complied with. I cannot remember any of the particular stores I asked for being refused; but the impression left on my mind that there were items I was refused. I most emphatically pledge my oath to the statement that one article was refused me. I think I may have included the lip-guards in my indent of stores. This document is in my handwriting. This is a list of repairs calling attention to the materials required to effect those repairs. List put in on behalf of the owners of the *Sir John Lawrence*, marked (1).

This document is in my handwriting. I call it a repair indent. This is one of the leaves of the store indent book. Put in and marked (2). It is dated 25th January 1886. This document is in my handwriting. It is an indent for stores, dated February 1st. To the best of my belief the items mentioned in the indent were all supplied to the ship, except two items—5 gallons of oil and wood for carpenter to work with. Put in and marked (2'). These five documents are all in my handwriting. They are indents for stores. As far as I know, the items mentioned in those store indents were supplied. In some instances the amount asked for was out down, as indicated by the red ink figures. I cannot remember whether Mr. Young had come back at the time of the intermediate survey. My impression is that he had come back. I cannot say whether Mr. Young or Mr. Taylor was present at the intermediate survey. I believe that Mr. Bushby and

Mr. McKellar were the Government Surveyors on that occasion. Mr. Leech was the engineer who gave me the information about the thinness of the plates at the bows. I am perfectly positive as to that, I made the statement about the difficulty involved in putting in a fresh plate where the patch was, because if one plate was removed it would be necessary to move 40, perhaps, on the information derived from Mr. Leech, and the engineers who were working on and belonging to the ship at the time. I believe the other two engineers were Mr. Thorpe and Mr. Sansoni, and the second engineer who was drowned. The *Sir John Lawrence* had two boats abreast the mizzoumast and two other boats abaft the foremast; the life-boat was abaft the foremast on the starboard side: the other life-boat was on the port side. We have a small boat used for running lines to the shore abreast the mizzenmast on the starboard side, which was the jolly-boat; on the port side was a cutter. There was no one of the name of Henderson as an engineer on board the *Sir John Lawrence* during the time I served on the ship. A Mr. Lindsay put on the patch to the steamer bows. The engineer, of the ship assisted, I believe. I say this from hearsay. I deduced that the plates were thin because the frames which I could see were nearly eaten through in many places. I tried the plates by sound. I did not bore them. I deem myself capable of guessing at the thickness of the plate of any iron ship by sound. I can tell whether it is a thin plate or thick plate when it is palpably thin. If you took off one-eighth rust from the inside of one of the iron plates of the *Sir John Lawrence*, and about one-eighth of an inch of paint and rust from the outside, there would be  $\frac{3}{4}$  of a healthy plate left: that is the conclusion I arrived at. I should be very much surprised to hear the engineers who were instrumental in placing that patch on to the *Sir John Lawrence* say that the thickness of the plate was above the regular thickness required for ships' plates. By being between wind and water, I mean that part of the vessel which is not continually immersed, and that part which is only occasionally immersed according to the freight carried. Where the ship is very deep, the patch is half under water. If the *Sir John Lawrence* was drawing 13 feet forward, the patch would be almost entirely under water. The patch would be almost continuously under water, whatever the draught of the vessel when she was moving. I should say the patch was below the main deck of the vessel, not much below—about 2 feet 6 inches below the main deck. I think it was below the main deck. I do not know which boat was smashed in the collision. I heard of the collision and damage to a boat, probably the starboard boat forward, but I do not know. When I was on board, I was told that the cutter belonged to the *Medina*. Ultimately I returned the boat. Captain Irvine told me that the cutter belonged to the *Medina*. I am not aware that the boat damaged in the collision was replaced from one taken from the *Medina*. The rotten boat I spoke of was sent on board before the intermediate survey; it passed both the intermediate and the final survey. At the conclusion of the last survey the Captain informed me that it was over, and under his instructions I hoisted up the boats in their places, put down the limbers, and adjusted the ballast, making everything ready for cargo. The rotten boat I lowered down, and it immediately filled with water: it was sent away to the yard. The rotten boat I call the cutter. I do not know whether the cutter passed the last intermediate survey, because I did not hear what the surveyors may have said about it; but this I will swear to, that the rotten boat remained on board for six months after the intermediate survey. The boat was a sinking boat when it was brought alongside. I did say that I made a remark to those on board they want a new hailer for this boat and pass a rotten boat on the other. I perfectly remember making the remark at the time of the intermediate survey, they insist on the trivial thing in respect of one boat, and pass a rotten boat on the other. Remembering this, I am almost prepared to swear that the rotten boat was on board at the time of the second survey. This is a store indent in my handwriting. Marked (27).

W. H. NEUSTEIN.

The Court adjourned till to-morrow.

C. H. REILY.

*The 20th July 1887.—Cross-examination continued to Mr. Orr.*—There were two tanks on the between-decks for water, capable of containing 400 gallons each; they were placed on the main deck. They were tommed off from the top, and a couple of chocks nailed on each side of them. They did not actually break adrift in any time, but they worked loose, and I had to secure them; the tom frequently fell down and had to be replaced, the nails of the chocks got shifted by the working of the vessel. These loosenings were not the result of ordinary wear and tear. I say this because the loosenings were caused by the abnormal rollings of the vessel, caused by the extra top hamper put on her, and the compensating ballast necessary below the rolling of a vessel does cause a certain amount of wear and tear. It was my duty as Chief Officer to see to all defects caused by wear and tear. If I had not been very careful, these tanks would have been carried away. Besides these two tanks on the main deck, there were two tanks below—one on each side of the mainmast in the lower hold of the vessel. Only one of these was connected with the deck; the other one remained unconnected nearly the whole time I was on the vessel. These tanks in the lower hold were each capable of containing 600 gallons, as far as I can remember. I cannot swear they were not tanks capable of holding 1,200 gallons each. These tanks were larger than those on the main deck. I was not asked about these tanks in the lower hold in my examination-in-chief. I was simply asked about the tanks containing the water intended for passengers: the tanks in the lower hold contained water for the ship's people. The two tanks on the main deck were supposed to be filled with Houghly water by a high caste Brahmin. If there was no other water, the passengers would get water from the tanks in the lower hold. There was a rule given by

Captain Irvine, which prevented the water in the lower hold being given to the passengers. I never knew any passenger demanding water from the tanks in the lower hold. The one which was not connected I kept whitewashed, but it was dry usually. The tank which was not connected was on the starboard side. The tank on the starboard side in the lower hold was not connected for many months after I joined the steamer. There was no pipe from the tank to the between-decks. I indented for that communication. Whether the communication was made, I cannot remember. The tank in the lower hold on the port side was connected by a pipe through both between and main decks; there was no connection between the two tanks in the lower hold by a pipe. I can take my oath to that. If the passengers wanted water, they had to get it themselves, or for some of the sailors to get it for them. I have frequently seen the lascars tipped with this object. I am sure all the native members of the crew were not Mahomedans only. The Captain had two or three Uriyah factotums. The paneewalla did not supply the passengers when they asked for water; he was the biggest man on board, and could have bought two or three ships of the same sort. I never saw the paneewalla supply any of the passengers with water, and I was on board thirteen months. There were many pumps in the engine-room. I believe there is a donkey pump in the engine-room. That donkey pump would be available in case of fire if the donkey fires were alight. There was also Downton pump on board, a pump worked by four men, a portable one. That could be used for working the main deck and for fire. You could not wash the upper deck with that pump. There was a canvas hose connected with the portable pump. The portable pump was not strong enough to force the water up on to the upper deck with any force. You would get about a bucket of water a minute on the upper deck. It wanted about eight lascars to work the pump effectually. I still adhere to the statement that the pump connection in respect of the forward pump was not made when I joined the ship. The leaden pipe was lying just as it fell on the beams, dented by the cargo. The treble action plunger of the pump was in a totally unserviceable condition and was sent ashore for repairs. The plunger of the forward pump was sent ashore after the first survey. The forward pump led from the main deck to a broken rose box at the bottom of the vessel. The plunger was brought on board, but when it came on board again, duly repaired, I do not know; but it came back within a reasonable time. The connection was made with the forward pump about four weeks after I called the attention of the Superintending Engineer to the matter. The after-pump had its new connection in lieu of the three which had been cut off. That connection was in the centre of the vessel abaft the engine. The two connections which were not replaced led to the bilges. In my opinion the bilge connection was a necessity in a ship like the *Sir John Lawrence*. I did experience inconvenience for the want of these bilge connections when I was on board the *Sir John Lawrence*. Several hundred bags of salt were damaged through the want of those connections. This damage to salt has occurred frequently. Many of the bags came out nearly empty. I should be very much surprised to hear that there have been no claims for damage to cargo, considering that over two hundred bags of cargo I have seen come out damaged from the steamer. I allude to bags containing salt.

The Court adjourned for half-an-hour.

*Cross-examination continued.*—There were no lin-guards to the scuppers except broken bolts all the time I was on board the *Sir John Lawrence*. I called attention to the state of the scuppers about six weeks after I joined the steamer. I drew Captain Irvine's attention to the scuppers. As far as I know, I did draw Mr. Taylor's attention to the state of the scuppers. I do not remember what reply Mr. Taylor made. I think it very likely that I called the attention of the carpenter visitor to the state of the scuppers more than once; the man's name was McDougal. I think I called Mr. Lindsay's attention to the holes made by boat-hooks on the scupper pipes; he had them soldered up. This was after the last survey on the same day after the surveyors had left. I did not leave the ship on the 25th October. I left on the morning of the 26th. I did not see the holes soldered up myself. The Captain told me the survey was completed on the 25th, and under his orders I put every thing back in its place. I was continually mentioning the state of the scuppers to persons on board—engineers and others. They all told me I better mention the matter to Mr. Young, for they dared not do so. I did not mention the matter to Mr. Young, because the Captain advised me not to do so for peace sake, because all these things were supposed to have been repaired in the repairs of 1884. Several times Captain Irvine told me this; he did so whenever I spoke to him of about any serious repairs necessary in the ship. He advised me in this way shortly after I came on board. He said if I wished to remain on board I had better not apply for these serious repairs, as the ship was supposed to have been thoroughly put to rights in the repairs of 1884. I did mention repairs to Mr. Young. The last time I remember calling the special attention to the danger attending the condition of these scupper pipes, saying that, if the ship were lost, the chances are the pipes would be forced in by the sea and the vessel would be lost like the *Vingorla*. I think it was a day or two after I made out this list No (1), which is dated 17th October 1886. This is the only time I mentioned the state of the scupper pipes to Mr. Young. Mr. Young in reply told me I knew too much about the ship, and that he would get me sacked. This interview took place on board the steamer. It is not usual for scuppers to be protected with cement. Whenever I put fresh cement I mentioned the fact to the Captain. I am prepared to swear that I put cement round some of the scupper pipes more than once, in order to support them in their places. The starboard pipe aft had been stoved in already. There were four scupper pipes on each side of the ship. I applied cement to two of them, both on the after-hold: one on the starboard the other on the port side. The starboard after-scupper pipe had been stoved in. The cement was put inside the vessel round the leaden pipe. I don't think I did mention the state of



the scuppers in any of the repair lists I sent in. except in the list (1), dated the 17th October 1886. I may have sent in a dozen, fifteen, twenty—any number of repair lists before that date. I am quite sure I did send in other lists always before survey and before docking. The Captain signs the repair lists and is responsible for its contents. I wrote the repair lists merely. The list is made in this way: I talk over the matter with the Captain and suggest; those suggestions he does not approve of are cut out. I make a list of those which remain, and he signs that list. I had a copy of list (1) in my hand when I spoke to Mr. Young about the state of the scuppers. I don't know what the sheer strake of a vessel is. The bowsprit was never repaired all the time I was on board. The band is of iron which has three eyes—one at the bottom and one on each side. From the lower one to a shackle on the stern, the bobstay is set up. From the eyes on either side the bowsprit shrouds are set up to shackle on either bow. I never measured the bowsprit. I should say about 30 feet. It is not a fact that the bowsprit was about five to seven feet long. I swear it was more than ten feet—nearer 15 feet. I should say it was much more than 15 feet. As far as I can say, there were 15 feet or more outside the ship before the end was broken. The fracture was at the sheave hole. Knowing that I can form a pretty accurate idea how much of the bowsprit was broken off. I should say that the bowsprit projected about 15 feet beyond the knighthead. Allowing 24 feet as the length of the piece broken off, the length of the bowsprit as it was when I went on board was 124 feet. The forestay was fastened to the knighthead. In every steamer I have been in there has always been a bulkhead below the engine-room and the stoke-hole. The dust from the stoke hole damages the brass bearings. A partition bulkhead, it is a bulkhead with door in it. I was never down in the engine-room of the *Sir John Lawrence* before I went on board her as Chief Officer. I am not certain whether there were two coal side pockets or one. There is one athwart ship bunker port in front of the stoke hole; the pockets were probably between the bunker and partition bulkhead which I said had been removed. When I was on board, the side pockets had been removed. I cannot remember whether there was a iron partition at the end of these pockets. The rudder had no rudder chain fitted on to the afterpart of the rudder, as a substitute in case the upper part of the rudder was damaged or broken. I did not bring the absence of these rudder chains to any one but the Captain; he told me not to press for them. As far as I can recollect, I never included the rudder chains in my list of repairs. Mr. Bushby, assisted by Mr. McKellar, made the survey of the vessel in October 1886. The last day only Mr. McKellar was there; that was the 25th, I think. The day we went to the Salt Golahs Mr. McKellar was on board both before and after the vessel left the dock. Mr. Young and Captain Irvine went round with the surveyors. After that survey I wrote to the Surveyor of the Port. I wrote to Mr. McKellar alone, because he was the last to finish the survey on decks, boats, windlass, and such like gear. They were 10 minutes walking round the deck. After that they went down into the engine-room. I saw them go down below off the upper deck. I did not follow them. This list (1) was made up by the Captain after we consulted on the subject. I wrote out the list; it was signed by Captain Irvine and sent to Mr. Young. The list I sent to the Government was as near as possible a copy of list (1)—perhaps not a verbatim copy; one or two items more or less. With the exception of these four items, *viz.*, Nos. 11, 12, 13, and 19 in the list, I forwarded to the Local Government all the repairs mentioned in that list remained unexecuted for more than a year to my own knowledge, and probably remained unexecuted for several previous years. The vessel had during the year passed three surveys. When in my letter I alluded to the survey as "walk round" occupying only ten to fifteen minutes, I intended to confine that remark to the deck survey alone. I did not call the attention of the Surveyor to these serious defects throughout the year in obedience to the instruction of my Commander, Captain Irvine. I am quite sure I told my Commander I worried the carpenter McDougal and Mr. Lindsay, the Engineer, constantly to see these repairs done. They told me to go to Mr. Young. Mr. Young was very seldom on board. He came on board often just before the survey. Mr. Young did not come on board after or even after nearly every trip. Most emphatically no. Whenever I got hold of Mr. Young disengaged I brought something to his notice; that is how I got into such ill blood with him.

W. H. NEUSTEIN.

Case adjourned till to-morrow.

C. H. REILY.

*The 21st July 1887.—William Henry Neustein recalled for further cross examination.—To Mr. Orr.*—My authority for asserting that the *Vingoria* was lost through pipos being forced in was the general opinion of the officers with whom I associated. I did not know that the Court of Enquiry failed to come to any definite conclusion how that vessel was lost. I have seen teakwood in very good condition about thirty years after it has been put into the deck. This remark, however, would not in my opinion apply to the covering boards now on board the *Sir John Lawrence*; but with respect to covering boards generally, I do not think there would be any difference in respect of the wood used for them and for deck purposes. The covering board of the *Sir John Lawrence* was raised above the deck, hence the water would not lodge or remain on it, so it was not so liable to deterioration from wet and the action of iron corrosion round the stanchions. I would be very much surprised if it can be shown that the covering boards on the *Sir John Lawrence* were of teakwood even in 1884, except where the new deck had been added in that year. The rails in the wake of the main hatch were unsafe—about twelve feet of railing in the wake of the main hatch and about five feet of railing in the wake of the fore hatch. I mean the gangway on each side of the ship. As a matter

of fact most of the stanchions attached to the covering board had their screws more or less torn out by the weight of the awning stanchions, caused by the contraction of the canvas in wet weather. This applies to the covering board all round the vessel. The covering board was so rotten you could not put a screw into it at all in the wake of the gangway. The covering boards were more rotten in the wake of the gangway than in any other part. In the other parts, however, the screws had been forced out by the strain of the awning. The water had got into the holes; in consequence the wood rotted in the neighbourhood of the screws. I weighed 18 stone more or less a year ago. I have lost a considerable amount of flesh since I never walked on the gangways because I knew a man had fallen overboard doing so; he weighed about 3 stone or 4 stone. On the occasions when the deck was so crowded with passengers that I could not get along in the usual way, I walked along the rails which were supported by the awning stanchions and the permanent part of the awning ridge chain, carefully avoiding the gangways. My feet rested on top of the permanent rails, and my hands holding the ridge chains, till I came to the gangway. The gangway is closed by two iron bars bent at right angles at the end, which fitted into eye bolts attached to wooden stanchions. The top of the rail was iron: there was generally a light at the gangway. I got down on the deck, leaving my shoes on the awning to try if I could find a place to put my feet between the prostrate forms of the passengers; the people were so closely packed, and I was so heavy, I was afraid of doing some damage to body or limb: and if the howling Baba! Baba! was not too acute, I would go to the other side of the gangway; then proceed as before. If the protests and the crowding prevented me, I got on to the awning, and scrambling on my hands and knees got along as well as I could, taking my chance of coming through. We have double awnings, else I could not have done this. My experience has been more in connection with iron than wooden ships. I have scaled and painted a good many iron ships in my time, among them the steamer *Arabia*. The scaling and painting of an iron ship should take place every three or four years. The process should be a thorough one. Any steamer could not have got into the condition which I described the *Sir John Lawrence* to be in in my letter to Government, viz., that "the holds below and above the orlop deck are one mass of rust, the scales can be taken off in large flakes by the fingers, and some of the frames are nearly eaten through for want of paint," except from thorough neglect extending over four or five years. If the *Sir John Lawrence* had been thoroughly scaled and painted in 1884, she could not have been in the condition I described her in when I wrote that letter to Government. The date of the letter is the 28th October 1886. The statement contained in my letter to Government about the state of rust was most emphatically true. When I first joined the *Sir John Lawrence* she was not so rusty; she naturally accumulated rust during the 13 months I was on board. These indents produced are written by me, marked (2<sub>s</sub>) to (2<sub>15</sub>). I did not use one-thirtieth part of the paint I used on the *Arabia* in less than half the time. I made several attempts to have the holds cleaned out, and I painted the between decks, fore and aft. I painted the between decks a few months after I joined the *Sir John Lawrence*. Before each survey I took up the limbers as far as I could in the time allowed with the few men left under my command. I cleaned the dirt out of the limbers and cement-washed them, so that they might have a good appearance from the upper hatchway. This was not eye-work: it simply represented all I could do with the materials afforded me and within the time. What I did, I did thoroughly. While I was in the ship, I had all the ballast shifted at different periods in order to examine the state of the ceiling and remove the tons of coal-dust accumulated round the foot of the main pump, under the ballast, which had apparently remained there for many, many months. I did not mention the rust in the hold in my list of repairs (1) because you could not indent for removal of rust. The *Sir John Lawrence* went on to be docked, to be overhauled, and examined for the half-yearly survey. I called the attention of Captain Irvine and Mr. Young to the state of the holds, and proposed to have the outsides cleaned; but I was only permitted to have the paint scaled off lightly outside with scrapers. Chipping hammers were not allowed to be used. If I had made a proper list, it would have been five times the length of No. (1). As it was, Captain Irvine cut a great many items off No. (1), and even hesitated to sign it in its present form. I did not attempt to suggest the scaling of the inside of the holds, after hearing Captain Irvine say that when he attempted to do so in 1884 he was prevented peremptorily from doing so. I should be very much surprised to hear that the *Sir John Lawrence* was properly scaled and painted, inside and out, in 1884. She may have received coats of paint in the bad places over the rust. She may also have been scaled when it was safe to do so. If scaling had been attempted in some places in the hold, between wind and water in the fore peak, for instance, the hammer used for the purpose would most infallibly have gone through. I could have demonstrated this by an experiment with a chipping hammer at the time when I sent in that letter to the Government in October 1884, when the *Sir John Lawrence* was at the buoy. I am certain I could have put my chipping hammer through the side of the ship in more than one place. I think the hammer would have gone through in some places in the forepeak and between the frames, just before the bunkers. On the port side, at about from 20 to 25 fathoms, there were two or three links of the chain cable bent partially round and some without studs. This occurred when checking the ship round in strong tides in arriving off town in Calcutta. The starboard chain defects existed between the 60 and 75 fathom shackle, which had suffered in the same way, being bent and in many cases links minus of studs. I did not include the state of the chains in the list because Captain Irvine would not permit me to do so. In coming into port we always, when we got there, made fast to the same buoy.

When the tide was against us, we were allowed to proceed and steam right up to the buoy. When the tide was running up, we turned round and dropped our anchor in whatever spot the Captain thought it most judicious to do so. I was not prepared to leave the ship. If I had been so prepared, I should have gone to the Agent and made my complaint as to the state of the ship in opposition to the Captain and Mr. Young. As a matter of fact, I did complain to the Agents—to Mr. Mackenzie—when I landed from the steamer, after I got information of my dismissal. I did not attempt to make any complaints to the Agents before my dismissal from their service. Mr. Young never at any time did anything to deter me going to the Agents with my complaints, had I chosen to do so. Captain Irvine did tell me to address all my complaints to the Superintending Engineer only, and not to the Agents. The Captain went every day when we were in port to the office of the Agents to know as much about the requirements of repairs on board. It was not part of my duty to go to the Agents about the repairs. I did not think it necessary to supplement list (1) with more items when I sent it to Government. List (1) was authenticated by the signature of the Captain, with the exception of the two last items, which were added afterwards by me and a remark made to that effect. I thought there was quite enough in that list to show the extent of the neglect of the vessel. The copy of list (1) which I sent to the Government was, I believe, copied by me from a duplicate list in my possession. I have not that duplicate in my possession. I gave it to a fellow-lodger of mine—a clerk in an insurance office. I don't know his name. I have kept no copies of the other lists I have sent in. I think we came out of dock about the 25th October. I believe the Harbour-Master was Mr. Mathewson. We dropped down to the Salt Golahs. We tried to get up the starboard chain with the windlass, and after much trouble and delay found it impossible to do so in the time required to move the ship. This was on account of the defective state of the windlass. We had to get the chain up from the chain locker down below. We got the whole of the chain for mooring the ship aft on both sides entirely up from the port locker. We had not laid the chain out in lengths on the deck before we left the dock. In this vessel, the *Sir John Lawrence*, it is not necessary to range the chain on the deck. The anchor is let go from the cathead and carries the chain with it over the gipsy of the windlass, to which there is attached a compressed break, which is useful to stop the chain at will. There is no occasion to have any chain lying on deck. As it comes in the windlass pays it down into the locker. The Harbour-Master is not bound under the rules of the port to have the chain laid out in lengths on the deck in a steamer carrying a windlass of the kind I have described. I don't know the Harbour-Masters' rules.

Did you not on the 23rd of October 1886 sign a certificate given to the Harbour Master certifying amongst other things that there were 30 fathoms of chain laid out on deck ready to be paid out?

*Answer.*—I do not remember whether I or the Captain signed the Harbour-Master's certificate on the occasion you mention. It is a paper which is usually signed without being read: a purely formal affair. I have never read a Harbour-Masters' certificate through yet, and I speak with an experience of 20 years. It was impossible to lay out 30 fathoms of chain before the windlass on the *Sir John Lawrence*. There was no room, and even if I could have done so, it would have proved a source of danger to the lascars.

*Cross-examination continued.*—This certificate is signed by me. (Certificate put in and marked X) When we left port in the morning, the Captain, acting as Harbour-Master, dropped the vessel under steam down the river. I have known this operation take up two or three hours. The Captain would then turn the ship, and then in his capacity of pilot take the *Sir John Lawrence* down the river; and if the tide were not favourable for entrance into the Western Channel, he would take the ship down the Eastern Channel, and would arrive at the further end, according to the state of the tide, at any time between 8 p.m. and 12 midnight. From the moment the ship turned off towards Chandbally the Captain navigated her as Master. If we left Calcutta at daybreak on Wednesday, and took the Eastern Channel course, we generally arranged matters so that we reached Chandbally on Thursday morning, the entrance of the Dhamra river, the Kanaka buoy. If we went the Western Channel course, and if we made a very favourable voyage, reached the Kanaka buoy about 11 p.m. on Wednesday night. We used the Western Channel most frequently. Starting at daybreak with the wind and tide favourable, we might make Saugor by 1 p.m. Saugor light-house would be about nine miles off. When we had Saugor light-house abeam, we should be through the greater part of the Western Channel. I was Captain of the *Medina*, a vessel in the Chandbally trade. I did not hold a pilot's certificate. My Chief Officer was a tug pilot, and he therefore had command of the vessel. I only made one voyage to Chandbally in the *Medina* as Master. On that occasion I took the ship through the Eastern Channel. I assumed command of the ship just below the Lower Gaspar. Had I gone by the Western Channel, I should have assumed command as Master at the Upper Auckland buoy. We got to Chandbally generally between 10 a.m. and midday. The Captain was the obliged to be up during the whole of that day. The mooring often took one hour or an hour and a half. We lay at Chandbally all Thursday night. I supervised the taking in of cargo during the night.

We never used a Chandbally pilot. Leaving Chandbally (if the tide be favourable) at daybreak we made the Kanaka buoy in 3½ hours; with the tide unfavourable, 4½. In the *Sir John Lawrence* we invariably returned by the Eastern Channel. We got to the Apex buoy between 1 and 2 in the morning. The Captain was obliged to act as pilot from the Kanaka buoy to the Apex buoy, taking the track we usually adopted. We anchored at the Apex buoy and proceeded to Calcutta at daylight on the following morning.

W. H. NEUSTEIN.

Court adjourned till to-morrow.

C. H. RILEY.

*The 22nd July 1887.—Cross-examination continued.—To Mr. Orr—*I wrote the ship's log on board the *Sir John Lawrence*, and the official log when requested by the Captain to do so. Captain Irvine may have made some entries in the official log himself without my knowledge. I may say he invariably asked me to make such entries. If he did make any entries of any importance, they must have been added after I left the ship, or I should have seen them. Every entry of any importance made in the official log while I was there was made by me. The entries related principally to the discharge and shipping of sailors, or death, if it was palpable. I did not enter the fact of six dead bodies being thrown overboard between Diamond Harbour and Garden house. I was not asked to do so by the Captain. I made a note in my own log book for future reference. I made shorthand notes in my log book from time to time. The Captain used to tell me the number of passengers to enter in the ship's log, and I so entered them. That was done in every trip if the Captain happens to tell me the number of passengers. If not, I put down the number I happened to tell the police on their making an enquiry from a boat an hour or two after the passengers had left the vessel. I entered the number of passengers on board in each trip going and returning from Chandbally when the Captain furnished me with the number. The Captain furnished me with this information from a rough pocket-book which he had. Never to my knowledge did the police count the passengers on board prior to starting from Calcutta. During festival times this work, if efficiently carried out, would have taken the police several hours to perform. A lighter would also be necessary to put some of the passengers into, so that they might be divided for the purpose of counting. I heard what Captain Spence said about counting the passengers on board the *Tyrone*. If the same surveyors who surveyed the *Sir John Lawrence* in my time, and passed her in that condition, were consulted by the Government, and the Resolution of the Government is based on their opinion, I am not surprised at any conclusion the Government might come to under their advice. I do not remember any altercation with Mr. Young on the 23rd October 1886, but I remember nearly all the words which passed between us, which were very few. Mr. Young asked me why I was not down below in the tunnel getting the shaft along. I said I was too old in the thorn to do that sort of thing. I said there were four of the ship's engineers, three or four extra engineers, all my crew, and all the extra hands, which were supposed to be paid by the deck department, were all below. What should I be doing then, as Chief Officer acting gunner to the engineers. Mr. Young did not order me to go down and lend a hand with the shaft. I did not tell Mr. Young I was a d—d sight too old to do that sort of thing. I did not refuse. Mr. Young had no right to give any such order. I did not continue using bad language. I used no bad language at all; had no quarrel and no words on that day. Captain Irvine told me not to go down into the tunnel, nor did he tell me not to obey Mr. Young's order.

*Question.—*Did you not, then, ask Mr. Young if he wished you to thrash him?

*Answer.—*No.

I did not say to Mr. Young "I suppose you want to get me dismissed." I don't remember Mr. Young saying to me that I dismiss you then and there: he had not the power to do this. I had a six months' agreement. After I left the ship, I went to Messrs. Macneill and Company's office. I went there to tell the Agents that Mr. Young was annoyed at my assisting the Commander in making out such an extensive repair list, and calling Mr. Young's attention to these defects mentioned in that list and pressing for their immediate repair. I saw Mr. Mackenzie at that interview. He said that's Mr. Young's business, not yours, or words to that effect. I then said I shall be glad if you give me a testimonial, stating the time I have been on your vessel, as to my conduct and ability during that period, as I think, of going up to pass for the river tug. Mr. Mackenzie gave the order and I got the certificate. Mr. Currie handed it to me.

Did you not ask simply for a certificate of service only, showing the time you had served on board the *Sir John Lawrence*, as you wanted it to enable you to go up and pass for the river?

*Answer.—*I did nothing of the sort. I did ask for a *bond fide* testimonial which would express the opinion of the firm as to my conduct and ability while I was in their service.

I don't remember the exact words I used. I applied for a testimonial in the ordinary terms a servant would to an employer. I will not pledge my oath to the exact words I used. I don't remember to whom Mr. Mackenzie gave instructions about my certificate. Mr. Mackenzie did not direct Mr. Currie to give me a certificate of service only: he certainly did not do this in my presence. After getting my certificate, I went two or three days after to the Agents to get my wages. I don't remember seeing Mr. Mackenzie on that occasion. I saw him on the date I served him with a summons. I remember presenting Mr. Mackenzie with a letter which formally tendered to him my services as Chief Officer. I did this under the advice of my Solicitor. I cannot remember whether I actually presented the letter to Mr. Mackenzie. I do not remember stating orally. I have come to tender my services as Chief Officer of the *Sir John Lawrence* to Mr. Mackenzie or any one else. I don't remember Mr. Mackenzie or any one else saying having already dismissed you, we do not require your services. My former shipmates, Captain Irvine and Mr. Turner, the second engineer, were the "valued friends" I alluded to whom I had lost through the foundering of the *Sir John Lawrence*. In my opinion the *Sir John Lawrence* having had a lot of heavy extra iron beams, large quantity of deck and houses added to her, about eight feet above a portion

of the vessel where there was none before, it must have considerably altered the stability of the ship with reference to the calculations made on the original construction of her hull. I also knew that large quantities of ballast were thrown overboard at different periods, which, as a matter of fact, were not wholly replaced in my time. I did not cause the ballast to be thrown over board, nor do I know the quantity which was thrown over board.

*To Captain deSmitt.*—The windlass was on the main deck. It could be worked by steam or by hand from the upper deck. The centre casting of the windlass was broken, and the whole body of the windlass forced over to starboard, so that the starboard gipsy had worn itself deep into the wooden bitts which supported it: it got into a state which made it difficult to work some two or three months before I left the ship. I don't know whether the windlass was ever repaired. I have seen the plates out out above the upper part of the stern: those plates were in good order. In the fore peak particularly, I think, the thickness of the plates were above  $\frac{3}{4}$  of an inch. No rivets were driven out of the vessel during my time in the hull under deep water-mark. If I tried to beat a rivet with a hammer so as to remove the rust between the frame and the plates, in many cases there would be a distance of  $\frac{1}{4}$ th of an inch between the frame and the plate. The *Sir John Lawrence's* plates were alternately outside and inside above light water-mark. The outer plates have a liner between the frame and the plate. What I allude to was rust, and not liner I could not see the floor plates, the depth between the floors would be about one foot. I can't tell you how high she was cemented in those chambers; she carried ballast then; the ballast was on the ceiling. I have known the *Sir John Lawrence* go away boarded as full as she could hold; at other times not a very great deal. The amount varied considerably between 40 to 50 tons upwards. There was enough water to damage bags of salt. I think the water came through a defective sluice in the engine room. The sluice hole was stopped up with rags. I don't know whether the cargo was insured. On the main deck, besides, the tanks on the starboard side cabins were very much enlarged. Three fresh cabins were added—larger cabins—the older ones being removed. The new cabins occupy very much more space than the older cabins. On the starboard side, nearly abreast the gallery, were the additional places taken up built for the purpose, but never used as latrines. On the port side, just abaft the main hatch, was a cabin built for the carpenter, and about three feet further on a large engineer's store-room had been built. I do not know how many superficial feet was left on the main deck for the accommodation of passengers. The horse-power was something over 90 and not under 90 for the second engineer could run her. Her speed under steam alone with a moderate head wind was about 7 miles an hour. I saw in the papers that the *Sir John Lawrence* was not classed at Lloyds; this was in 1878. The *Sir John Lawrence* was a very lively boat in bad weather.

*To the President.*—My acquaintanceship with Captain Irvine led me to consider him a man who placed very little value on his own life. I myself have heard him say I expect to go down in the old *Lawrence* if I stop on her long enough. On one occasion we received peremptory orders signalled to us to return. We obeyed that order; but if it had not been for me, we should never have seen that order, for I prevailed upon Captain Irvine to wait and read the flags. He waited reluctantly, and but for my protest he would have gone on. On one occasion when storm signals were up and large steamers had anchored, Captain Irvine proceeded out to sea in opposition to my advice. The Captain looked upon his passengers as so much living freight, worth so much a head. I do not believe that he would have permitted the question, whether or not his passengers would be inconvenienced or their lives endangered, influence him in any way when he came to decide whether he should return or go out to sea. If Captain Irvine had succeeded in getting to Chandbally before the *Seagull* and the *Tyrone*, he would most assuredly have swept up all the passengers who had not taken tickets for passages in the other ships. As a matter of fact, independently of the passengers who had tickets, Captain Irvine carried a larger number of passengers, who paid their money on board. That money was collected by Captain Irvine. In my opinion Mr. Currie, knew all about it. He was the Agent of Macneill and Company at Chandbally. My belief, induced by what I saw, was that the Captain obtained some pecuniary advantage out of the fares of these passengers. The interest he took in these passengers confirmed this belief. One of the motives which, in my opinion, induced Captain Irvine to venture out to sea was to secure the larger number of those passengers on the return voyage.

*Re-examination to Mr. Ghose.*—No account to my knowledge was kept of these passengers who took no tickets. If the Captain handed over the money to the agents they would only have the word of the Captain as to the amount. The proceeds which under an amicable arrangement might be the subject of division between the owners of the various steamers plying between Calcutta and Chandbally would only be in respect of money paid on the sale of tickets. The only thing which could be checked would be the money obtained on the sale of tickets. In my opinion this practice of receiving passengers on board without tickets was the chief cause of the crowding of the steamer with numbers beyond the amount the steamer was allowed to carry. In my opinion the person directly associated with the collection of the money from these passengers would be interested in getting as many of these passengers as they could on board. This practice obtains on both sides, more particularly from Chandbally. At Poojah during the Puri festival we carried quite 1,400 passengers. I have known the *Sir John Lawrence* when, during the time of the year and he was only permitted to carry 700 and odd passengers, according to what Captain Irvine told me, carry about a thousand passengers. I emphatically reassert that I have frequently seen the *Sir John Lawrence* overcrowded; and the overcrowded state of the ship interfered with the management of the ship, and in rough weather it would decidedly endanger the vessel.



and all on board. I have never seen the upper awnings blow away; the curtains would go and the rain pelt in. I have seen the passengers wet all through the night. The distance between Calcutta and Chandbally is between 150 to 160 miles. My decided opinion is that it is not possible for one officer performing the treble duties of Captain and Pilot and Harbour Master to get through the accumulation of work efficiently. Captain Irvine was 60 years of age at least, too old in my opinion to discharge these duties efficiently. I have frequently seen him for hours together asleep on the bridge when on duty. On the occasion when we were on shore at the mouth of the Dhamra river, the passengers threatened to throw me over board because they could not get food, and the Brahmins would not take the water from the tank, as that was used by Mahomedans. The two four-hundred gallon tanks had been exhausted. We got up coconuts from the cargo. In scrambling for these the women and children got trodden on. Had not been for Mr. Yakkie, I should have been thrown overboard. On one occasion, when our steamer was dragging her anchor, if one of the defective tanks had given way we should have been in pieces in two or three minutes. We had six or seven hundred passengers on board. When we anchored the Captain said that will do: steam, the fires were banked; finding ourselves slowly dragging, I informed the Captain. I also reminded him that, owing to the defective windlass, we could not let go the second anchor. I then with the consent of the Captain ordered steam to be got up as fast as possible. I have never known a passenger vessel go to sea with such an unsightly patch on her. I have noticed passengers stay behind till after the counters had left, and on leaving Chandbally after the counters had left and the vessel off in the stream underweigh, the paneewalla would bring down some hundred or more passengers who had been concealed in houses, and in spite of the efforts of the native agents to stop them to see whether they had got tickets, force them into boats and bring them off. The paneewalla shipped a large amount of freight on board the steamer; the freight were stowed in the best place; he saw it done, having great influence with the crew. I do not think there is any screw steamer which carries within one third of the amount of passengers as carried by the *Sir John Lawrence*, even if they be of the same tonnage as the *Sir John Lawrence*. The *Medina*, a much better ship, carries nothing like the amount of passengers. I believe the *Mahratta* has been running in the place of the *Sir John Lawrence*. We often carried horses, carriages and cows; the space occupied by these encroached upon the space set apart for the passengers. The space set apart for the hospital was not used for the benefit of the passengers, but was a store place for hawsers, ropes and ship's gear. The space occupied by the cows, horses and carriages was part of the space reserved in the survey for passengers. I remember one or two occasions when passengers were refused admittance because the deck was so choked no room could be found for more. The last item in exhibit (2<sup>1</sup>) is the most important item in the paper. We had a carpenter at Rs. 40 a month, and not enough wood on board to make a boat's rudder. The item of oil was also important; it might have resulted in having to run without side-lights. This item, No. 12 in exhibit (1), is written and understood by me; it refers to the boat which passed its survey in the presence of Mr. Young and Mr. Bushby, and I made the remark particularly to Mr. Leech, the Chief Engineer. They lowered the two new life-boats into the water, and let the rotten one remain hanging at the davit. What sort of a survey do they call that. On the 17th October, when I wrote exhibit (1), I had no prospect of quitting my post. I attribute my discharge intimated to me on the 25th to the fact that I insisted on the repairs mentioned in exhibit (1) being done. Before making out this list, I had often made verbal reports to the carpenter and blacksmith sent on board to look after the repairs, and also to Mr. Young, when opportunity offered. I have known 4 annas taken as a fare for a passenger. I have also known as much as Rs. 5 paid for a single passage.

W. H. NEUSTEIN.

Case adjourned till Monday, half-past 12 P.M.

C. H. REILY.

*The 25th July 1887.—William Henry Neustein to Mr. Kilby on re examination.*—It was only our casual conversation in hotels that the *Vingorla* went, through the defective state of her soil pipes. I cannot give you the date or month when the *Sir John Lawrence* proceeded to sea in defiance of the storm signals. I cannot give you the date or the month when we were overtaken by a cyclonic storm; could not use the starboard anchor through our defective windlass. It was about two or three months. It may be four months before I left the ship.

W. H. NEUSTEIN

*John Leech—Sworn saith to Mr. Kilby.*—I was Chief Engineer at one time on board the *Sir John Lawrence* from the 22nd September 1884 up to the 25th September 1886. Mr. Neustein was on board as Chief Officer for part of the time. Whilst I was running to Chandbally, weekly one trip a week, I had six firemen, four coal-trimmers—it may have been two coal-trimmers—a serang, two tindals, and two oil-men. I had engineers besides myself. When we began to run tri-weekly that is two steamers making three trips a week, I had eight firemen, four coal-trimmers that no extra fire-men, two extra coal-trimmers, and an extra engineer. In my opinion these were a sufficient crew for the work the *Sir John Lawrence* had to do. I cannot tell you anything about the deck crew. When I went on board the *Sir*

*John Lawrence*, she had been recently repaired. I believe she had a new spar deck from the bridge up to the poop flush deck. I was in the vessel 13 years ago, and can therefore say that the *Sir John Lawrence* had two side bunkers and a bunker athwart ship, also a bulkhead separating the stokehole from the engine-room; the two side bunkers and the bulkhead I have mentioned have been removed. I should say the more bulkheads the ship has the stronger she is; in my opinion the removal of that bulkhead did to a certain degree weaken the vessel. I joined the *Sir John Lawrence* in 1874, and left her in 1877. In 1874 the *Sir John Lawrence* was a staunch vessel; everything good about her. The forepart of the *Sir John Lawrence* was not staunch in my opinion in 1884. The plates down in the fore peak were all encrusted with rust and the frames also. In 1874 she was properly painted in the fore peak and everywhere else, inside and out. In 1885 after the collision occurred with the *Indore*, there was no paint, all rust on the fore peak. I was sent by the Captain to go and have a look at the hole made by the collision on the fore peak on the starboard side; the hole was above water—a good deal above water. When the ship was light she was drawing about 8 feet forward at the time of the collision, the hole was about 4 feet above the water line. I went down to look at it and came back and told the Captain that there was a large hole in the bow, and that he could not go to sea and must take her back to be repaired. The hole may have been above 18 inches to 2 feet square when the ragged parts were cut off. My engineers cut off the ragged parts under my superintendence. Mr. Turner was second engineer, Mr. Thorpe, third engineer, Mr. Sansoni, fourth engineer. The plate was one-eighth of an inch thick. I did not measure it, but I could see by the edges of the plate. The plate when new must have been a quarter of an inch thick: this is merely a guess. The plate looked much corroded. We came back to Calcutta to the workshop at Garden Reach. The collision occurred in the morning between 6 and half past 6 A.M., I cannot give dates. Mr. Taylor, the Superintending Engineer, came on board; he afterwards sent workmen on the same day. They brought a plate off with them, punched holes in the ship's side round the hole, and fixed the patch with putty and made a bolt patch of it: we steamed away the same evening to Chandbally. We had passengers on board when the collision occurred—a large number of passengers—they remained on board all that day, and we took them to Chandbally that evening. When the patch was on, Mr. McKeller, the Assistant Surveyor, came on board and had a look at the patch. I saw Mr. McKeller on deck forward. I did not see him go down below. I think he must have gone down below. Mr. Taylor was on board with him. An engineer of the name of Henderson was sent off with the men to put the plate on. I saw the plate put on. I was there all the time. No Government surveyor was on board when the patch was being put on. You could easily feel the thickness of the plate from the inside after the patch was put on; it was an outside patch. After we came back from that trip, Mr. Taylor came on board the next day. He said if Mr. Bushby ordered the plate to be taken out that there would be no stopping, the plates on both sides of the bow would have to be taken off. By "stopping" I meant that, according to Mr. Taylor if one plate was taken out, the whole affair would be exposed, and a good number of plates; the whole of the fore peak on both sides would have to be renewed. Mr. Taylor further said he would see Mr. Bushby about it, and get him to leave the patch where it was with the exception of the bolts; he would take out the bolts and put in rivet and make a rivet joint of it. The bolts were subsequently taken out and rivets put in. The remaining of the plates on the fore peak would have been an expensive business, it would have taken over a month at the very least to have done. The *Medina* was running in conjunction with us, she had been chartered by Messrs. Macneill and Company. She belonged to the British India Steam Navigation Company. I could not tell the number of passengers the *Sir John Lawrence* certified to carry, or the *Medina*. No other part of the skin of the ship was examined by me. I do not know the condition of the holds or ceiling. I don't know whether the holds were painted. In 1884 the engines were 90 horse-power nominal. They were compound direct acting horizontal engines, so far as the shafting and the cylinders were concerned they were all right. The condenser was pretty much worn. Very much worn, the rest of the machinery were in good order and condition. The boiler was a new one. The donkey boiler was also a new one. It must have been put in the ship on the last repair of 1883-84. There was one unserviceable boat on board, a boat on the port side close to the mizzenmast, the after port boat; there were three other boats in good order. The starboard life-boat was smashed in the collision, and while the patch was being put on a new boat was sent from the yard, and was lashed alongside. In the evening the damaged life-boat was sent ashore in charge of five lascars, it was towed ashore by the jolly-boat. During the day the unserviceable after fore boat had been taken away, and a new boat had been brought in its place and lashed alongside but not hoisted on the davits. We also received a brand new life-boat sent us in exchange for the one which was smashed. The boat which was lashed alongside and not hoisted on to the davits filled with water, and got under the ship, the painter parted and we saw it no more. I could not swear to the fact that the after port boat was unserviceable at that time. On our return trip the after port boat came back to us again and was hung up on the davits. I saw that after port boat come alongside, it was an unserviceable boat, it used to leak very bad. It remained with us for some time till just before the survey when it was taken away and a brand new boat put in its place. After the survey was over we ran a trip or two, and then the new boat was taken away and the old unserviceable boat sent back to us. I saw the unserviceable boat come alongside after the survey, it was in a leaky condition, as it was hove up the plug was taken out and the water ran out of it. I was on board the *Sir John Lawrence* when she went ashore at the mouth of the Chaudbally river; we had lots of passengers on board; the

ship was very crowded. The passengers wanted to go ashore to cook in the jungle. The after port boat was let down, it was found to be leaking so much that it would be dangerous to send passengers in it, so it was hoisted up again. When I left the *Sir John Lawrence* the unserviceable boat was still there: I left on the 25th September 1886. The collision I think occurred in May 1885. The unserviceable boat remained on board the *Sir John Lawrence* with the exception of the short time when she was sent ashore from the time of the collision to the time I left the steamer in September 1886. After the occasion when the unserviceable boat was removed to make way for the new boat, there were two additional surveys held in my time. I never saw the Surveyor's order that boat to be put into the water. It passed two surveys so I am wrong. Now I come to think of it the unserviceable boat passed one survey, the surveyor was Mr. Bushby. There were four surveys held while I was on board the ship: they were made by Mr. Bushby and Mr. McKellar; the latter does the engine-room, Mr. Bushby did the first engine-room survey. Mr. Bushby did all the deck surveys. The survey on deck and the survey on the engine-room was going on at the same time. I cannot say whether the Surveyor went down into the hold or not. When Mr. Bushby himself surveyed the engine-room he went into the boiler; he had a look at the cylinder, he looked at the shafting and made me take off the bearings when we went on deck. We looked at the safety valves, the whole affair was finished in half an hour. I did not see the dock survey. We were aground three or four days going to Chandbally, it was very early in the morning. There was a moon but it was clouded, it must have been on account of the darkness. Where we were aground the sand was not visible; the nearest shore from us must have been about six lengths of the steamer off. The passengers were short of food. I have seen the steamer crowded as full as it will hold. The people could not move about; the crew could not have got about through the passengers; the passengers had to cramp their legs up. At night it was utterly impossible for a woman to move towards the water-closets in day time, if she had male friends she might manage to do so. There were two passenger decks, the spar deck and the main deck. The spar deck was flush from the stern to before the foremast, then there was a break where the male closets were. Before the spar deck was the main deck. In 1874 there was no spar deck, there was poop, bridge deck and forecastle. The distance between the old poop and the bridge deck was about 60 feet and 120 feet about from the bridge deck to the forecastle; I cannot say for certain. The only alteration is that the space between the poop and the bridge deck has been decked over; there had been high bulwarks between the poop and the bridge deck. These high bulwarks were done away with altogether; the new spar deck was supported by iron frames; the distance between the main and spar deck is about  $7\frac{1}{2}$  feet. The old bulwarks are replaced by new bulwarks about  $3\frac{1}{2}$  to 4 feet high; the space between these bulwarks and the spar deck is open. The top of the bulwark was distant between 7 to 8 feet from the water when the *Sir John Lawrence* had a full complement of passengers and full cargo when she had a draught of 13 feet; the bulwarks were seven or eight feet out of the fathom. We did not get any very heavy weather on the last occasion. I was in the *Sir John Lawrence* in ordinary monsoon weather; the seas broke into the main deck—heavy seas. I have seen the passengers wetted through. I have seen six inches of water right up to the saloon door and the passengers lying in it. I have never seen passengers injured by the force of the sea. The sea would just douse the passengers and nothing more. If there had been a storm all the passengers on the spar deck would have been sent down on the main deck, and if the main deck had not sufficient room the passengers would have been sent on to the between deck; if they stayed on the spar deck they might roll over board. There was an iron rail, there was strong netting between the rails; these rails were pretty shaky through the lascar walking along them necessitated by the crowded state of the upper deck. I have seen ballast taken out of the ship to lighten her. I found the *Sir John Lawrence* rolled a great deal more on the second occasion I was in her than she did on the first. There was an awning over the spar deck. There were curtains when the weather was unfavourable; the curtains were down there were no curtains or anything else to cover the spaces above the bulwarks on the main deck. Captain Irvine was not always a sober man. I have not seen him the worse for liquor when on duty. I have seen him asleep when on duty. I have not seen him asleep when coming by the James and Mary. There was no counting of passengers when shipped in Calcutta. They would generally start coming on board at 5 p. m. in spite of an order occasionally given by the Captain that they should not come on board till 7 or half-past 7; some used to get on board and others remained in boats, about 50 to 60 boats alongside. There was no showing of tickets when they came on board. Those that did get on board from the boats got in by the ports or up the gangway ladder. The Captain used to collect the tickets while the steamer was going down the river. After we had gone a good way down about 10 or 11 o'clock, a good many of the passengers had no tickets—money was taken, the price fixed for the trip: this price varied in different trips. The Captain issued no tickets. There was no one to check the amount which the Captain took. I never saw any of the European officers of the river police on board the *Sir John Lawrence*. I am not aware of any attempt or pretence made by the police to count the passengers who went on board at Calcutta. In Chandbally the passengers were counted when we got there. Stage planks were placed from the jetty, five or six planks, about a foot broad each, were placed side by side, a policeman stood either at the end of the jetty, sometimes in the steamer a native officer, and counted the passengers as they went ashore. There was no order kept. They were allowed to scramble ashore over these planks in any order. It was difficult for the officer to count them, but I think he was able to count them. I am not aware that Captain Irvine was ever fined for carrying excess passengers. I have myself seen twelve to thirteen hundred passengers on board. The police officer at Chandbally would be able to count them. I believe on



one occasion we did go to sea when the storm signals were up. We thought we would have very bad weather. I did not talk to the Captain about it. We did not think it prudent on the part of the Captain going out to sea on this occasion. I cannot remember whether we had many passengers on board. Mr. Young accompanied by Mr. Bushby or Mr. McKellar when they came into the engine-room for survey. Mr. Young gave me no directions to keep silent when the surveyors were on board. Nor did he even tell me to mention anything that might be wrong with the machinery. It is a practice with all ship engineers to answer any question which may be asked, but to volunteer no information.

JOHN LEECH.

Court adjourned till to-morrow, half-past 12 P.M.

C. H. REILLY.

*The 26th July 1887.—Examination of witness John Leech continued to Mr. Kilby.—Mr. McKellar when he used to come down and examine the engine-room used to do it satisfactorily, by that I mean thoroughly; but as regards the condenser Mr. McKellar would not be able to find out what was wrong with the condenser unless he was told. I did not tell him. I heard no one else tell him. The condenser had ram pumps. The chambers in the condenser into which those ram pumps worked were eaten away by galvanic action; we had to put in copper pipes and the rams worked in these copper pipes, the seating of the suction valve of the after circulating pump had no landings to bolt the seatings to the landing. The landing or cast iron flange was all corroded and eaten away, so that we had to fix brass flanges in its place, cutting away what remained of the rusty cast iron flange for that purpose. Those defects did not endanger the safety of the ship and was not detrimental to the working of the engines. They gave us a good deal of trouble. We had to keep rectifying it constantly. Mr. Bushby's survey also was a thorough survey. I wish to correct a mistake I made yesterday, the boat which was sent on board the *Sir John Lawrence* on her return from Chandbally after the collision was one belonging to one of the Inland River Steam-boats. I also wish to say that during our bi-weekly service we had four coal trimmers on board and during the tri-weekly service we had six coal trimmers on board. I also omitted to mention a store-keeper.*

*To Captain de Smidt.—I was Chief Engineer on board the *Sir John Lawrence* between 1874 and 1877. When I first joined her we were put on the Chandbally trade. Messrs. Macneill and Company were agents to the ship at that time. She was chartered by the British India Steam Navigation Company; she was afterwards employed and was run between Calcutta, Chittagong, Akyab, Kyaukse—Phyou and Sandoway. Throughout the time we were employed in the Bay of Bengal and on the west or Malabar coast. I was Chief Engineer again from 1884 to 1886, I was not in Calcutta in 1883. The *Sir John Lawrence* between 1884 and 1886 was surveyed twice in dock. The *Sir John Lawrence* was not scaled inside on either of these surveys, she was scraped outside. I never went out on the dock and examined the bottom. I have, however, been at the bottom of the dock working at the steamer's propeller, when I could see the bottom looked staunch. I believe the pintles were changed. I cannot say whether at the first or second time we went into dock. I examined the roses of the sea connections, they were all in perfect order. The bolts of our sea connections were all right, I examined them myself. I never examined the cement at the bottom of the boilers. The after scupper on the starboard side leading through the after hold to the side of the ship was leaky. I on one occasion took down a Mr. Gill, the out-door foreman of Messrs. John King & Co to rectify the scupper. When we got down into the hold we found Captain Irvine there with a lascar busy cementing the scupper. Gill looked at the scupper, the cement was on it and said—"If I were you, Captain, I would do nothing more to it, the cement will get as hard as iron." I said the *Sir John Lawrence* was not staunch when I joined her in 1884 because the plates of the fore peak were corroded and thin. Previous to the date of the collision I heard no one speak about the thinness of the fore peak plates. I did not examine the plates of any other part of the steamer. I am aware that our sea connections bolted on to a plate only  $\frac{3}{4}$ th of an inch thick would be attended with great danger; knowing this I did not think it necessary to examine the plates to which the sea connections were bolted. The surveyors never examined the sea connections, none of the bolts were taken off in their presence. I never at any time saw the surveyors test or bore any of the plates of the *Sir John Lawrence*. When the surveyor came down into the engine-room he went first to the boiler, everything is open and ready for inspection. He went first into the furnaces and examined the crown of the furnaces, then he goes into the combustion chamber, then he comes out and goes into the boiler through the manhole. The cylinder covers are taken off, we do not disconnect the piston, but the surveyor looks to see whether the cylinder is smooth and not scored. Then he examines the slides, then the journals of the shafting, the condenser doors are open if he wished to look inside. It would not have been possible for the surveyor to have noticed the defects, I have mentioned in the condenser unless I took the sealing off. There was no other ventilation except small port holes on the main deck; there are no ventilations whatsoever in the between decks. I heard of no deaths occurring through suffocation or over-crowding on board. I could not tell you whether the upper deck was covered with a double awning. I do not know whether the railings and string netting was strong enough and is sufficient protection to the passengers in bad weather. The railings were loose and the string netting were no doubt rotten though I did not examine them. All the time I was on board I heard of no trouble with the windlass, the messenger*

chain once parted and we had to work the capstan by hand for a short time; it might have been for a trip or two. There was a new gipsy given us, but the messenger chain was bad. I have no knowledge of the scantling employed in building a ship.

*To Mr. Trelawney.*—I never had any difficulty about stores as long as Mr. Young was there; whatever I indented for I got.

*To the President.*—I discovered that the *Sir John Lawrence* was more crank than she was when I first became acquainted with her 1874. Mr. Taylor, the Acting Superintending Engineer to Messrs. Macneill and Company, himself examined the hole in the plate made by the collision, he ordered me to cut the "ragged edges off." There was no conversation between Mr. Taylor and Mr. Bushby in my presence about the condition of the fore peak plates. In my opinion the plates should have been taken out. There was no condenser on board in 1884. During the time I was on board between 1884 and 1886 nothing occurred during our frequent voyages to and from Chandbally which led me to suspect that the ship was not in other respects sound and of a seaworthy condition. As far as I can recollect the port anchor was always used. I do not remember the starboard anchor being used. There were four scupper pipes as far as I can remember. I cannot tell whether the other three scupper pipes had been commented or not. I cannot tell what the condition of the cast iron line guard was on the outside of the scupper. I took Mr. Gill to see Mr. Neustein was on board with me about ten months. Mr. Neustein and I had frequent conversations about the condition of the ship whilst on board. I have had nothing to do with Neustein since I left the ship. Mr. Young indeed gave me to understand that it was through Mr. Neustein I was dismissed. I told Mr. Neustein about the thinness of the plates in the fore peak. I can remember both Captain Irvine and Mr. Neustein speaking to me about the state of one scupper. I can swear that Mr. Neustein never complained to me about the other three scuppers. I can swear Neustein never spoke to me about the band of the bowsprit or the bobstay or the bowsprit shrouds. I do not remember Neustein saying anything to me about the condition of the starboard side of the windlass. On the morning of the survey held in April 1886 Mr. Neustein called my attention to the fact that the two after boats had not been lowered into the water. He said, "Is this what you call a survey?" they lowered the two new life boats into the water and would not lower the other two. The main deck pumps were connected with the sea and the bilge in 1874; in 1884 there was no sea connections. The shaft of the after pump was discovered broken and had been lying in that condition for a long time. Mr. Hannah, the chief officer, discovered this, I sent it ashore about a couple of months after the discovery. A new shaft was made and fitted to the pump. Some portion of the forward pump was also sent ashore for repair by the chief officer, either Mr. McDonough or Mr. Neustein. I have read the rules attached to Act V 1862, which indicate the nature of the examination to be made by the surveyor of the engine-room and machinery thereon, and I say that with the exception of the condenser the surveyors who surveyed the engine-room and machinery on board the *Sir John Lawrence* on the four occasions, I was there did their duty thoroughly, and quite in accordance with the requirements of those rules. With respect to the condenser, if I had been in their place, I should have insisted upon having all the valves taken out, and also the ram pumps; this was never done on any of the four occasions. I was present at the survey. Mr. Young was aware of the condition of the feed and bilge pump chamber, and the seating and landing. Mr. Young was present at the first, second, and fourth survey. Mr. Taylor was present at the third survey. My repair was only a makeshift, nothing more, the chambers wanted fresh boring, and a proper tube put in. To do these repairs properly the vessel would have to lie up a week or ten days, it might be more. This repair ought to have been done when the steamer was thoroughly repaired before I joined her. During my time the ship was not laid up for repairs. If these makeshift repairs of mine had given way, it might have resulted in the breaking of the pump rod. The engines would have to be stopped long enough to enable that pump to be disconnected. This would take quarter of an hour. I should then have to work with only one pump. This would not have caused any loss of power. I don't know whether the *Sir John Lawrence* is classed at Lloyd's.

*Cross-examination to Mr. Orr.*—I was dismissed from the service of Macneill & Company. This was the letter which dispensed with my services. Letter put in and marked (4). I had no communication with Mr. Neustein in September or October 1886; he came over to my house in January 1887. Since January 1887 I have had nothing to say to Mr. Neustein, nor has Mr. Neustein said anything to me within the last two months. I have had no conversation with Mr. Neustein about this enquiry on the nature of the evidence to be given here. I have had no communication with Mr. Neustein through others. I have spoken of this enquiry with my relations, but with no one else. The bridging over the space between the poop and the bridge deck are one of the alterations I noticed when I rejoined the *Sir John Lawrence* in 1884. My estimate of the length was a guess. It may be nearer 20 feet than 60 feet. I cannot form any idea as to the added weight given to the vessel by this alteration. Before I joined the *Sir John Lawrence* in 1874, I believe she had been running with pilgrims between Bombay and Jeddah. When I joined the *Sir John Lawrence* first she had a saloon under the poop; apart from the saloon she had houses on the fore part of the main deck, between the fore hatch and the middle hatch; there was one cabin for the Chief Officer, one for the second Officer, one for the Chief Engineer, one for the second Engineer, and one for the third Engineer. These cabins were all on this house. They were so small that in my cabin I could not lie with my legs stretched out. There were no other houses that I remember. Two water-closets

were added by the British India Steam Navigation Company when we were running for them. There were two store-rooms on the starboard and port side, respectively, near the fore-castle.

JOHN LEECH.

The Court adjourned till to-morrow at 2 P.M

C. H. REILLY.

*The 27th July 1887.—John Leech.—Cross examination continued to Mr. Orr.—*The officer's house was on the spar deck, the water-closets were on the main deck, the store-rooms were in their old places when I rejoined the ship in 1884. The water-closets had disappeared; the officer's house on the spar deck has also been removed. I cannot estimate the difference in weight which would be caused by the removal of the officer's house. I cannot estimate what weight would be added to the vessel by bridging the space between the poop and the bridge deck. The donkey boiler was on the port side of the stokehole in 1874. It occupied much the same place—perhaps the difference of a few feet—in 1884. It was on the same platform as the stokehole. I can't say what the weight of that donkey boiler would be. There was on the spar deck under the bridge a small room called the chart room: it was made by the carpenter while I was on board. The steamer in 1874 had a saloon, the same as she had in 1884. The saloon in 1884 was some feet smaller than what it was before. The saloon had one main entrance. The saloon was shorter in length—about five to six feet. There was no other alteration with respect to cabins on the main deck. In 1874 the *Sir John Lawrence* had three masts and yards on the foremast. In 1884 she had no yards on the foremast. I am not a nautical man, but taking down her fore-yards would make her less top-heavy. I can't say what kind of a bowsprit the *Sir John Lawrence* had in 1874 nor in 1884. The new bulkheads in 1884 were not more than four feet high. The cargo ports on the main deck were always shut: they were wedged up by the carpenter. There were scuppers. The coal bunkers were three in number in 1874. They were ranged on the three sides of the boiler. You could walk round them inside. There was a bulkhead between the boiler and the thwart ship bunker. The bulkhead did not extend right across the ship. At the after end of the side bunkers there was a partition bulkhead separating the boiler space from the engine-room. In this partition bulkhead there were doors leading into the stokehole. When I rejoined the ship in 1884 these doors and the side bunkers had disappeared with the bulkhead. The coal bunker bulkheads were extended on each side till it touched the side of the ship. The result was the bulkhead abaft the boiler was taken away bodily and the coal bunker bulkhead extended till it reached the side of the steamer. The only occasion when I examined the plates of the ship was the day when I assisted to patch the hole made on the starboard side of the forepeak by the collision with the *Indore*. I was down there the whole day in the forepeak, not the fore-castle. The hole was four feet above the water line; the hole was below the main deck; the crew live in the fore-castle on the main deck; the hole was below the fore-castle. Mr. Bushby came alongside, about the length of the room away from the side of the ship; he was in a steam-launch. I heard Mr. Bushby give no orders. I was on the fore-castle at the time. I don't know what is meant by the superstructure of the vessel. The leak would be up to the main deck. The thick plate which runs along the side of a ship is called the sheer strake. I learnt this lately. The hole must have been below the sheer strake. There were port holes in the saloon. This hole was below the line of those port holes. I saw the steamer that collided with the *Sir John Lawrence*. I saw the collision take place. I was on the main deck standing by the engine-room door. I can't tell you what part struck. I was not forward enough. We went into the *Indore*: she was at anchor. We struck the *Indore* and cannoned or bounced off. The plate put over the hole was a quarter of an inch thick; they had no difficulty in punching the holes. They were punched with a round-nosed chisel; the ratchet was not used. The plate was too thin for that. I did not measure the thickness of the ship's plate. I don't remember whether I told Mr. Neustein that the ship's plate was so thin it was with the greatest difficulty I got the plate on. I can't swear one way or the other. The statement about the plate made to me by Mr. Taylor was made the day after our return from Chandbally: the rivets were put on, or rather begun to be put on, on that day. I did not supervise the work. It might have taken half a day to a day and-a-half. The frames may have been two feet apart in the forepeak. I did not measure the distance. I did complain to Mr. Young about the condition of the condenser. I showed him the old tube, not fit for use, which was replaced by the new one made by John King and Company. The chambers of all four pumps were in a bad state. They all had pipes in them. It was very nasty for a bilge pump to be discharging condensed water over board through leakage. The pipe would not last long, and had to be constantly renewed. I can't tell you how much coal the *Sir John Lawrence* burnt. It is nine months since I was in her. She used Raneegunge and then Assam coal. She used more coal than she ought to have done for a ship of her class. Mr. Bushby must have done all the deck surveys. I did not take particular notice of the state of the covering boards. The rails on the spar deck, before the Captain's house, right away forward, on both sides were loose. I don't mean the rails on the poop. I can't account for the increased rolling in the ship in 1884. I saw Captain Irvine asleep on duty when we were coming up the river. I have seen him asleep more than once on duty. The Chief Officer on these occasions was on deck—not on the bridge. The Chief Officer was doing nothing in particular: he was walking. I did not count the 1,200 to 1,300 passengers I spoke of. It is not my place to bring the state of the condenser to the notice of the surveyors. The surveyors never on any

occasion asked me if there was anything in the ship which required their attention. I don't think it was part of my duty to bring the state of the condenser to the notice of the surveyors. The Superintending Engineer answers all questions the surveyor chooses to ask. I am not spoken to. If I am asked, I answer. It is not my business to point out defects. I had never been forbidden by the Superintending Engineer to speak to the surveyors.

*Re-examination. To Mr. Kilby.*—The letter No. (4) talks about a "false" statement sent in by me as to the quantity. There was an error in the account—an unintentional one. We received a certain amount of coal which lasted us five trips. At the end of five trips I should have had 200 maunds remaining, whereas I only had 60 maunds. I mentioned this to the Captain and also to the Chief Officer. I also told them that I had my bunkers cleaned out and painted. I arranged the coal 30 maunds on each side of the stokehole: it was Assam coal. I was 140 maunds short on Monday morning. I was down the engine-room at work. The Mate came to me and said the Captain had been sent back by the office to bring the coal statement. I immediately came out of the engine-room and went to my cabin and washed my hands and started to make it out on the one column. I put down consumed by engines so much: the remainder I put down in the next column as remaining, whereas I ought to have had another column—deficient. I did not know anything at all about this mistake. The Captain took the coal statement to the office, and I heard nothing more about it till the Tuesday morning, when Mr. Young came on board to see the coal bunker. He found this 60 maunds on each side of the stokehole. He went into the bunker and found it cleaned and painted. I was on shore at the time and did not know that Mr. Young had been on board till my return. It was then told to me by the second engineer who saw that Mr. Young had told him I had made a mistake in my account, and that he had come on board to see how much coal I had on board. I wrote a letter to Mr. Young to explain; when I came back then I received my discharge. I had probably used more coal over the five voyages than I actually put down; the coal was dusty Assam coal, and therefore very hard to judge the daily consumption; the coal was given me as a trial. The real reason of my discharge was not connected with the coal incident—that was only a pretence. Mr. Young told me that Mr. Neustein was the cause of my dismissal; that Neustein had stirred the Captain to go to the office and make much of the mistake. The real reason why I was dismissed was economy. Two months previous to my dismissal there were rumours that Mr. Ogg, second engineer of the *Medina*, was to get my place in the *Laurence* on Rs. 200 a month. My pay was Rs. 300. This rumour proved true, for Mr. Ogg was appointed in my place: he had just passed as Chief Engineer. I had great trouble to get this certificate. Mr. Young put me off from time to time he eventually told me that he would have given me one long ago, but he was told by the office people not to do so, as they were afraid I would take them to Court. I told Mr. Young I had no intention to take the office people to Court: I never had any such intention, as I knew which side my bread was buttered. I then got this certificate put in and marked (F). I was under articles to serve up to the 31st December. I left on the 25th September. Mr. Young accused me of being in league with Neustein. As a matter of fact I had nothing to do with Neustein. I could see that he meant in respect of the letter Neustein was writing. Mr. Young was pumping me: I could see that. If I had taken upon myself to point out defects on board to the Surveyor, I would not have been one hour on board: I should have been instantly dismissed. This would have been in any Company, the India General for instance; they would not give that as a reason, but I should have been dismissed. Mr. Ogg was appointed in my place on Rs. 200 a month.

*To Mr. Orr by permission of the Court.* These are my indents, the bundle marked 5.

JOHN LEXCH.

Court adjourned till tomorrow, the 28th July.

C. H. REILY.

*The 28th July 1887.—James Oliver Thorpe.—Sworn Saith to Mr. Kilby.*—I was third engineer on the *Sir John Lawrence* from March 1885 to January 1886. I was on board the *Sir John Lawrence* at the time of the collision with the *Indore*. A hole was knocked into the fore part of the *Sir John Lawrence*. I helped to mend that hole, the hole was in the fore peak below the main deck on the port side: I am not exactly sure. The right hand side is the port side: the hole was on the right hand side of the steamer: the hole was about four feet above the water when I mended the hole; the hole was about 2 feet square. The collision occurred in the morning when we were going out. We came back to Garden Reach to have the hole patched up. I and the second engineer, Mr. Turner, clipped off the ragged edges of the hole. Mr. Turner went down in the *Sir John Lawrence*. The thickness of the plate was between  $\frac{1}{4}$ th and  $\frac{1}{8}$ th of an inch: a bolt patch was put on. Mr. Henderson, in charge of Messrs. Macneill's workshop, put on the bolt patch. We proceeded to sea the same afternoon for Chandbally. When we came back a rivet patch was put in the place of the bolt patch. The surveyors came on board after we had put on the bolt patch. Mr. McKellar—I do not remember exactly whether Mr. McKellar went down into the fore peak. I can say nothing as to the thickness of the plates in any other part of the skin of the ship; I saw nothing wrong with the tunnel casing. The steamer did not leak in my time. The pumps were never used to pump out the ship to my knowledge. I know nothing about the condition of the ceiling. I remember a boat which would not swim; it was returned to the yard and we got a new one in its place. I do not remember how long that boat that would not swim remained on board.

the steamer. During poojah times there is always a big crowd of passengers on board the *Sir John Lawrence*; during these occasions the passengers walked about and had room to circulate. There was not room to lie at full length. After we had started some of the passengers on the main deck would make their way to the spar deck. To prevent over-crowding and interference with the movement of the crew these passengers were sent down again to the main deck: there was no difference in the fare for passengers on the main and spar deck. I am aware that main deck passengers have a right to stay on the spar deck. I never exactly noticed whether the crowd on the spar deck was too dense to prevent the crew working the ship. On the main deck the passengers occupied space from the foremast to the mizzenmast, the main deck was closed up from forward till near the engine-room. There were bulwarks about five feet high, the spar deck was about 10 feet from the main deck, the opening above the bulwarks was about 3 feet. I have been in the *Sir John Lawrence* in monsoon weather; the seas broke in through the open space above the main deck bulwarks once in a way. I have seen the seas break on when there was a big crowd of passengers on the main deck; there were women and little children among the passengers. I never saw any of the passengers injured by the force of the sea. Captain Irvine was about 60 odd years of age.

*To Captain deSmidt*—I never saw any of the rivets or bolts leak in my time. I never saw any of the rivets taken out; I never heard any one speak about the plates being very slight; the engines never gave us any trouble during the voyage. We never had to lie to on the way to Chandbally or back on account of a defect in our engines. I do not remember having anything to do with a defective condenser. It is my duty to make myself acquainted with every part of the engines. I saw nothing defective about the condenser. I saw it opened, not exactly in perfect order; it was an old condenser, there were no new tubes put in my time.

*Cross examination to Mr. Orr.*—I did not measure the thickness of the plate.

*To the President.*—I do not hold any engineering certificate. The *Sir John Lawrence* was the only steamer I worked on as engineer, before and after that time my duties have been always on shore. I am now an assistant at the water-works. I left because I wanted more pay and they would not give it to me.

JAMES OLIVER THORPE.

*Henry Lindsay sworn saith to Mr. Kilby.*—I am a foreman, in the Rivers Steam Navigation Company. Messrs. Macneill and Company are Agents of the Company. Mr. Young is the Marine Superintendent. I remember Mr. Young ordering Mr. Neustein to have wooden templates made for the lip-guards to the scuppers: these lip-guards were made of cast-iron, I think at Messrs. Burn and Company. At the second survey Mr. Bushby and Mr. McKellar came on board and examined the scupper pipes, all of them. I was walking round with the surveyors. They said the scupper pipes were all right, and that the new lip-guards need not be put on. Mr. McKellar said this. Mr. Neustein had left the ship. Just before Mr. Neustein left there had been a survey while the ship was in dock. Shortly after Mr. Neustein had left there was a second survey. It was on this occasion Mr. McKellar said the new lip-guards need not be put on. I once put a patch on the *Sir John Lawrence* on the port side: this was in October last: it was a small patch on the port bow. The hole was a slit about 4 to 5 inches long, about an inch and a half wide. The plate was a quarter of an inch thick. I know nothing of the thickness of the plates of the *Sir John Lawrence* except what I have mentioned. I have been in the Rivers Steam Navigation Company's service since 1871.

*To the President.*—I repaired the windlass; that was after Mr. Neustein had left. It was in October. There was a bracket broken at the bottom, and the whelp was jammed on the shaft I put on a new bracket. I repaired the winches. I took the windlass to pieces, the whelp was jammed on the starboard side. I took the windlass to pieces while the ship was in dock; the orders were that the vessel should come out of dock, so I put back the windlass as it was before. The ship came opposite Koila Ghat. I then a second time took the windlass to pieces and put it right. I was ordered to mend the windlass the very morning Mr. Neustein left the ship. I put it right that very night. I took it down in the afternoon. The oil hole was jammed, that was all that was wrong with the windlass. This list No. (1) was given to me by Mr. Young when Mr. Neustein was still on board. Mr. Young told me to carry out all the repairs mentioned in list (1). I did the repairs indicated in items (2), (9), (13), (21), (22), (23), (4), (14), (17), (7), the gipsy which works the messenger chain (it purchases the anchor by steam) was worn. A new one was made by Burn and Company, and put in after the first trip the vessel had after the survey. The steamer made one trip with the worn out gipsy. I fitted in the new gipsy myself. I left Messrs. Macneill of my own accord in April for an appointment on board a boat making voyages, there was no vacancy. I then left Messrs. Macneill's service for about two months. Mr. Young took me on in June, on the 9th June, and I am now in their service.

*Cross-examination to Mr. Orr.*—I first joined the workshop at Garden Reach on the 18th September 1886. I went on board the *Sir John Lawrence* in September and October that year before she went into dock. Once or twice I was sent by Mr. Young on board. He sent me to the Chief Engineer to see if any work was to be done. When I went by myself I saw Mr. Neustein on the poop. Mr. Neustein never spoke to me, never came near. Mr. Neustein never spoke to me about the state of the scupper pipes. Mr. Neustein never drew my attention to holes in the scupper pipes made by boat hooks. In 1885 I was second engineer of the steamer *Behar*. This is the letter which I wrote to Mr. Young, letter put in and marked No. (6). No one had drawn my attention to the state of the windlass before I saw it when the



ship was in dock. It is the Chief Officer's duty to look after the windlass and see that it is kept in order. The windlass was dry ; there was no oil at all. The windlass had been neglected, not looked after.

*To Captain deSmidt.*—I did work at suction valve and seating of the after circulating pump. The cast iron grating was broken ; there was a brass grating on. Mr. Young went on board, examined and condemned the old brass grating. He ordered the Chief Engineer to make a tem-plate, one in two halves, and angle iron all round. The grating was broken by pressure of water, not worn. The middle part of the seating was all broken; the side flanges were all right. There was left an inch of metal on the side of the landing ; the middle part was broken. All the pumps in the condenser were renewed in dock. I put a copper pipe into the feed pump chamber. A new brass grating was put in. After these repairs the condenser worked all right. Mr. Young sent me on board to enquire if the condenser was working all right. The Chief Engineer said "Yes, no trouble." The landing was left as it was broken. A false brass grating put over the old landing.

HENRY LINDSAY.

*Niel Macdougall sworn saith to Mr. Kilby.*—I have been on board the *Sir John Lawrence*. I am a foreman carpenter. At that time I was in Macneill & Co.'s service. It was part of my duty to go on board the *Sir John Lawrence*. When sent I saw the ceiling of the ship ; it was in very good condition ; it required repairs. I was sent by the Superintendent for to repair it the last time the ship was in dock in October 1886. Some of the planks were gone and required replacing. This was in the fore hold. I saw the plates of the ship in the fore hold and the frames ; they seemed in fair condition. I noticed no rust. The ship was thoroughly repaired in 1884. The ceiling was repaired in 1884. Most of it was new. I cannot say whether the part I had to renew was old or new ceiling. I put on the covering boards of the spar deck in 1884. I put the ceiling on in 1884. I was then in Macneill & Co.'s service. The covering board planks were all new except a piece round the quarter round the stern of the ship. I did not see any of the stanchions were loose. I did have a look at them. The gangway boards were morticed into the covering boards. I cannot say whether they were slack or not. I saw a boat on board which would not float when the ship was coming out of dock the last time. I do not know whether this was before or after the last survey.

*Cross-examination to Mr. Orr.*—I went into the fore peak, the last time the ship was in dock I did not examine the plates or the frames. I was working under Mr. Young when the *Sir John Lawrence* was repaired in 1884. I saw the main deck laid and the upper deck laid ; the portion from the bows to the cabin was new, the upper deck was all new, the covering boards were of teak-wood. I did not see any of the stanchions loose. The rigging is fastened to chain plates rivetted to the outside of the ship. I cannot remember whether the rigging passes under or over the top rail on the open deck ; it went outside a part of the rail. I could lean against the rails with safety. I was not afraid to lean against them. There was a rope netting painted over, that was all done after the ship came out of dock in 1884, the netting was made of new material. I did not see anything wrong with the netting when I was last on board. The covering board and the stanchion ought to last fifteen or twenty years. I cannot say how long the netting would last. That boat which would not float was taken away to the yard, another boat was sent to take its place ; this was in October after the ship was in dock. A new boat, a gig, was sent to replace the old boat. I left Macneill and Company's service in January last. Up to that date I did not see the new boat come back to the yard : they were chipping the hull of the *Sir John Lawrence* when I was working on board of her in 1884 ; the chipping was going on all round the hull of the ship inside ; the inside was painted after the chipping. I cannot say whether anything was done to test the thickness of the scantling. I saw some of the ship's plates drilled through ; that was in 1884. I have seen this done in the fore-castle when I was putting in the hawse chocks ; they were bored for the fastenings of the hawse chocks, the plates were about  $\frac{3}{4}$ ths of an inch thick to half an inch. I did not measure the thickness.

*To Captain deSmidt.*—Everything was taken out of the ship amidship at the time of the repair of 1884. I cannot say whether cement in the holes had been removed. I cannot say how many plates were taken out of her and new frames put into her. There were some new plates put in about the engine-room. If water got in between the stanchion and the wood work, the latter would be apt to rot, and then the stanchion would not last so long ; the stanchion was driven right through the waterway ; the bottoms of the stanchion were fitted to plates which with four screws were screwed down to the waterway ; there were two bolts and two screws to each stanchion.

*To Mr. Kilby, re-examination.*—I could see the men working at the chipping—native men ; they scraped and chipped.

N. MACDOUGAL.

*George Adolphus Robertson sworn saith to Mr. Kilby.*—I am Superintendent of the Port Police ; it is part of my duty to see that passenger ships carrying passengers to Chandbally are inspected. It is the duty of the native officers to go alongside the vessels in their police boats, to remain alongside from the early evening till the vessel leaves port the following morning, to count the passengers embarked, and the following morning after the vessel leaves port to give in their report, the time that each of the steamers left

their mooring, the number of passengers carried, and to report any accident, if any, occurring during the embarkation. The report is made to the Inspector of the division. The Inspector notes the information in his daily register of cases, and it is part of his duty also that during the night immediately to the early morning when the steamers leave their moorings, to see that the native officers of the police are alongside the vessel, and are on the alert. I have never prosecuted any of the steamer captains for having too many passengers on board. The duty of counting passengers falls upon the sergeant of Police on Rs. 35 a month; he, however, can only attend to one ship; the other two passenger ships which start at the same time have their passengers counted by a corporal on Rs. 10 or Rs. 12 a month. During the Dole Jatra and the other three or four festivals in the year, the rush of pilgrims for Juggernath is very great. On several occasions it has been reported to me that the maximum number having been reached, no further passengers were allowed to go on board. There is only one Inspector, Mr. Driscoll, for that division. There were no extra precautions taken by the police on the occasions when the rush of passengers were great, except that the inspector visited the police boats oftener in the night. When the rush of pilgrims is great, the passengers begin to go on board about 6 p.m. before sunset. They continue going on board till the moment the vessel leaves. The police never go on board the vessel at all. The Inspector may do so; there is a light all night on the gangway; there is only one gangway. A big country-boat is placed alongside the gangway as a landing stage; the passengers coming in smaller boats are embarked on the stage of the big country-boat, the police usually only remain on the big country boat. I have seen this. I have visited the spot at various times throughout the night. I usually found my police officer on the big country boat. The passengers are counted by the dinghy load. Most of the boats carry ten passengers, two boats carry twenty, and four or six fourteen. The passengers in each boat are counted, and then the boat is tallied by a stroke. Those tallies have never been checked or their accuracy tested during the 13 years and seven months I have been Superintendent of the river. I have found that the vessels seldom could get one half the number of their passengers, except on festival days, when they would get about the full complement. I also know that the passengers would have to be checked again at Chandbally, where there is a landing stage, and more easy to count them. I did not test the accuracy of the counting on festival days, when the rush was great for that reason. I had every confidence that my men did their duty accurately. I have never been to Chandbally. On the 25th of May the following entry occurs in the register case book, No. 1356:—The S.S. *Curlew*, *Tyrone* and *Sir John Lawrence* left port at 4-55 A.M., 5 A.M., and 5-10 A.M., with 573, 886, and 735 passengers, respectively, for Chandbally. The *Sir John Lawrence* was licensed to carry on that occasion 735 passengers; she therefore had her full complement on board. The counting officer was Corporal Sahadeo Tewarry; his salary is Rs. 12 a month. All three steamers had their full complement of passengers. It was reported that passengers had been refused admission on all three steamers.

G. A. ROBERTSON.

Case adjourned till tomorrow at 12-30.

C. H. REILLY.

*The 29th July 1887.—George Adolphus Robertson. Examination continued to Mr. Kilby.*—The police officers counting the passengers on board the *Curlew* was Sergeant Ram Golam Singh, and Corporal Mungli Khan counted the passengers on board the *Tyrone*; that is how I understand the report. Ram Golam gets Rs. 35, and Mungli Khan Rs. 16 a month. I cannot say when the large country boat used as a landing stage goes alongside. I have seen it lowered the evening after sunset alongside. The gangway ladder is down all day. There is nothing to prevent native passengers from going aboard before the country boat goes alongside. In former years I used to see a crowd of small boats all round the vessel mostly towards the evening, and when there would be a rush of passengers, men with tickets have come to me on the day following the starting of the steamer, and have shown me their tickets, and have complained to me that they had not been allowed to go on board, although they had these tickets. From this I infer that persons without tickets must have been admitted on board before the passengers with tickets went alongside. People with tickets have an idea that they can go on board up to the moment before the steamers. When they get alongside they are often unpleasantly undeceived. I have known instances when boat loads of passengers have been turned away from the side of the ship between the hours of 3 and 5 p.m. The ship people I believe prevented these boats going alongside. I have seen boat loads of passenger start for Koila Ghât and after a while return in the same boat. Some of them have complained to me that they had not been allowed to go on board, although they had tickets, but had been told to return later on in the evening. I have not known of instances where boats have been allowed to transfer their passengers on board the steamer before the time. During the Gunga Sagar mela passengers go on board the steamer from all points in the port of Calcutta. They even go, hundreds of them, by train to Diamond Harbour to catch the steamer there. These remarks do not apply to the Chandbally steamers.

*To Captain de Smidt.*—I do not think boats go alongside on their own account while the vessel is in motion. The country-decked boat used as a landing stage has been in use for the past two to three years.

*To the President.*—There is an order that passengers arriving from Chandbally should be counted before being allowed to disembark. This is done on every occasion. It is recorded

in the same way. The passengers are counted by the boat-load. It would be impossible to count by the heads. We discovered that boat-loads of passengers were landed at Garden Reach. I issued a proclamation forbidding this, and we have prosecuted boat manjees for breach of the rule. The boats whose duty it is to count the passengers await the arrival of the steamers at Koila ghat. The police at the Hastings thana have orders to arrest any boats attempting to go alongside while the vessel is still in motion. Some passengers may occasionally get ashore before the steamer brings up at her moorings. The matter of counting passengers was considered by Sir Stuart Hogg, at that time Commissioner of Police. Having knowledge, he wrote to Government suggesting the sending a police officer on board each steamer during her voyage to and from Chandbally. At present, I consider, I do the best I can with the materials at my disposal. The labour of counting the passengers can be much more efficiently done, especially if the steamers were compelled to take their passengers on board over a landing stage. When the tide is strong, it is, in my opinion, positively dangerous for passengers to be taken aboard in boats. I can only remember one or two cases where deaths have been reported to me. I have heard that the body of a passenger, if he happens to die on board after the vessel started for Chandbally, would be thrown overboard.

*Cross-examination to Mr. Orr:*—I don't believe that six bodies could be thrown overboard between Diamond Harbour and the Garden House without the matter being reported to the Port Officer. The crew would talk about such an occurrence if it ever took place. It would not be possible for boats to come alongside and discharge their passengers through the port holes without the police knowing of it if their boat happened to be there. Mr. Neustein came to me in September 1886: he talked to me about the prosecution I had instituted against the *Sir John Lawrence* for starting before daylight in December 1885. Mr. Neustein said to me that he was now prepared to give evidence against the steamer in any future prosecution which I might take in hand. That on the previous occasion he had given evidence on behalf of the steamer, and that he had sworn that it was daylight, and that he could see for miles: he was now prepared to assist the prosecution. I thereupon said how about the log, because in 1885 Neustein had produced the log as written by himself. To this Neustein said that he would make the log all right. His own words were, as far as I can remember—"I will suit the log to the prosecution." I said to Neustein you better clear out of this. You will be getting yourself into trouble. This interview took place about a month before I went on leave, which I did about 3rd October or the 4th October. Neustein came to me in the Police Office. It was some time in the afternoon I warned the Inspector, Mr. Driscoll, at the same time.

G. A. ROBERTSON.

*Shahadeo Tawarry solemn affirmation, saith to Mr. Kilby.* I am Corporal, Second Division River Police; my pay is Rs 12 a month. I remember the last time the *Sir John Lawrence* went out to sea. I was on duty on that day to count the passengers who boarded that vessel; for the passengers there was only one ladder, there was another ladder on the other side down for the captain's use. I went alongside in my police boat on the starboard side, close to the passenger ladder. I could not see the ladder on the port side; no boat went near the port side ladder, I can swear to this. I went alongside at 6-30 p.m. I stayed till the next morning at 5-10 a.m. I stayed there all the time. I was awake on watch counting passengers all the time. After 3 a.m., no passengers came on board. I cannot say whether there were any first class passengers or not. On the day when the passengers go on board the port ladder is drawn up, so all the passengers go on board by the starboard ladder. Before my boat came alongside there were no passengers on the ship. I went on board when I first arrived and walked around the ship to see whether there were any passengers on board. I went all over the deck. The *Sir John Lawrence* did not begin to take passengers in till half-past 8. I am quite sure no passengers went on board before half-past 8 p.m. It got dark after 7. I did not see any passengers on board before half-past 8. A big country-boat was used as a landing stage; one dinghy comes up at a time; there were a number of dinghies around. I counted the passengers myself throughout the time. I stood in the log boat all the time and counted the passengers. The *Sir John Lawrence* was allowed to carry 735 passengers. By 3 a.m. the complement was reached. Eight or ten dinghy loads of passengers went back to shore; they had been refused admission by me. They went away saying they had got tickets. They were making a noise, but I prevented them going on board the steamer. I told the seacunny when the complement was full, and the Captain ordered the ladder to be lifted up. No boatmen turned away before 3 a.m. It is not true that a boat load of 20 passengers were refused permission to disembark on board the *Sir John Lawrence* by some *sahib* at 9 p.m. It is not true that the *sahib* said at 9 p.m. It is so full that I won't let you come aboard. I did not go on board again before the steamer started. Occasionally a boat brings more passengers from the shore than she is entitled to carry, but this does not happen often. The boatmen would be arrested. When a boat licensed to carry 10 passengers comes alongside, I make a single down stroke; if any boat comes alongside containing more than 10 passengers, I make the down stroke to represent the 10, and then the number in excess to the side of the down stroke; if six passengers come in a boat I write down the six in numbers. There is no accurate account kept of the passengers coming from Chandbally. We approximate the number of passengers who arrive from the boats used. We ask the boatmen how many passengers they have on board. All the passengers come down the ladder; they also come



down any other way. They are in a great hurry to get ashore. Boats are not allowed to go near the steamer till she is fast to her moorings. I am off duty the whole of the next day. When the passenger dies out of port limits the body is thrown overboard, if within port limits it is landed and made over to the police by the Captain. Now and again a small boat brings off passengers from other ghâts, but the bulk of the passengers come on board from Koilah Ghât.

*Cross-examination by Mr. Orr.*—Before half-past 6 on the last occasion I saw passengers in large numbers collected at Koilah Ghât. I know the *panicalla* of the *Sir John Lawrence*. I did not see him on that day at the ghât. I have seen the *panicalla* of the *Sir John Lawrence* keeping the passengers together on the ghât. We invariably ask the officers on the ship how many passengers they brought two or three hours after the ship comes in. We do this with the double object of comparing the information with our own attempt to count, and to find out how many passengers really came in the steamer.

बहदुर तेवारी,

BEHARY LALL PAUL,

*Interpreter.*

*Bhoobun Kishen Ghose solemn affirmation saith to Mr. Kilby.*—I took thirty-three tickets for passengers in the *Sir John Lawrence* for her last voyage. Ten first class and 23 servant tickets. I went to the *Sir John Lawrence* with four women first class passengers, and one native woman servant. I went on board; it was light enough for the Captain to read my tickets. We went from Koilah Ghât, and the Captain lowered the ladder for us on the port side of the steamer and we eventually, 45 of us went up by that ladder. That was my party. They were distributed in various boats; thirty-four went on the steamer, and eleven returned to shore. I did not notice any police boat on the starboard side of the steamer. The port ladder was lowered for us by special arrangement I had made with the Captain on the Tuesday previous. We went to the port side to avoid the rush. We went on the spar deck and then to our reserved cabin in the saloon; we left the women there; I remained on board till gun fire, nine o'clock. I left at gun fire. During the time I was on board I saw many passengers. I was standing on the poop deck. I went forward also into the third class passengers compartment. I saw passengers on the top deck and the lower (main) deck; the passengers were seated so close together there was no room for another person to get between, their bodies were touching, their shoulders rubbing, the passengers were huddled together in no order. I could not get past them, though I tried to do so. I have been describing the state of the passengers in the upper deck. I looked down on to the main, it was as far as I could, quite as densely packed with passenger as was the upper deck. I did not, however, go to see. The Captain was trying to make more room on the upper deck by compelling some of the passengers to go on the main deck. The passengers were unwilling to go, he seized some by the hand and pushed them; the majority of the passengers were women—three women to two men. I saw no children. The Sobha Bazar Rajas are my relations. When I came away there was a crowd of dinghies still round the starboard ladder. I left by the same ladder I came up. Eleven of us returned in the same boat.

BHOOBUN KISHEN GHOSE.

*Lawless Mathieson sworn, saith to Mr. Kilby.*—I am Assistant Harbour Master. I took the *Sir John Lawrence* out of dock in October 1886. I recollect her windlass, the whelp of the starboard side of gipsy of the windlass was jammed and would not work. I wanted to use windlass on the starboard side when moving the vessel; I found I could not do so. It is not usual to have length of the chain cable arranged on deck when the ship has a windlass of the kind possessed by the *Sir John Lawrence*. I cannot tell for certain whether there was room to so arrange the cable before the windlass.

*To Captain de Smidt.*—I moored the vessel with two hawser chains and two stern chains. I had 25 fathoms on my port chain, and 7 to 10 on the starboard chain. After 30 fathoms and 15 fathoms. I noticed no defect in the cable, none of the links with studs. The cable seemed in good working order not worn out the starboard side of the windlass was workable sufficiently to heave the starboard chain tight. I was doubtful about the starboard side of the windlass, because Mr. Neustein told me not to let go the starboard anchor, because the windlass was jammed on that side. I did not see anything the matter with the bowsprit, the chain was taken out of the port side locker only. I took no chain out of the starboard locker, because I could not heave it up out of the locker by the gipsy. I did not consider that windlass in a fit state for a vessel going to sea.

*Cross-examination to Mr. Orr.*—I do not know whether the vessel had been surveyed. I do not recollect saying to anyone that for a ship which had been surveyed she was in a rascally condition. I do not recollect making that remark to Mr. Neustein.

LAWLESS MATHIESON.

The Court adjourned till Monday at 12-30.

C. H. REILY.

*The 1st August 1887. Bunko Behary Bose on solemn affirmation saith to Mr. Kilby.*—I went on board the *Sir John Lawrence* before she started on her last voyage with my brother's eldest daughter, the eldest Ranee of the late Rajah Oporbo Krishna Bahadoor of Sobha Bazar, and some other neighbours, one man servant and three maid servants. My three nephews accompanied me also, but they and one servant returned to shore with me. We went on board about candle light; the steamer was lighted with lamps when I went into the saloon. About 7 P.M. went up the ladder on the port side. The passengers, except the servants and some of the neighbours had first class tickets. At first I tried to get on board by the starboard ladder, I found this impossible through the great crowd of boats and people. I then ordered my boatmen, we had two boats, to go to the port side of the vessel. There was boats placed as a landing stage on the port side. I did not see whether there was a boat placed as a landing stage by the starboard side ladder. I noticed no police boat with policemen in uniform among this crowd of boats. No one tried to prevent us getting on board by the port ladder; I saw no one else except our party go up the port ladder; we came down by the same ladder. I kept on the saloon. I went up above the saloon where the servants were. I could see that the spar dock was full of people. They were packed close to each other, there was no room to move about among them. As I came back to shore the gun fired and it was nine o'clock. We started from Koilia Ghât and returned to the same ghât. I did not see a police boat near the steamer at any time.

*Cross-examination to Mr. Henderson*—On the previous day, I arrived with a letter from Mr. Orr, went on board the steamer and I saw the Captain, and it was then arranged that I should bring my party to the steamer on the Tuesday, and that they should go on board by the port ladder. I saw more than 20 boats on the starboard side. I can swear I saw no policemen in uniform.

BUNKO BEHARY BOSE.

*Ashutosh Chatterjee on solemn affirmation saith to Mr. Kilby.*—I went on board the *Sir John Lawrence* the night before she went on her last voyage; it was a Tuesday, I think, the 24th of June. We started a party of five boats to get on board at half-past 5 P.M. We went alongside the starboard side. We were not allowed to go on board. We were told to go back to the shore and come again when we were called. We went back, our boat remained alongside; my father was in that boat. It was night when the steamer whistled. Most probably 8 P.M., hearing the whistle, the four boats went again towards the steamer. The fifth boat passengers had not gone on board. We all went on board by the starboard side ladder. One party consisted of between 40 and 50 persons, men and women, of these about 30 were intending passengers, four men and the rest women. We tried to get first class tickets, but failing to do had to take deck passages. Our party were on the upper deck grouped round the foremast. I left after gun fire. There were some people on board, not very many, when we went on board. When I left at gun fire the deck was awfully crowded, it was so crowded that each person was struggling for his own place. Those who came on board first were sitting, the later ones were standing. I saw no one lying down. There was no room, so far as I could see, for persons to lie down, the persons sitting were side by side, their bodies touching. This was the state of things from the ladder to the fore mast on the upper deck. I heard frequent cries of distress, all the females were crying. I peeped down into the lower deck and saw that it was full of passengers also; they were less crowded than the people on the upper deck. I can form no idea of the number of passengers on board. The passengers were very cruelly treated by the Captain and lascars. They caught the women by the hand and pushed them along the deck. Some of the women fell during the pushing (this last answer in reply to a question by the Court) I saw no policemen in uniform in or near the ship, either going or coming. I cannot recollect whether the passengers were counted. The Captain was standing in the boat with a whip, it may have been a stick; if anybody tried to come down from the steamer he beat them with the stick. The Captain was standing on a large country-boat; my uncle told me it was the Captain, he was a stout officer.

*To the President.*—We took up while we were there the space wanted for 40 or 50 passengers, besides the men who accompanied me back to the shore. I did not see any person come away. None of us were stopped from going on board, because we were not going to travel on the steamer; there were only two or three boats left round the vessel when I came away.

*Cross-examination to Mr. Henderson.*—Only eleven of our party came ashore. More than 29 or 30 of our party went on the steamer. They had tickets. My uncle had the tickets, Jogendro Nath Chatterjee. I do not know how many tickets he had. My uncle in reply to the Captain said I have tickets, he mentioned no number. My uncle held them up in his hand; I was nearly two hours on board. There were lots of dinghies about when I went on board; when I left I only saw three or four dinghies. I did not go to the other side of the ship. I did not see anybody standing alongside the stout Captain, he was stout. I was not flurried when I went on board; as cool as I am now. The cries of distress I heard were *Bupre bachon o go; Morria geylam go; Dada cothai gello*. I heard these cries on board the steamer. I did not hear these cries before the passengers got on the steamer. I saw no women fall; I heard that they fell. I did not say that the Captain was counting the passengers.

ASHUTOSH CHATTERJEE.

*Robert Bushby, sworn saith to Mr. Kilby:—*I call myself Engineer-Surveyor to the Port Commissioners. I passed my examination as a Surveyor of steam-ships, to the Board of Trade. I was appointed in 1874 Shipwright and Engineer-Surveyor to the Board of Trade, and I practiced as a Surveyor under the Board of Trade till April 1882 in London, Hull, and the last six years in Liverpool. The Board nominated me as Engineer-Surveyor to the Port Commissioners, I am paid by salary. I get Rs. 1,000 less income-tax. My duties are to inspect steam-ships under Act, VI and VII of 1881, that is, all sea-going and inland steam-vessels which come to the Port of Calcutta. All coolie emigrant ships, under Act XXI of 1883, all ships and steamers applying for register under the Merchant Shipping Act, any ship reported to be unseaworthy within the Merchant Shipping Act of 1880, and any other duty the Commissioners may order me to do. The fees for the performance of these various duties are paid to the Port Commissioners; they amount about Rs. 20,000. I have an assistant, Mr. John McKellar, he is my subordinate, and has to obey my official orders. No one supervises my work. I am responsible to the Government through the Port Commissioners, my immediate superiors. My duties in surveying a ship are to survey hull, the machinery and equipment of both iron and wooden ships. When in England I passed an examination which included such subjects as rigging and gear. If an owner intends building or repairing a ship which he intends to use hereafter as a passenger ship he generally calls upon me to survey the ship before it is launched. Sometimes I am asked to visit the vessel before the building is complete; this is done to save expense in alteration later which I might call for were I not satisfied with the way the ship was built. My interference is limited to seeing that the ship is built strong. I have nothing to do with her shape. It is left entirely to my discretion to decide whether a ship is strong enough to be a passenger ship. The owner can appeal if my requirements are in his opinion too stringent. If it happens that my requirements should not be stringent enough there is no one to call my action into question at all. I have known the *Sir John Lawrence*, I think, since 1884. I came out here in 1882. I first came out under the impression that I should be a surveyor of steamships, the same sort of duties I had been doing in Liverpool, which was confined entirely to passenger steamers, including hull and engines. In the beginning of 1883 I got the survey of emigrant ships added to my duties. I knew the *Sir John Lawrence* before she was repaired when she was lying up in the river here. I was consulted whether she should be repaired or not. I was asked to report on the condition of the vessel by the Port Commissioners. I made a report, and the report went through the Port Commissioners. I think Mr. John Mackinnon consulted me what amount it would take to repair the *Sir John Lawrence*. I did not know whom the ship belonged to at that time, I was not told. I had no conversation with Mr. Mackinnon before the official application as to what was required to be done in regard to the repairs to obtain a certificate. I sent in a written report, it must be filed in the Port Commissioners' office. I cannot tell from memory when the *Sir John Lawrence* was built, she was then about 18 or 19 years old; she was built in 1865. The *Sir Lawrence* was an extra strong ship as originally built; her scantling are above the requirements of Lloyd's A. 100 class, her keel and garboard strake were exceptionally strong and her plating was quite  $\frac{1}{8}$ th heavier and the sheer strake was  $\frac{1}{8}$ th heavier than ships of her dimensions and tonnage would be built in the present time. Her iron was of ten per cent. better quality than they make iron now for ship plates. The requirements of a ship classed 90 A.1. Lloyds for the garboard strake would be F16 the thickness of the garboard strake of the *Sir John Lawrence* was  $\frac{1}{8}$ th. The sheer strake in a ship classed 90 A.1. at Lloyd's should be  $\frac{1}{8}$ th; on the *Sir John Lawrence* the sheer strake was originally  $\frac{3}{8}$  or  $\frac{1}{2}$ th. The bilge strake on a ship classed 90 A.1. at Lloyd's should be  $\frac{1}{8}$ th. The bilge strake of the *Sir John Lawrence* was  $\frac{1}{4}$ th. The side plating in a ship classed 90 A.1. Lloyd's would be  $\frac{1}{8}$ th and the same thickness at the flat at the bottom. For the *Sir John Lawrence* they were  $\frac{1}{4}$ th respectively. I say this from having bored her in those parts.

ROBERT BUSHBY.

Case adjourned till to-morrow, half-past 12.

C. H. REILLY.

*The 2nd August 1887. Examination of Robert Bushby continued to Mr. Kilby.—*These are the plates on the hull proper below the main deck. When I surveyed the *Sir John Lawrence* in 1884, she was then in dry dock and the hull stripped entirely, the boilers taken out, the decks taken up, also the ceiling in the hold. The cement was all taken out of the boiler compartment, all the frames and floors in that compartment were taken out; the engines were not taken out, they were stripped and overhauled generally. The frames and plates were completely exposed. I examined each frame and chalked those which had to be taken out. In doing this I was guided by Lloyd's rules for A.100 class of vessel. Those of the plates which were below the thickness required by Lloyd's rules were doubled in each case, quarter inch plates were rivetted on to the old plates and on to the frames. In the boiler compartment the plates which are mostly liable to deterioration, the frames were taken out altogether, wherever a plate gave indication of having been worn it was bored at the thinnest spot. When the frames were removed, I could tell what the original thickness of the plate must have been. I bored the various plates. I should think I made quite a hundred holes in various places. I cannot say what was the thickness of the plates I bored into. I kept no note of the thickness of each plate, but as I went along I indicated with a chalk what had to be done in respect of each plate. If the chalk mark happened to be rubbed out I would have discovered it in a day or two I would then have been more strict

in seeing whether any of my suggestions had not been obeyed. If I discovered anything of that sort it would have resulted in a very severe survey. I visited the *Sir John Lawrence*, I should say about a dozen times at intervals of a week between each visit. If my suggestions had not been carried out, I should have heard of it. The Port Commissioners do not receive a fresh fee for each of my visits. Only one fee for the whole survey. An ordinary survey of a ship necessitates three visits, the fee is the same in both cases. Each visit, except the last, takes up about three hours; the last visit when the ship is afloat and under steam takes about half an hour. When the survey of a ship is held while the vessel is afloat I make at least 12 visits during the survey. The scantling of the *Sir John Lawrence* would have passed 'A.1. at Lloyd's, as she was originally built. When I saw her in dry dock in 1884, her wear and tear were not more than what a ship usually might be like. She was not more rusty nor corroded than I expected. The frames under the boiler were done for, worn out and required renewal, they were renewed. A ship of the kind as the *Sir John Lawrence* having once been thoroughly repaired ought not, if she had been well kept up in the interval to have wanted thorough repairs for 12 to 15 years. She ought regularly to be cleaned and painted once in four years, chipped and painted every four years. This would depend on the nature of the cargo and the trade the ship was in. When I first saw the *Sir John Lawrence* she was laid up, had no paint, and was very rusty. I cannot tell how long the steamer had been in the state I saw her in. The fore and mainmasts were good. I think the mizzen was renewed, but I am not sure. She had entire new rigging, the mast were taken out altogether, looked at and put back, that is, the main and foremasts were returned to their places. The main deck and the upper deck were renewed with new wood. Some of the main defective where defective were renewed, I think the forward bulkhead was bad at the bottom and good above. There were four bulkheads, a collision bulkhead forward, a collision bulkhead aft, a bulkhead at the after part of the engines, and the forward bulkhead. The collision bulkhead forward are, as far as I remember, all right, the collision bulkheads were not changed. The bulkhead in the aft part of the engine-room was all right; both the collision bulkheads were carried up to the main deck, so were the others, no bulkheads were removed. There was a bunker bulkhead, not water-tight, at the fore part of the boiler, between the boiler and the bunker, that was bad and was renewed. There was also a partition bulkhead originally between the engine and the boiler space, half of it had been taken down, the bottom half to let in air. The removal of either of the bunker bulkheads or the partition bulkhead would not weaken the ship, they were made of very thin plating. I examined the plates in the forepeak, some of the plates were thin, those that were doubled. The rest were sufficiently strong, sufficiently thick. Thick enough to comply with the rules I follow in making my survey. Sufficiently thick to allow the ship to be classed as 90 A.1. it would not have been sufficient for class at Lloyd's A.100. I found the engines shewing the ordinary wear and tear of ten years use. Engines of that sort with care should last 40 or 50 years. The engines were left as they were after the usual overhauling. One new main boiler and a donkey boiler was supplied. The *Sir John Lawrence* had a pump to each hold, a hand pump; she had engine bilge pump, that pump was attached to the main engine and also to the donkey engine. These pumps were after survey in perfect order. There was a steam pump from the donkey also a Downton pump for putting out fires, both these pumps would be efficient as pumps as fire engines on the spar deck after it was added. Downton pump was a portable pump, if carried up it could be worked on the spar deck if the suction hose and delivery hose were in perfect order. Originally the *Sir John Lawrence* had a forecastle deck and a poop, the forecastle deck extended aft for another 25 feet of the poop as a shelter or hurricane deck. There was a main deck from stern to stern forward of the engine room only; there was a between deck, the alteration made was that the upper deck was continued till it joined the poop forming one long deck. The necessary beams to support that deck were added, the beams, were of iron. The extra weight of the deck and beams would be from five to six tons, there were bulwarks on each side in the space between the poop and the bridge deck, the bulwarks originally were 4 feet; there was the topgallant rail which practically made the bulwarks five feet high. The poop was not shortened or lengthened when the spar deck was continued; the topgallant railing was taken off and the bulwarks kept at the same height they were before; the upper deck when added to became a flush deck from stem to stern there were no bulwarks round the upper deck, there were only rails; the upper deck is about three feet narrower than the main deck, the sides being rounded. The rails stood as a covering board, the rails protected the passengers from falling over board; they took the place of the bulwarks on the main deck. Only spray could ever come on to the spar deck. No sea could be shipped so high up nor solid water. On the main deck after the repairs the protection from weather was as to the poop, the sides of the house, and forward the sides of the shelter deck closed in at the sides. There were also the bulwarks amidships about 25 feet between the poop and the shelter deck house. There were no shutters or curtains on the main deck. There was a double awning on the spar deck and side screen fore and aft as far as the space measured for passengers, further forward than the foremast. The space measured off for passengers on the *Sir John Lawrence* was—

- (1) The whole of the main deck from the forepart of the poop to the forecastle.
- (2) The between decks, and
- (3) The upper deck.

She was licensed to carry in the between decks the number of passengers represented by the superficial space of the deck divided by nine in foul weather, and the same space divided by six in fair weather. The superficial area was 1,620 feet, that is, from the bulkhead before the engine-room to the collision bulkhead. The number of passengers in fair weather was 270, and in foul weather 180. The upper deck and main deck together in fair weather if the 270 were carried in the between deck is 708, in the foul season 511. The superficial area devoted to passengers on both decks may be obtained by a calculation which will take some time. If the 270 are not carried in the between deck then the two decks can carry 888 fair season, 591 foul season. The ventilation on the between decks was two cowl ventilators about 16 inches diameter and two hatches; these hatches can be kept open in any ordinary weather and even in very bad weather. There may have been some bad ventilation, but I do not know. If the poop were given to third class passengers, it was licensed to carry 60 passengers in fair weather and 44 in foul weather. In foul weather the maximum number which the *Sir John Lawrence* could carry was 735, including space in all three decks, in fair weather 1,038. The *Sir John Lawrence* carried a master, one officer, 24 deck crew, three engineers, and 12 engine room crew. The crew lived in the fore-castle. The master and chief engineer each lived in a small cabin on the upper deck. The Chief officer and other engineers lived in cabins in front of the poop. If first class passengers were carried, the maximum would be  $735 - 44 = 691$  in foul weather; in fairweather 978. There is no space reserved for second class passengers, except in very bad weather, a hurricane, great seas would not wash over the bulwarks. In a heavy storm it would be safe for passengers to remain on the upper deck; also on the space where the bulwarks are. The between deck was the same deck called by that name before the spar deck was added, it still, in my opinion, remained the between deck after that addition. As regards the master and mate and the engineers, my discretion is trusted by the law with respect to the number of the crew. I consult my own discretion. As regards boats, the *Sir John Lawrence* had four under the rules framed under Act VIII of 1876. The *Sir John Lawrence* was compelled to carry four boats, a dinghy, a cutter, a long boat, and a gig, she being a steamer between 360 to 500 tons. As Surveyor, however, I insisted on their carrying, a life-boat, a long boat, a cutter and a gig. I insisted on the life-boat being put in, from my knowledge of what would be required under similar circumstances under the Board of Trade Rules. As a matter of fact, the *Sir John Lawrence* carried two life-boats, a cutter, and a gig. The tonnage of the *Sir John Lawrence* was a fraction 466 tons. I think the number of boats fixed by the rules made by Act VIII of 1876 are insufficient. The boats I insisted upon could carry  $97\frac{1}{2}$  passengers: the life-boats required five lascars, and a coxwain, cutter five lascars, and the gig three lascars. The engine room crew are generally capable of rowing a boat. I believe the repairs to the *Sir John Lawrence* cost a lakh and 20 thousand rupees. The repairs and alterations effected on the *Sir John Lawrence* would, in my opinion, make her roll less, nor did it affect her stability in the least. The Act requires that each passenger shall have 6 feet by 1; in fair weather if you packed the passengers rubbing shoulders and in a sitting position you could get 1,000 passengers on the upper deck and 700 or 800 on the main deck, that is packing them closely. In a cyclone the great seas would probably come over the bulwarks and wash the passengers and some of them might be drowned, the Captain would then close all the hatches. Four or five hundred would be able to store themselves in the between decks. If the hatches were battened down there would not be enough ventilation to keep them alive for two days; they could live 24 hours without loss of life. A couple of hundred could take refuge in the saloon. The passengers forward of the engine-room on the main deck would be pretty comfortable. There would be enough room on the poop and main deck and the fore-castle to carry the 735 passengers, the maximum number which could be carried in foul weather. There would not be a crowd of passengers in the upper deck during a violent storm, except a few behind the houses. The person working the ship would be the men at the wheel, the master, the engineer and the crew down below. I was about 10 years at sea. I do not think the captain of a steamer carrying as many passengers as the *Sir John Lawrence* would be justified in going out to sea if he knew a storm was coming on. In September 1885 I surveyed the *Sir John Lawrence* myself; this was a dock survey. I did not on that occasion see steam up, Mr. McKellar did that for me. I inspected the hull on that occasion inside and out. I found nothing wanting, every thing in order. She was properly painted and properly found, everything requisite under the Act was supplied. I am certain I put the life-boats into the water. I cannot say about the other boats. I examined all the boats. I could tell whether the boat was sound when she was hanging into the davits. I tested them with this hook, I dug a little bit out here and there, paint would hide a rotten boat, the more paint the more suspicion. I had the life-boats lowered to see whether the disengaging gear worked properly, not to see whether they could float. The next survey was in April 1886, that was made by Mr. McKellar, that was not a dock survey. I did not go near the vessel at all during the survey; he is about 35 I should say, he gets Rs. 440. The next survey was in October 1886. I surveyed the bottom on the 21st October in dock and Mr. McKellar did the rest.

ROBERT BUSHBY.

Case adjourned till to-morrow.

C. H. RILEY.



*The 3rd August 1887. Examination of Robert Bushby continued to Mr. Kilby.*—The certificate of that survey bears date the 25th October 1886; that is Mr. McKellar's signature; my signature does not appear on this document (G), though as a matter of fact I surveyed the bottom and outside of the steamer. The fact that the certificate bears date the 25th October, shows that the survey of her hull, machinery, and equipments were complete, except that after the granting of the certificate the surveyor sees the ship under steam, this is done to save the useless getting up of steam, simply for the purpose of testing the valves when steam would have to be got up later on, in order to test the steamer get out of port. Mr. McKellar surveyed the hull and equipments on the two occasions I have spoken of. He is quite competent to discharge this duty. After the 25th October 1886 there was no further survey of the deck and equipments held forming part of that survey. Mr. McKellar received a letter from Mr. Neustein and handed it over to me as soon as he got it; this was in the early part of November, it may have been in December. I was out of town for a few days some time after the letter was given to me. As soon as an opportunity offered itself, I went on board. I took with me a memorandum of the points raised in that letter. I made the memorandum myself. I made a careful inspection of all the points raised by Mr. Neustein including the patch in the forecastle, the upper forecastle above the main deck. I went into the forepeak and into the hold. I examined the forepeak; I had a careful look round with a light. I had none of the plates bored. I did not think this necessary. I saw no reason to have this done. I saw no material change from my previous survey. I had not been down the forepeak the last time the steamer was in dock. I had not seen the plates in the forepeak since October 1885. It is quite dark in the forepeak. I do not remember whether there was any water in the forepeak, there might have been. I do not remember having it pumped out. In October 1885 when I surveyed the forepeak I did it with an ordinary hand light or a "stick buttty", or native torch. Between October 1885 and November 1886, I must have surveyed over a 100 hulls. If there has been previously anything wrong with the forepeak I should have remembered it. I saw the patch in the forecastle from the inside in 1885. The thickness of the plate on to which the patch was rivetted was about a quarter of an inch thick, the plate was painted in the inside I think. I did not measure the patch. I merely looked at it. I ordered the patch to be bolted on first and then ordered the patches to be rivetted on. Afterwards I did not measure the thickness of the plate. I went through the various points of Mr. Neustein's letter and found none of them correct, except as regards two store houses which had been built on the passengers space; even in this case the encroachment of space was less than that stated by Mr. Neustein. I reported the result of my examination to the Port Commissioners, in writing. There is the signature of Mr. Duff Bruce on this letter put in and marked (H) dated 8th December 1886. This letter, put in and marked (J), bears also Mr. Duff Bruce's signature.

Mr. Kilby at this stage asks to interpose the evidence of John Moore, the Master of the *Curlew*, on the ground that his steamer is about to leave Port.

Mr. Henderson, for the owners of the *Sir John Lawrence*, consents.

Application granted.

ROBERT BUSHBY.

*John Moore, sworn, saith to Mr. Kilby.*—I am master of the steamer *Curlew*, and was such master on the 25th of May last. I left Calcutta about 5 in the morning. I first saw the storm signals at Mud Point. I was about 5 miles to 4½ miles off, when I saw the signals. I had to turn the vessel round to see them. The weather at the time was very dirty. I saw the signals in the distance at half-past 10, but did not distinguish them. I turned my vessel round about 11 a.m., then I waited till the rain passed over, then I saw the signal—an inverted cone over a ball. I believe it was No. 8. The weather looked as if the wind was going to increase, heavy rain, Mud Point bore from my steamer S.E. or S.S.E. I was in the Bellary Channel at that time leading into the Western Channel. The Bellary Channel was, where we were, about 500 yards wide. This is the channel Chundbally ships usually go by. The *Sir John Lawrence* was about an hour to an hour and a half behind us. I went on to Kedgerree, and anchored there just abreast of the Kedgerree tidal gates. I anchored about 12 o'clock noon. There was more wind than there had been at 11 o'clock, but up to that time it hung to one quarter. At eleven the wind was N.E., at twelve N.E.; it was blowing strong, not a gale. It had appearance of increasing; but with the wind from the N.E., we had great shelter here. A strong N.E. is indicative of a cyclone in May—a cyclone passing somewhere. My barometer at 11-30 was 29.59". I anchored at 11-45. The *Tyrone* was anchored about three cables to the eastward of me. The Captain of the *Tyrone* talked first by signals, afterwards by black board. All the way to Mud Point we were discussing the weather. Captain Spence said "I think I am going back to Diamond Harbour." I replied "say when; I am ready." We eventually decided to go on to Kedgerree. I would never go to sea when there is a wind from the N.E. and a low barometer. After I anchored, the *Sir John Lawrence* came up an hour after, or an hour and a half. If anything, there was a little more wind; that was the only difference. When the sun began to set, the glass began to fall. At 6 p.m. the glass was 29.45: it was blowing pretty hard. The barometer fell very gradually. All through the afternoon the weather was very thick. If it had been clear, I should have gone back. After 12 noon the weather became thicker. It was thick all day. At 5 p.m. I would have gone back to Diamond

Harbour if I could have found my way. At 5 p.m. there was every indication of a cyclone. The *Sir John Lawrence* passed us about a mile and a half off. I could not make out her passengers. The steamer was under sail, fore and aft canvas. At 10 p.m. wind blowing very hard, veering towards the East; barometer 29.38; it was falling faster. At midnight wind E. by N., blowing very hard with heavy rain in gusts; barometer 29.30. About 2.45 a.m. the barometer reached its lowest point, 29.23. We had a lull for half an hour with very heavy confused sea. We were pretty well in the heart of the cyclone at that time. At 2.30 a.m. the wind veered round to the S.E. and blew in terrific gusts S.E. and S.S.E., and continued to do so for two and a half hours. My idea is the *Sir John Lawrence* encountered the worst of the storm between the Ridge ship and False Point. I saw no wreckage I could recognise as belonging to the *Sir John Lawrence*. Towards daylight on Thursday morning the 26th the storm began to abate. At noon on Thursday the barometer had risen 29.35, less wind and sea. At 6 p.m. barometer 29.40. Wind still backing to the southward. Friday morning at daylight I went on to Chandbally. It was not very comfortable for my passengers. At one time we had them all below deck. The hatches were not on. We carried 550 on that occasion—our full complement. I went down; then it was pretty warm. There was, however, plenty of ventilation. I know the *Sir John Lawrence*. I imagine most of the passengers must have tried to go below. The awnings must have blown away. I do not think the *Sir John Lawrence* would have shipped heavy seas. She was very light in the water and very buoyant. Any vessel would ship heavy water in a cyclone. All I mean to say is that the *Sir John Lawrence* would not have shipped more water than the best ship in port. In front of the open bulwarks of the main deck, the main deck was protected by sides. There was an ash port on each side fore and aft. It was clear with alley under the deck. The passengers if they crowded there would, in my opinion, be perfectly safe. The hatches of the 'tween deck correspond with the hatches on the main deck, so that there was a continuous open space from the 'tween decks to the upper decks. I do not think it would have been necessary to batten down the hatches. As a sea-beat, the old *Sir John Lawrence* was as good as any boat which came to Calcutta. She was from 450 to 500 tons. I think her 90 horse-power would be enough to enable her to keep her own if everything was in good order. I know nothing of her equipment.

To Captain deSmidt—I did not hail or signalize to the *Sir John Lawrence*. I do not imagine the old man saw the signals. I had to turn round to see them myself. Independently of the signals I would not have gone out. Captain Irvine saw us right enough. That ought to have caused him to stay, if there was nothing else to press him on. At the time the *Sir John Lawrence* was passing us the state of the weather and my barometer told me my place was at anchor where I was. If he had stayed and some other vessel had made the passage, he would not have been Master of that ship very long. I do not mean to say that I have any special reason for saying this, but there are owners who insist on their orders being obeyed. Thank God I do not serve such. I say that eight out of ten masters of ships would have hesitated before attempting to go out to sea in such weather. There is not a ship in port which would have gone out if they had known, what I know, that they had no port to go to. I think it was a very risky thing to do as Captain Irvine did. I have been in a cyclone in 1879 and a hurricane off the Cape in 1864. I have never heard if the *Sir John Lawrence* shipped heavy water. There are as bad seas in the Eastern Channel as any I know of. I have been 33 years at sea. I have known seas breaking over the bridge of big loaded vessels which were driven through in the Eastern Channel.

To the President.—I have never seen Captain Irvine that he was not able to walk and talk with any man on the point of duty. I think he was a humane man, kind to his passengers if it had not been so, he would not have had so many passengers go with him. She was a popular vessel with the natives. I think the passengers on board the *Sir John Lawrence* must have suffered from being kept in a confined space. As to being knocked about, they pack themselves too close for that. No man with any sense would have of his own free will gone to sea. Neustein did the talk; Irvine did the work. Neustein is no sailor in comparison to Irvine. Smith, the Chief Officer, was a tear-away old fellow. He certainly would, in my opinion, have urged the Captain to go on. Smith has been a master on the same line. Smith used to do things which no one else would do. Irvine has never complained to me that his owners were hard task-masters. The only advantage that the *Sir John Lawrence* would have obtained would have been the increased number of passengers he would have secured according to her tonnage. So far as I know, I never knew Captain Irvine carry passengers in excess of the number on his own account. The panniwalla may have smuggled, but I have no reason to say so. Captain Irvine was too honest a man to have smuggled passengers himself. They are very particular in counting passengers at Chandbally. It is done over a landing-stage, one man at a time. There is no rush. I never was handed up for having excess passengers. I don't see how it would be possible for a Captain to land a portion of the passengers before he got to Chandbally without being found out. After the passengers are out the police come on board and search the hold over to see whether there are any passengers left on board. Before we take in passengers at Chandbally the police search the steamers, and then count the passengers as they come on board. In Calcutta the police come on board every ship and count the passengers. Over and over again I have had to turn out excess passengers found on board by the police, just before starting at daybreak.

*Chundra Coomar Bhattacharjee, solemnly affirmed, saith to Mr. Kilbu.*—I went alongside the *Sir John Lawrence* in a dinghy about 8 or 8-30 of the evening previous to her starting on her last voyage. I reached the ghât about 8 or 8-30. It took me some time to engage a boat. When I got alongside it was 9 or 9-30. I heard the gun fire when I was in the dinghy on my way to the vessel. I intended to go with my family and some of my neighbours to Chandbally in that steamer. There were altogether two boats which carried my party of twenty people. I saw a European and two or three khalassies standing on the side of the vessel; passengers from a boat were getting on to the steamer. The European said to me you cannot now come on board. I spoke to the European in Hindustani. I said I will be very much disappointed if I am not allowed to go on board the vessel. I begged of him to be good enough to take me on board. He said there is already a large number. I cannot take you on board. I kept on begging the European. I coaxed him to take me. He at last said if you do not listen to me I will give you a good caning. I then said what is to become of these tickets of mine. I hold both kinds of tickets: those for Rs. 3-0-6 and Rs. 5-0-6. He said you will get back your money; then the khalassies pushed my boat from the side of the vessel. I felt sadly disappointed and came back to the ghât. We slept that night in a sort of a godown near the Koila ghât, the ladies refusing to return to their homes as they had started on a pilgrimage. About 6 o'clock the other two steamers for Chandbally left. The *Sir John Lawrence* left the last of the three steamers. I got the money back on those tickets. My friends have got the money for me. I caught a Midnapore steamer that same day and went to Juggernath *via* Midnapore. I did not notice any police boat when I went alongside the *Sir John Lawrence*; there were none near me. I saw no police in uniform. The two sorts of tickets were for the same class of accommodation—deck accommodation. On Monday the price of tickets was Rs. 3-0-6, on Tuesday I had to pay Rs. 5-0-6. After that the tickets sold for Rs. 6. Many people who bought tickets for Rs. 6 could not go by that steamer. I met these at Juggernath.

*Cross-examination to Mr. Henderson.*—I bought the tickets at Messrs. Macneill and Company's office. I saw about eight empty boats; only one boat with passengers on board. That is the boat out of which passengers were getting into the steamer. I saw none of these boats return with passengers. I know the uniform of the police on the river; they wear ash-coloured or black uniform. I have seen them. The European looked like a Mr. Brown employed in Thacker, Spink and Company. The police boat is manned with nine oars and has more brass about it. I did not see any brass-mounted boats.

জিহ্মকুমার ভট্টাচার্য্য,

হাল সাং দরজিপাড়।

Interpreted by me,

BIHARI LAL PAL,

Interpreter.

Court adjourned till to-morrow, half-past 12.

C. H. REILY.

*The 4th August 1887. Examination of John Moore continued to the President.*—We landed our passengers by dinghy on arrival in Calcutta. We try to keep off the dinghies as much as we can before we get to our moorings, but they occasionally get alongside in spite of us, and some of the passengers scramble on to the dinghies before we are moored. The bulk of them remains on board till the steamer is properly moored. I have never seen the police count the passengers who arrive from Chandbally.

*Cross-examination to Mr. Henderson.*—If there were a good few on board some of the passengers only a few get off into the dinghys before we are moored. Except in poojah season, we seldom get our full complement. I have known Captain Irvine for the past seven years. I knew him intimately during that time. I have a full belief in his integrity and honesty. I believe that Captain Irvine would never have taken extra passengers on board for the purpose of filling his own pockets. The panniwalla in connection with the crew might carry an extra man or two as passenger, but not to any great extent. It would be impossible to smuggle passengers on shore before coming to the counting stage at Chandbally without the Captain knowing of it. I cannot believe that Captain Irvine could ever have connived at any such system. I never saw boats putting off with passengers from the *Sir John Lawrence* when she arrived at Chandbally. I do not believe it possible for passengers to have been kept back until after the visit of the police at Chandbally. The police always searched my vessel for passengers, and, so far as I know, they did the same at Chandbally with the *Sir John Lawrence*. I have often seen the police count my passengers in Calcutta. I go on board about 9 p.m. The police boat always was alongside. I have no reason to suppose that the system of counting passengers in Calcutta by the police was any different on board the *Sir John Lawrence* than it was on my steamer. The night previous to the cyclone the police were alongside my steamer. Some of the police were on the landing stage. They reported no excess to me in Calcutta. The numbers counted out at Chandbally



were not in excess of the number I was permitted to carry. I made no signal when the *Sir John Lawrence* passed me. The *Sir John Lawrence* might have anchored in perfect safety about four miles lower down, this spot would not be in the direction of, but about 16 miles from, the South Channel buoy. I heard that the chest of Captain was picked up at Saugor. I do not think it possible that she pulled up at the place—I mean she went right out to sea. She must have been right out to sea between 5 and 6 P.M. It is quite likely that he did not see the signals. The *Sir John Lawrence* unfortunately was not going to sea; it would probably have been all right with her if she had. I never saw the *Sir John Lawrence* carry her canvas when she ought to have stowed it. I have never heard it rumoured that she was a hot ship. It is very probable that the passengers would have gone between deck during the cyclone, if the vessel had anchored at Kedgerree. They would have plenty of room if the passengers had not overcrushed themselves. So far as I know there would be sufficient ventilation. I was never there myself. If the hatches were open on the main deck, there would be enough ventilation. My full complement is about 550 passengers. That complement is calculated on the same basis as the complement of passengers permitted in other vessels on the same line. Having my full complement of passengers would not obstruct in any way whatever the working of the vessel in fair weather or foul. I have had my full complement of passengers often. They have never interfered with the working of my vessel. After we have started and the passengers and their bundles got arranged a bit, I never found any difficulty in moving about my ship, neither I nor my officers. I have seen the *Sir John Lawrence* in very heavy seas in the Eastern Channel. She was a very good sea-boat. I never saw anything that was wrong with the equipment of the *Sir John Lawrence*. I never examined any of her gear. I have never had anything to do with the owners of the *Sir John Lawrence* in business. I had no reason to suppose that Captain Irvine had orders to go to sea irrespective of the weather. Native passengers huddle together, because it is their nature to do so. The space allowed by Government rule is in my opinion sufficient. The proof of this is shown in this particular instance. All my full complement of passengers on the day of the cyclone went into the between decks, which contain only a little over one-third of the space allowed by the rules to the whole number. They were there the whole of one afternoon, the whole night, and part of the next day, and I never heard any complaint. I have frequently seen the passengers squeeze into a much smaller space than allowed them by the rules, and they have done so of their own accord. I have known Smith for some years. My ship is surveyed periodically every six months—sometimes by Mr. Bushby, sometimes by Mr. John Mackellar, his assistant, sometimes by both. I have always found them pretty strict. They always wanted something new, something fresh. Mr. Bushby always surveyed the deck. When Mackellar did the survey alone, Mr. Bushby was either at home or away from Calcutta. I always went round with Mr. Bushby during the surveys. So far as it was possible afloat Mr. Bushby visited all parts of the ship. He examined the plates and frames. Twice we have had the ceiling up. We had 417 new plates put out my ship last year. This was in consequence of Mr. Bushby and Mr. Mackellar's survey. Every old plate was removed from the bottom of the vessel. All new frames were required. A good many of the plates were not very bad. Two years prior we had the ship bored. Mr. Bushby was the surveyor on that occasion. Both surveyors are very particular with our vessel. If the *Sir John Lawrence* were surveyed in the same way as our steamer, she must have been a sound ship. I think a survey certificate signed either by Mr. Bushby or Mr. MacKellar is a perfectly good guarantee. The survey is equally strict throughout the ship and more survey than it is at home. The dock survey takes place every twelve months. Every dock survey the vessel is scraped and cleaned outside ready for inspection. I do not think Mr. Bushby passed a plate so rusty that you could peel off the rust with your fingers. He would have it scraped and sounded. I have noticed the patch on the *Sir John Lawrence*; if it was properly secured, it would not lessen the strength of the ship. Captain Irvine is as good a seaman as they make now-a-days. We anchor at the Kanaka buoy some time during the night, reaching Chandbally the next morning. After he gets out to sea after leaving Chandbally, if he had a trustworthy officer on board, he could get three hours' sleep. If he got away early enough, say by 8 A.M., he would anchor at Saugor at 10 P.M., and so get a comfortable sleep. Passengers and their friends get on to the ship together. I never heard an objection being made by persons coming on board to see their friends off. I have not observed any considerable number of persons come on board to see friends off.

*Re-examination to Mr. Kilby.*—Tickets are looked at as the passengers come on board. When there is a rush of passengers, my seacunny has no orders to object to friends of passengers coming on board. The police do not examine the tickets of the passengers. Whenever there is a large number on board, the police in Calcutta always count the passengers after they are seated on the deck. This is done between 3 and 4 o'clock just prior to our leaving. Unless the 1,038 passengers on board the *Sir John Lawrence* all crowded on to the upper deck, they would not interfere with the working of the ship.

*To the President.*—I and my Chief Officer are the only seaman officers on board. My Chief Officer does not hold a pilot's certificate. Mr. Smith held a pilot's certificate.

J. MOORE.

*Robert Bushby. Examination continued to Mr. Kilby.*—Except the enquiry I made, and that made by Mr. McKellar, there was no other enquiry into the charges made by Mr. Neustein

The space on the main deck reserved for passengers is 2,863 superficial feet, that is, after all deductions having been made, the space between the two open bulwarks for passengers was about 640 feet. Passengers could stay in the alleys during the cyclone, in any weather, except in an overwhelming sea, which should sink the ship. I remember the two 400 gallon tanks; filled, each tank might weigh a ton and 3 quarters. The main deck was a safe place for tanks of that sort. Those tanks were lashed to ringholds, from memory I cannot say. I looked at the tanks after receiving Nourse's letter. If they had not been properly secured I should have noticed it. I noticed nothing wrong. I saw the *Sir John Lawrence* on the same morning of the collision with the *Indore*. A collision of that kind would not strain a steamer of the build of the *Sir John Lawrence*. I never ask the officers of the ship if there is anything wrong on board, unless there be some special reason for it. In cases where, like the charges made by Mr. Neustein, I should think it necessary to speak to the Mate and the Captain. I do not remember ever having done so before. I have known an officer volunteer information without being asked. Engineers often and officers often volunteer remarks if they want any special thing done. I have never known any of Macneill's officers speak to me about anything on board. I cannot remember any instance. It is possible they may have done so. The number of passengers to be carried between deck would not be altered by the spar deck being added to the steamer. In this case, adding the spar deck did not interfere with the ventilation of the vessel. This is the certificate of the last survey held on the *Sir John Lawrence*, dated 25th April 1887.

...staying a very large number of plates to be taken out of the *curlew*. I had to mark each of these plates with a piece of chalk to show they are to come out. The way it was done was to mark a whole line of plates if they had to come out with a line of chalk. I should be able to see at the final survey, before the paint was put on, whether any of the plates I had condemned had been taken out or not. The *Sir John Lawrence* was painted, but not chipped after the big repair in 1884. I say ships are not chipped more than once in four years. Without going the length of removing the frame, it is quite possible to tell whether the plate was sound where it joins the frame. I did test the delivery and suction hoses. I do that in every survey. I invariably ask the engineers in the engine-room, whether the Superintending Engineer be pre-out or not generally whether there is anything wrong. I have never known an instance where the engineer has hesitated to point me out anything he thought defective. If there was anything wrong with the condenser, the engineer in charge ought to have told me. If the Superintending Engineer knew of any defect in the condenser, he ought to have called my attention

As a matter of fact, I did examine the condenser in my final survey in April 1887, and found that the repairs to the condenser were sufficient, and I did not find it necessary to order any further alteration. These documents produced are surveyor's certificates in which the A and B certificates under Act VIII of 1876 were issued to the *Sir John Lawrence*; put in and marked (N) to (N5) I never mustered the crew. I took the Master's word for the number. In the big repair of 1884, I ordered my shipwright assistant, Mr. Cowperthwaite, to take the number of equipment out of Lloyd's rules, and to go over and calliper every length of chain on board the *Sir John Lawrence* and test it up to the highest class at Lloyds. He did this. I did not survey the chain the last dry-dock survey. Mr. McKellar did the survey.

To Captain deSmidt.—I was never on board of the *Sir John Lawrence* before. I was called upon to survey her. I do not know whether she was in the market for sale at that time. I never heard of a Mr. Cranstoun, or that he had declared the *Sir John Lawrence* not to be worth repairing. The *Sir John Lawrence* had to go into dock before I could give my survey report on her. She was not in dock when I gave the report embodied in (M). I had some of the cement in the fore and aft hold taken out in places where I thought it necessary. I bored some of the bottom plates when the ship was in dock. There were more holes bored in the forepeak than anywhere else. The engine and ...

ROBERT DUSHAY.

Court adjourned till to-morrow.

C. H. REILY.

ON THE 5TH AUGUST 1887 THE COURT RE-ASSEMBLES.

*Robert Bushby. Examination continued to Mr. Trelawny.*—I have sometimes done as many as five surveys in a day, that is, a portion of such survey. That is very tedious and hard work in this climate. Sometimes there is pressure put on me to go through with the surveys. I do not, however, for this reason slur the work. It frequently occurs that owners wish the ship to be surveyed in a hurry. I take my own time, and, if necessary, detain the ship.

*To the President.*—The officer appointed to receive the declaration sent in under section 12 of Act VII of 1884 is the Vice-Chairman to the Port Commissioners. Under section 7 of the Native Passenger Ships Act of 1876, "the officer authorised in this behalf by the Local Government" is by appointment the Port Officer, Captain Stiffe. Captain Stiffe is the officer who, under the Act, has to grant certificates (A) and (B). As a matter of fact, the Port Officer does not himself cause a ship to be surveyed; he sends the notice on to me and I make the survey. These remarks only apply to certificate (A). The notice given under section 7 is always by letter; that letter is sent on to me and I make the survey. Captain Stiffe might send the notice to any surveyor; sending it to me does not involve payment, except in one or two exceptional cases. I make the survey or Mr. McKellar; we sometimes do it both together. The Port Officer has absolute discretion, except in cases which come under section 13, and which are otherwise provided for, to grant and withhold the issue of certificates (A) and (B). There is of course an appeal to the Local Government, provided for in section 16. The Port Officer is the official responsible for the issue of certificates (A) and (B). As regards certificate (A), the Port Officer invariably accepts my report as final. I only know one instance, which happened some years ago, that of the steamer *Commilla*, where I reduced the number of passengers to be carried, and Captain Stiffe called upon me for my reason for doing so. The point raised was one of principle, and I eventually followed the former practice. I had to give way. With this exception, Captain Stiffe has accepted my surveys without demur so far as certificate (A) is concerned. I know nothing of certificate (B). I do not know where the Port Officer gets the materials on which he issues certificate (B). So far as I know, there is no other survey held on behalf of the Port Officer except the one held by me. I never got any directions from Captain Stiffe, after the receipt of Mr. Neustein's report, to hold a survey of the *Sir John Lawrence*. He, however, sent the Port Commissioners the letter. I did have an interview with Captain Stiffe on the subject. Emigrant ships at home have to be surveyed by four surveyors, that is because they make long voyages and have to carry a large number of passengers.

*Cross-examination by Mr. Henderson.* All I have to do with the Act of 1876 is to furnish materials on which certificate is granted. I supply these materials under a survey which I have to make under another Act, excepting as regards the measurements, which have to be made under the Act of 1876. So far as I am aware, the Port Officer, during my period of service, has never, under section 14 of Act VIII of 1876, caused a ship to be surveyed at the expense of the master or owner while my certificate of survey was in force, and the issue of that (A) certificate in that survey. Mr. McKellar has power to make a survey, and is competent to do so in my absence; he has power to make a survey and grant a declaration on which a certificate is issued even when I am present in Calcutta. The Port Commissioners grant the certificate. The additional duties placed upon me did, before I got Mr. McKellar's assistance, very seriously interfere with my survey work. Since Mr. McKellar's appointment we have been quite competent and capable to carry on the work. I was not present when the plates were bored at the big repairs in 1884. I saw the plates after they were bored. I forget whether I gave the order for the borings; it is very probable I did. I made a thorough investigation of the whole of the hull. I have not the slightest reason to believe that the chalk marks I made were rubbed out; if they had been, I should have found it out, for I thoroughly inspected the vessel before she was painted. I ordered sundry plates to be doubled. I own that my orders were carried out. The surveys made in the thinnest parts of apparently defective plates was done under my directions. I cannot say whether I took out any plates. I found that about 200 plates were supplied to the ship, but whether they were used for the purpose of doubling plates, or in the place of old plates taken out, I cannot say. All plates which were left in her were sufficiently strong to meet the requirements of the law. I saw that every order I gave with regard to the plates was carried out. On my weekly visits I saw whether my orders were carried out; that was the object of my visits. The frames were eighteen inches apart in the *Sir John Lawrence*; that distance is closer than usual in a ship like the *Sir John Lawrence*. The frames would be 20 to 21 inches apart if built in the present day; the closer the frames the stronger the ship. I saw the hole before the patch was put on. I happened to be coming up the river shortly after collision took place. I looked at the hole from my steam-launch. I am certain the plate was strong enough for the place where it was placed. When next I saw the plate it had been rivetted on. The plate was not too thin to bear a patch; it was on the starboard side; it was 11 feet above water. I say this because I identified the part of the *Indoor* which caused the damage, and that water measurement was 11 feet out of the water. It could never by any chance be less than eight feet from the water. It is absolutely impossible that the hole should be only four feet above the water when it was mended. It is not true that the hole was below the main deck; it was not in the forepeak; the edges had not been cut. When I first saw the hole, it was not more than 15 to 18 inches by 12. I do not think the hole was two feet square after the edges had been cut. It is impossible that at the time the patch was put on the frames were nearly eaten through with rust. It is

absolutely impossible that the plate could have been  $\frac{1}{8}$  of an inch thick. It is impossible, when the ship is deep, that half the patch should be under water. It is not true that, as she pitched, the patch was almost entirely under water, whatever the draught was. It was not 3 feet below the main deck. The plate was painted. It is not true that the inside of the vessel was one mass of iron rust, and that the scales could be taken off by the fingers. From 1884 till she foundered it could not be said that the ship, as to her hull and scantling, was neglected. It was not possible for a ship which had been scaled and painted like the *Sir John Lawrence* to have got into the state of rust described. Ships I have surveyed have repeatedly been scraped and painted. The scraping and scaling and painting of the plates of the *Sir John Lawrence* were carried out in much the same way as in other ships. I have nothing to do with the painting. I have to see that the painting inside is done. I never noticed, during my surveys of the ship, that the vessel had been specially furnished up to pass such survey; the ship was thoroughly scaled; paint was not laid over rust. It is not true that the *Sir John Lawrence* received a coat of paint over the bad places in and out. During the 13 months previous to Neustein's discharge, it was not true that, if scaling had been attempted in the hold and forepeak, the chipping hammer would infallibly have gone through, nor would the hammer have gone through between the frames just before the bunkers. It is not true that the *Sir John Lawrence* was never scaled at all inside, but only scraped outside. I saw the windlass at the big repairs in 1884. I examined it at that time, it was in proper working order, both starboard and port side. On each of my surveys it came under my notice. I never observed any defects in the windlass, nor was any defect brought to my notice. I know, however, it was under repair in 1886. I examined the windlass after the repair of 1886, and it was then in perfect working order: the Captain and Mate were perfectly satisfied. They said it had got out of order through the carelessness of the previous Mate, Neustein. I examined the state of the windlass on my last survey in April 1887, and also on receipt of Neustein's letter. The repairs of the windlass were being proceeded with at the time he was dismissed. At the last survey I found that the windlass had not deteriorated: it was in thorough working order. In my opinion the windlass would have continued in such thorough order up to the time the ship was lost. I could never have passed the windlass at a survey if it had been useless, or even partially useless. I did not observe that the centre casting was broken. If the casting had been broken, it must have occurred in the interval of October 1886 and my previous survey. I can't remember the state of the starboard gipsys, but if they had worn into the wooden bitt which supported them, they would never have escaped my notice. If the whole body of the windlass had been forced over to starboard, I should have noticed that. Surveying the chain of the ship is part of my duty. I never observed that any of the studs had gone. If the messenger chain had not been there at all, it would not have interfered with the working of the ship. I have no special recollection of the condition of the donkey engine. The hose and the engine which were tried at every one of the surveys held by me, were not defective. It would take two or four men to work the Downton pump. I did notice the hose of the Downton pump. It was not leaky: it would not take eight lascars to work it. There is only handle room for four. I know, as a matter of fact, that the forward pumps are connected with the bottom of the ship. The pumps were tried at every survey I made. Every time I tried the pumps, I found them in satisfactory order. On each survey I made I examined the scupper pipes. The scupper pipes were renewed in the repairs of 1884, and properly so done. The length of the piping was about 15 inches; the thickness of the lead three-eighths of an inch. No sea that ever rose could have affected that pipe. The mouth of the pipe is flanged over the outer plating. After Neustein's letter, I examined all the scuppers carefully. I am quite satisfied with their condition. None of them would have been packed with cement. It was not necessary to have lip-guards to the scupper pipes, the question raised in Neustein's letter. I left it optional with the owners to put them on or not as they liked. I believe the lip-guards were made. It is not possible for a boat-hook to pierce the scupper pipes. I have never seen an iron-shod boat-hook with a sharp point in any of the boats on the river.

ROBERT BUSHBY,

Court adjourned to 8th August, Monday next, half-past 12.

C. H. REILLY,

*The 8th August 1887.—Robert Bushby.—Cross-examination continued to Mr. Henderson.—*It is usual sometimes to have iron scupper pipes. There is nothing unusual in this class of vessel in having had scupper pipes. Neither lead nor iron scupper pipes are expensive to make or fit in. At the present time lead scupper pipes would be the more expensive of the two. The rudder of the *Sir John Lawrence* was in a good state of efficiency. The steering chains were properly fitted. There was relieving tackle to each side on board. The relieving tackle was surveyed by me on each occasion and found to be in good order. There was a fixed span tiller. I saw that the condenser had been repaired on the occasion of one of my survey visits. I examined these repairs and considered they were sufficient. The scaling for the valves had been repaired. There is no ground whatsoever for

characterising my surveys of the *Sir John Lawrence* as a mere walk round, taking about ten minutes. It is not true that I never went below hatches. I did go below hatches on each occasion I made a survey of the *Sir John Lawrence*. It is not true that I merely looked down the hatches in the main deck. The additional weight of 5 or 6 tons on the main deck by the newly added deck was more than compensated for by the removal of a long set of deck cabins on the upper deck. The iron socket into which the stanchions fitted were secured to the deck by coach screws into the covering board: the awning stanchions would be screwed down, and would reach right through the covering board and the plate underneath, and were secured by a nut underneath that again. The covering board was new and not rotten in the least: it was sufficient to hold the screws of the stanchions. The ordinary wear of the ship since 1884 could not have rendered the covering board rotten. The bowsprit was very short: a stump bowsprit. The end of the bowsprit was not carried away in the collision with the *Indore*. I do not think the bowsprit, the band, bobstay, and bowsprit shrouds were carried away: the bowsprit shrouds on the star-board side may have been carried away. If they had been carried away, I should have had them replaced: there was no such thing as a bobstay on board. She did not require one. The stump bowsprit had nothing to carry: it is only used when sails are carried over. The bobstay was not the key and support to all the masts. The forestay, which is the support, was not secured to the bowsprit in the *Sir John Lawrence*, and never is in any other ship. In iron ships the forestay is secured to cleats bolted to the covering board. The ceiling of a ship in a new ship is no support to such ship. The rails were iron on the upper deck with rope netting. The two 1200 gallon tanks in the lowerhold were connected by a pipe at the bottom, so that the contents of one tank should run into the other. On the 21st October 1856 I was on board the *Sir John Lawrence*. Mr. Young asked Neustein to go down below and help to get up the shaft. He was sitting in a long chair. His reply was I am too d—d old. This was after Mr. Young had asked him two or three times. Mr. Young said nothing to Neustein further in my presence. Neustein never moved. No one ever wrote to me direct about the defects in the *Sir John Lawrence*. The hatches of the *Sir John Lawrence* were not cased into the upper deck. The large one before the engine was 8'-6" by 6 feet. This hatch leads to the between deck. The other hatch, which led to the forepart of the between decks, was 5 feet square. The combings of the after hatch are about a foot high. The combings were not raised that I know of. The cubical content of the between decks was 13,622 feet (cubic feet). The statement that remnants of the old lip-guards were left adhering to the sides of the vessel were absolutely untrue. The new scuppers could not have been worked into the plate if they had been there. Bilge pipes are not required on board of a modern steamship. They are only used in sailing ships with flat floors to draw the bilge when the ship is hove down by sail. The bilge pipe has nothing to do with the safety of the ship. It is only useful to prevent damage of cargo. It is not true that at the survey of 1st October 1855, at which I was present, the water poured down the forward pump ran through as fast as you poured it in. The sea connection to the after pump was cut off at the repairs of 1884. Doing so made the ship a safer vessel. It is not true that the pipe leading to the hold had not been connected with the forward pump. I am not certain whether the rudder pendants were there. I do not think they were necessary. The inner keelson was not knocked off. The top angle irons, which formed the base of the deck stanchions at the fore hatch, were damaged by ballast being thrown down. They were not damaged in any other part, nor at the stanchions. If these angle irons had not been there at all, there was sufficient section of iron in the keelson plate, and the angle irons worked on below these angle irons to give the required section for a vessel of the class of the *Sir John Lawrence*. I paid special attention to this, as it is the only point which, to a casual observer, might have affected the stability of the ship.

*Re-examination to Mr. Kilby.*—The patch was rivetted on to the frame and plate. The point of the *Indore* coolie deck, which knocked the hole into the *Sir John Lawrence*, the plate at the point three-eighths of an inch thick. There were two angle irons inside and the end of the deck. The point that struck the *Sir John Lawrence* are perpendicular to the stern. The point was strong enough to pierce a half-inch plate. I had not seen the windlass for eight months immediately preceding the time when Neustein left the *Sir John Lawrence*. I always notice windlasses; particularly as I could have noticed whether the gipsy had worn into the bitts. On looking at a windlass I generally ask the Mate, or whoever is with me, if it is all right. If he says yes and I myself see nothing the matter with the windlass, as I look at I pass it, I should probably have observed if any of the studs had gone from the chain. I look generally along every length of chain. There may be one length on top of another, but it is easy to see each link. You can generally see if a chain is worn. I mean by examining the scupper pipes as part of the hull that I examined each one of the scupper pipes. The scupper pipes could not possibly have worked loose. The bowsprit had no sheave. It was not broken off at the sheave hole. The bowsprit may have been used to put up a light jib to help to bring her round. She never used a jib for sailing purposes.

*To the Court.*—It is usual. It is not at all unusual to put a permanent patch instead of taking out the plate bodily. The only case in which the new plate is put in is when the ship is under A class and the owner may wish to sell her as a ship of that class. There is absolutely no foundation for the statement that I refrained from having a new plate put

in the place of the old one because I believed that the removal of the damaged plate would necessitate the further removal of 40 or 50 other plates. Neither Mr. Taylor nor Mr. Young spoke to me on the subject of allowing the patch to be permanent. My decision in the matter was not influenced in any way by their wishes or views. I did not know Mr. Young before I came out to this country. I am not more intimate with him than I am with any other Superintendent.

ROBERT BUSHBY.

*John Taylor sworn saith to Mr. Kilby.*—I was acting Marine Superintendent to Messrs. Macneill and Company for some time from May 1885 to November or December 1885. There was a collision between the *Sir John Lawrence* and the *Indore* about May, the end of May that year. The *Indore* was a river steam-ship belonging also to Macneill. I saw the hole which had been knocked into the starboard bow of the *Sir John Lawrence*. I saw the *Indore* after the accident. I should say it was the bow of the upper deck of the *Indore* which struck the *Sir John Lawrence*. The bow of the *Indore* was injured, the stanchion was smashed, the flagstaff also, and some of the hand rails. The deck and angle irons were not affected. The *Sir John Lawrence* was struck with wood first, afterwards with iron. The covering board over the point was scoured away, and exposed the iron. This point on the *Indore* was eleven to twelve feet from the water. I do not remember whether the *Sir John Lawrence* was deep that day or light. The hole was above the main deck in the fore-castle. I am quite certain of this. I noticed the plate where the hole was. I had the barbs or rags cut away, and the hole made as near square as possible, and an outside patch put over it, an iron plate about a quarter of an inch thick. The size of the square hole was about 18 inches. The patch in the first instance was bolted on to the plate only. Subsequently it was rivetted on to both plate and frame. I went round with the surveyor during the surveys of the *Sir John Lawrence*. The first was in June 1885 and the second in October 1885. Neustein was on board at the latter survey. The October survey was a dock survey. Mr. Bushby did the hull survey, Mr. MacKellar the engines. I have been over a good many surveys. I can tell you what was done by Mr. Bushby on that occasion. We went all over the ship both inside and out. I don't remember looking at the scupper pipes. I don't remember the surveyor looking at them. The scupper pipes had no cement on them in my time. Mr. Bushby looked at all our boats; they were lowered down to the level of the deck. None of them were put into the water in my time; this applies to both surveys, Mr. Bushby looked at them inside. He did not test the planking in any way. Mr. Bushby looked at the windlass; it was not tried, simply looked at. No complaint was made to me about the state of the windlass: Neustein never mentioned the state of the windlass to me. The pumps were examined; the leathers drawn and looked at nothing else. The hose was looked at in the October survey. The hose was not tested, that I remember. It was tested in the June survey. Mr. Bushby went down below right to the bottom of the ship into the after hold as well as the fore hold. It was not very dark. We had a light to look at the stringers and the plates. I saw no rust, all the iron-work was painted in the hold. We painted every two or three years or as often as the iron would require it. A Downton pump was connected with the bilge, and the pipes of both fore and aft pumps were continued to the bottom of the ship. I know nothing of a boat being sent from the *Medina* on board the *Sir John Lawrence*. I gave no order about it. The boat could not have been transferred without my order. I never heard of a boat on board the *Sir John Lawrence* that would not float. I went over into the Sunderbunds after giving over charge to Mr. Young. I remember the bowsprit of the *Sir John Lawrence*. I don't remember whether it had a sheave tied to it, it was short bowsprit. It was not broken at the collision. I can't remember whether she had a bobstay. I can't say whether the *Sir John Lawrence* had a broken bowsprit: it looked as if it had been broken. I never heard any complaints that the *Sir John Lawrence* rolled very much after the alteration. I never heard the officers of the ship tell the surveyor of any repairs or alterations they might deem necessary. I have never heard this done on any of our steamers that I can remember. I think the etiquette is that the officer should tell the Superintending Engineer, but if they chose to speak to the surveyor direct, they could do so. No notice would be taken of their having done so. The survey of the hull and equipments took Mr. Bushby about an hour. Mr. MacKellar did the survey of the engine-room. At that time Mr. Leech was the Chief Engineer. The condenser was repaired in my time. The landings were eaten away partly. The seatings were all right, the landings were repaired, we made brass landings in the place of the iron landings eaten away. We had not to lay the ship for that repair. I had no look at the chamber of the condenser nor were they opened out or looked at in the survey. My attention was not called to them. I did not remember the ram pump being opened out—the valves were opened I felt the thickness of the damaged plate on the starboard bow with my fingers. The plate was a quarter of an inch thick.

*To Captain deSmidt.*—The frame to which the patch was attached was good. I cannot tell you the thickness of the frame. The thickness of the plate I should say originally was not much more than a quarter, perhaps  $\frac{1}{16}$  of an inch. I am not a practical ship-builder, I am an engineer. I never said to anybody that if Mr. Bushby ordered the plate out there would be no stopping. In my time I never bored any of the plates to test their thickness. I do not know whether the donkey had any connection with the fore and after hold for the purpose of pumping the fore and after hold out. We were dependent on the two main pumps. I did not notice the plate to be rusty. It had no rust. I felt the plate from the inside. I had heard that the *Sir John Lawrence* made use of her sails.



*Cross examination to Mr. Henderson.*—The *Sir John Lawrence* had a flat bottom for a sea-going steamer. I cannot say that the donkey engines had no connection with the fore and after hold. I could not have made the statement that taking out the damaged plate would result in no stopping. It would not have been true. I never heard it ever suggested that if that particular plate be removed, it would be necessary to take out other plates in the bow. Mr. Neustein was not present when I examined the damaged plate. I had no doubt then, and I have no doubt now, that the plate and its patch was as strong after the patch was put on as the plate was when it was new. The engineers and officers had to report to me if there was anything wrong in their respective departments. The only complaint made by Leech was about the condenser, and his complaint was seen to, everything was done to repair it that was necessary. None of the officers were discouraged in any way to make suggestions as to any repairs about the ship. I never discouraged any suggestions being made to me. Every time I went on board, I asked both engineers and officers what they required being done on board ship. The suggestions which in my opinion were reasonable were carried out. It never happened in my time that I had to refuse any request for repairs made by officers and engineers. I never gave either the engineers or officers to understand that it would be better for them to keep out of the way of the Surveyor. I never suggested to Neustein that he should go elsewhere during a survey and keep out of the way. It is absolutely untrue that the condition of the ship was such that to draw Mr. Taylor's attention to repairs was to court instant dismissal. Messrs. Macneill and Company never discouraged the bringing to notice the fact that particular repairs were necessary. They never gave me either directly or indirectly to understand that the less that was asked for the better. I never knew Messrs. Macneill and Company do anything which would induce the belief that the less which was asked for the better. In my estimation the brass landings were sufficient for the purpose they were intended. No complaint was made about them. Leech never in my hearing complained that the repairs were insufficient.

JOHN TAYLOR.

Court adjourned till tomorrow half-past 12.

C. H. REILY.

*The 9th August 1887.*—*Cross examination of John Taylor continued to Mr. Henderson.*—In my opinion Mr. Bushby as a Surveyor was very strict, he never hesitated to direct anything he found wrong to be repaired or altered. I never did anything in order to influence any of the surveyors as to what repair or alteration they might direct. A boat was smashed in the collision between the *Sir John Lawrence* and the *Indore*, and a boat was substituted by my order; it came from the yard, whether it was a new boat or not I cannot say. I think the broken boat was given to the *Burmah* after repair. One of the life-boats was smashed and a new life-boat replaced it shortly after the accident. The Captain reported that a boat had been sunk during the voyage, another boat was sent on board the *Sir John Lawrence* to replace the boat which was sunk; it was not a life-boat. The boat which was substituted for the boat which was sunk was never removed from the *Sir John Lawrence* during the time I was a Superintendent. The boat which was substituted was in good condition and repair. In the survey of October 1885, the scraping usually done to a steamer when in dock was done on this occasion to the *Sir John Lawrence*; the ship was also painted. I never noticed any old lip guard bolts adhering to the sides of the ship. I can swear these were not there, I should certainly have seen them. I never had any conversation with Mr. Bushby whether the patch should be left permanent or not, the question was never discussed between us. The plates and frames generally were in good condition, and that I say after having gone through the vessel. I cannot say that I examined the ceiling particularly.

*To the Court.*—I did not think it necessary to call the attention of the Surveyor to the repairs done to the condenser. The Surveyor could not have seen the landings unless his attention was specially called to them. No boat was ever put on board the *Sir John Lawrence* in my time simply with the object of passing the survey.

JOHN TAYLOR.

*Alexander Pedler sworn saith to Mr. Kilby.*—I am Officiating Meteorological Reporter to the Government of Bengal, and I was so on the 25th May. I issued orders by urgent telegram at 8-25 A.M. on the 25th May to hoist storm signal No. 8 at the river stations, that is, Diamond Harbour, Mud Point, and Saugor Island. I issued these orders to the Telegraph Masters in charge of the stations. This is a copy of the Government notification prescribing the nature of the signals to be put up. Copy put in and marked (O). I based my opinion as to the nature of the storm signal to be put up from meteorological information I had received from the previous five or six days, previous to putting up No. 8 signal. I had been in receipt of such information every two hours from the ports on the West coast of the Bay. Reports from the East coast were coming in every six hours. I knew the storm was moving in a westerly direction, so it was not necessary to get as frequent reports from the East coast; the West coast information was more important. Just at the time of hoisting the signal I had ordered telegrams for Akyab and Diamond Island. The Diamond Island telegram ceased to come after the morning of the 23rd May. I have received no official intimation why Diamond Island telegram ceased after that date. I have been informed that the wire was out of order. In several previous storms Diamond Island telegrams have ceased to come at most critical times. I think that the construction of the line between Diamond Island and the main land must be defective. I have no reason to believe that the fault is due to the men

in charge of the telegraph station. In respect of the origin of cyclones in the Bay, Diamond Island is the most important of all stations which furnish me with information. It is the nearest station in that part of the Bay in which cyclones generally form, though it is about 350 miles away from where I believe the storm of the 25th May actually formed. The usual birth place of cyclones which come to the head of the Bay of Bengal is to the West of the Andaman Islands. We have meteorological stations both at Port Blair, Andamans, and Nancowry in the Nicobar Islands. Reports from Port Blair have come in since by post. I cannot be certain whether there has been any report come in from Nancowry. I received reports from Diamond Island by telegraph some days after the storm of the days the observation of which were previously missing. If I had received the reports from Diamond Island and Port Blair in time, I should have been in a position to state more accurately the nature of the storm. It would not have been possible to state with absolute precision the precise intensity. As a matter of fact, the storm was a very small one, but very intense. It is always possible to mistake a large storm with less intensity for a small storm with great intensity. It must be remembered that the observations on which the conclusion is based are obtained from stations which are generally some hundreds of miles from the storm itself. It is of the utmost importance that there should be telegraphic communication between Port Blair and the main land. This has been reported on several occasions to Government. On the 20th I came to the conclusion a cyclone was forming to the South-West of Diamond Island. Subsequent information confirmed that impression, and showed that the cyclone was increasing in force and moving in a north-westerly direction. This was notified day by day in the meteorological report published every afternoon. As in other cases, the Diamond Island telegram while the storm was in progress ceased to come in at the most critical moment. The West coast stations appeared to be affected by the approach of the cyclone on the morning of the 24th. From the indication on the morning of the 24th received from the West coast, it appeared probable that the storm would cross the coast some where near Vizigapatam, as barometric pressure was falling most rapidly along that part of the Bay, and wind directions appeared to show that the centre of the storm was to the South of Vizigapatam. The observation I received in the evening of the 24th showed me that the storm was proceeding in a more northerly direction than was shown by the position fixed by me in the morning, and at 1 A.M. on the 25th, the wind suddenly went round at Vizagapatam to North-West it was calm at Gopalpore, and at False Point wind was N.-N.-E. and very light. It being calm and winds light along the West coast, it appeared to show that the storm was not a very large and intense one. At 3-40 A.M. wind at False Point was North and blowing at 14 miles an hour, which is a very light wind indeed. Pressure had risen at False Point within the previous twelve hours. This telegram reached me at 8-15 A.M., and taking this in conjunction with other telegrams I received, I hoisted the storm signal No. 8. Up till receiving this telegram from False Point, it was quite uncertain at what part of the coast the storm would strike. There was no other signal in the Code which applies to the storm. Whatever my information had been I should have hoisted No. 8. The only other signal which might have been used was No. 3. This has reference to very large cyclones, whereas the storm in question was a very small one. It might be desirable to have one or two more general signals. In other respects, I should have the signals, as far as meteorology is concerned, as they are now. I have already suggested a modification of one of the signals in most cases of storms of unknown intensity. At 1 P.M. on the 25th the centre of the storm was, in my opinion, about 100 to 110 miles South of Saugor Island. The diameter of the storm was about 100 miles. At the time the *Sir John Lawrence* passed Mud Point and Saugor, both telegraph masters at these stations saw the *Sir John Lawrence*.

*To Captain deSmidt.* The storm was small in diameter, but great in intensity.

*Cross-examination to Mr. Henderson.*—It would not be particularly rough at Saugor at 1 P.M. on the 25th in the proximity of the light-house. The indications at Saugor Island at 1 P.M. on the 25th were very different from indications given in ordinary monsoon weather. A strong N-E wind is always an indication of a storm at that time of year.

ALEXANDER PEDLER.

*Edward Henry Palmer sworn saith to Mr. Kilby.* I am Port officer at Chandbally. I have to do with passenger ships on the voyage from Chandbally to Calcutta. I have to give them their (B) form certificates and check any excess of passengers they may happen to have on board. I am subordinate to the Calcutta Port Officer. The Inspector and police staff at Chandbally thana are subordinate to me in that they have to carry out any orders I give them in respect of counting passengers arriving and departing in the passenger ship. I exercise this power under the Native Passenger Act 1876. I am an Honorary Magistrate at Chandbally, and by virtue of that office and in accordance with the orders of the District Magistrate I exercise authority over the police. The police make no written reports to me, they make oral reports if there happen to be any excess passengers. When the ships come in I do not myself count passengers, but when there is a great pressure of passengers during poojah trips, I generally go on board one and all three of the steamers. I have seen the passengers counted by the police, it is done by the inspector, sub-inspector and head constable, followed by two or three other constables attached to each of these officers. Nine or ten constables altogether. There are ten constables in the thana, the ships come one at a time, the difference varies from intervals of half an hour to three hours. The system of counting



passengers disembarking is that either the inspector or sub-inspector or head constable take the first vessel that arrives; she comes in at the jetty appointed to her. She put out passengers at her stage, which is made of four or six or seven planks, the steamer side is apart from the jetty about 12 to 15 feet, the police stand sometimes on the jetty and sometimes on board the steamer's gangway. There is only one stage. The passengers pass out one at a time as a rule, and they are counted as they pass. The counting is registered in a little tally book the police have. I have very often seen the passengers counted when there is a big crowd. The counting of passengers on board the *Sir John Lawrence* when she was full would take from three-fourths of an hour to an hour and a quarter; sometimes there is struggling to get through but the police and the ship's people and the agents people on shore prevent the rush. It is possible for the police to make a mistake of four or five or ten passengers. But it is quite within the power of the police to count accurately. The Captains of the steamers have been handed up for carrying excess passengers and been fined. The Divisional Officer at Bhadruck tries such cases. I have no power to try such cases. The Captain of the *Sir John Lawrence* has not been fined within the last five years. I think the Master of the *Cerber* was fined four or five years ago. I have been Port Officer at Chandbally for nine years. The system of counting as I have described has been so carried on ever since I have been Port Officer. When passengers go on board bound for Calcutta they are counted in just the same way, they go on board over the same stage. The passenger ships stay at their respective jetties the whole of Thursday and portion of Friday. The thana is distant from the jetties four or five hundred yards. The ships can be seen for an hour and a quarter before they come to the jetty. I have seen a police go on board the ships to see if there are any passengers left on board. I have seen them do this. The police remain on the jetty and prevent excess passengers going on board till the steamer starts. The steamer suits themselves to the state of the tide. There is no particular time fixed for the passengers to go on board. Passengers do not go on board on Thursday. They are not allowed to do so. The police search the vessel before allowing her to embark passengers. I know Mr. Augier in business; he was Sub-Deputy Collector and Customs Officer, and he has nothing to do with the counting of the passengers. I remember he did make a report to the Collector about something connected with the passengers. He used to go on board the steamers till warned off.

*Cross-examination to Mr Henderson.*—Mr. Augier is not in Government employ now. He was dismissed for withholding Government money. I was not called upon for any explanation. I am responsible for the counting of the passengers. I live in Chandbally itself. I go down to the jetties almost every time the steamers come in. There is no ground for saying that the counting at Chandbally is a mere farce. It is not true that it was impossible to count the living stream of passengers as they rushed past. I never found after the counting that people were concealed in the cabin and about the deck. There is no river police at Chandbally. The passengers were not allowed to scramble down the planks as they liked. There is a village before you get to Chandbally seven or eight miles off where passengers might be landed, but I have never heard of passengers being landed there. I have never heard of passengers being landed on boats before the ship comes alongside the jetty. I have never known of passengers being taken aboard from boats to evade the counting. There has never been any permission given to the Captains to carry passengers in excess of the fixed number. I know Captain Irvine, he in my opinion was a humane man. He treated the passengers kindly; he was popular amongst the natives. He was a sober man. I have known him nine years. I have known cases when tickets were not sold because the full number of that voyage had been reached. I have no doubt that my orders as to counting passengers were carried out and I had full opportunity of judging that they were so. We have had cases of one or more pilgrims on their way from Juggernath dying on the bank of the river before they disembarked. These cases were very few and far between.

EDWARD H. PALMER.

*John MacKellar sworn saith to Mr. Kilby.* I am Assistant Engineer Surveyor to the Port Commissioners. I was appointed January 1885 by the Port Commissioners. I was examined before my appointment was confirmed. I had questions to answer set me by Mr. Bushby. It was not a competitive examination. I saw the post advertised. I applied for it and sent in my testimonials. I was not acquainted with Mr. Bushby at that time. Mr. Bushby handed me the papers, I filled them up, and afterwards I saw that my appointment was confirmed. I asked no questions about it. I had not been a surveyor before this. I had been an engineer in the Mercantile Marine. I first went to sea in 1873 as fourth Engineer. I gradually rose to First Engineer, and was First Engineer for seven years. I was in the British India service at the time. I began my service in the British India. I was in that service for five years. Then I went over to the British and African service about a year and a-half. Then I rejoined the British India, and I passed the rest of my service in the British India till I took up my present appointment. I served an apprenticeship as an engineer for five years at home. I received no other authority from Government or official body to practice the duties of surveyor except my letter of appointment. I either myself, or assisting Mr. Bushby, have surveyed the *Sir John Lawrence* ten times. On the 19th and 21st April 1886 I visited the *Sir John Lawrence* when she was in the river. On the 19th I surveyed the boilers and machinery. On the 21st I finished the steam survey. In April I did not examine the hull and deck equipments, Mr. Bushby did so I believe. On

October 23rd, I examined engine and boiler. On the 25th I saw the equipments on deck and also completed the steam survey. On the 23rd and 25th I was alone. I saw the ship under steam on the 26th. I was on board and saw her work through the bridge. I was alone in my survey on the 25th and the 26th. I cannot remember whether Mr. Bushby was with me on the 23rd. On the 31st January and 1st February 1887 I went on board the *Sir John Lawrence* because of a report sent to me about the condition of the vessel. I examined the hull of the *Sir John Lawrence* inside while she was in the river on 6th June 1885. Except on these two occasions, viz., the 6th June 1885 and 25th October 1887, I made no other survey of hull and equipments on board the *Sir John Lawrence*. When I made a survey in the year 12 ships were surveyed out of Calcutta. I have not been further than Naraingunge surveying vessels. When we go outside Calcutta to survey vessels either I or Mr. Bushby go. We do not go together. I survey vessels in Calcutta myself without Mr. Bushby going on board. I survey a fair proportion of the vessels alone. I believe I surveyed a little less than half of the 377 vessels I mentioned. I did these surveys entirely alone. Invariably when Mr. Bushby and I go together I do the engine department and he does the deck and equipments. We survey about a hundred vessels together. That is a rough estimate. Mr. Bushby does the emigration vessels entirely alone. He does most of the British India vessels by himself. We divide the work between us to get through it as expeditiously as possible, so as to cause as little detention of the ship as possible. I cannot tell with certainty. I make a report to Mr. Bushby in writing if I find anything defective. If I don't find anything defective I let Mr. Bushby understand orally that a certificate may be issued. I have my own private diary, in which I noted what I did on the 6th June 1885. I keep my diary regularly. I don't note down everything, but I note down everything of importance.

JOHN MACKELLAR.

Court adjourned till to-morrow half past 12.

C. H. REILY.

*The 10th August 1887.—Examination of John MacKellar continued.*—I have looked for my diary containing the rough notes of my surveys of June 1885, I can't find it. They are only my private diary not office records. 377 vessels were surveyed by Mr. Bushby and myself, or by one of us from the 30th March 1886 to 1st April 1887. Most of the surveys are held in Calcutta. I do not remember with any particular minuteness what I did on each survey. As I do so many vessels, I cannot remember what had been done by me two and a half years ago on any particular vessel I surveyed. I examined the hull of the *Sir John Lawrence* in June 1885. I say everything was correct. If it had not been I should not have granted or rather got the certificate granted. The boats must have been in good condition or I should have condemned them. I feel sure I should have detected a rotten boat or a leaky boat if it had been on board. I should have noticed if the frames and plates had been rusty. I should have examined the frames to ascertain the condition of the iron, and if found defective, I should have ordered them to be strengthened or renewed. I always go down into the forepeak of every ship when I make an internal survey. I go into every compartment of the ship. Chandbally ships are not pretty rusty generally. The holds of the *Sir John Lawrence* were in thoroughly good condition and without scales. The plate on which the patch was put was also in good condition and painted. I never heard it stated that the hole in the fore-castle was done by the *Sir John Lawrence's* anchor.

JOHN MACKELLAR.

*Arthur William Stiffe, sworn, saith to Mr. Kilby.*—I am the Port Officer of Calcutta. I received from Government some letters sent to the Government by Mr. Neustein. I received the letters from Government on the 23rd November last. I also received a letter from Mr. Neustein direct. I was requested to report on those letters. This is the Government letter put in and marked (P). I also received a subsequent letter in June 1887 from Government, forwarding me the same set of letters from Neustein. I was asked to report a second time on those letters, put in and marked (Q). On receipt of the letter (P), I sent the enclosure to the Port Commissioners to deal with, and reported to Government that I had done so. I made no enquiry myself, and I made no report to Government. I then left the Port Commissioners to correspond direct with the Government. I am the officer referred to in section 7, Act VIII of 1876. I am at liberty to enter and inspect a ship under section 7. I may authorise any one else to do so. I am the person who grants certificates (A) and (B) under the Act. I am required to cause the ship to be surveyed before granting certificate (A) under the express direction of section 14 of the Act. Up to Mr. Bushby's arrival in 1882, I think, I appointed a surveyor myself and was responsible for the survey. Since Mr. Bushby's arrival I am not responsible for the character of the survey. My responsibility is limited now to the fact that a survey is held. I received official instructions from Government to apply to the Port Commissioners to order Mr. Bushby to make the survey necessary under the Act of 1876, and receive his report whether the requirements of the Act are complied with. From the nature of the Government instructions, I consider myself authorized to accept the report of Mr. Bushby; but if the owners or agents raised any objection to the report, I then should refer the matter back to Mr. Bushby or to Government. If the case was urgent, and the information given me was *prima facie* credible I might satisfy myself by a personal inspection of the ship, or through a survey of independent surveyors, as to whether the ship was seaworthy and properly equipped, fitted and ventilated.

By "urgent," I mean if the ship were on the point of going to sea ; if the case were not urgent I should simply write to the Port Commissioners, sending the information I had received on to them. I should take no further action ; they would not report to me. In Neustein's case, although he brought grave and serious charges against the way in which the surveys on board the *Sir John Lawrence* were conducted, I thought it lay solely within the province of the Port Commissioners to investigate into the action of their subordinate. Since the receipt of Government letter, dated 16th January 1884, I consider I have no responsibility in respect of surveys. Letter put in and marked (R). My view of my duty in respect of the (A) certificate is to make out and hand it over to the owner or agents on receipt of Mr. Bushby's certificate of the survey of the ship. Practically, therefore, the officer authorised under section 13 of the Act of 1876 is Mr. Bushby, and not myself. Under section 8, I consider I have the authority myself to enter and inspect the ship. As regards certificate (B), I should conceive it part of my duty to take action under section (8) when circumstances demand it. Section (8) I consider does not apply to me, in that the Government have directed Mr. Bushby to be the person authorised under the section. I follow the Government direction and consider myself absolved from all responsibility. Act VIII of 1876 directs that the surveys on which (A) and (B) certificates are granted should be by surveyors. Mr. Bushby has been appointed both Engineer and shipwright Surveyor. On the authority of the Government letter, I consider I am sufficiently complying with the requirements of the Act in accepting the certificate of one surveyor, Mr. Bushby. I do not recognize Mr. McKellar. As to (B) certificate, when asked for in respect of ships about to make a long voyage, I go on board myself ; as to ships going short voyages there is less trouble. The requirements are mentioned in section 11, Act VIII of 1876. Occasionally I go on board ; generally I accept the agent's statement in writing—a detailed statement that the requirements of section 11 have been complied with. I have been on board the *Sir John Lawrence* several times. She had an awning deck from stem to stern. She carried passengers on this deck. If there had not been substantial bulwarks or netting or other sufficient protection against the weather, I should have noticed it, and should have seen that the law was complied with. I consider that railings with rope netting combined with curtains are a sufficient protection against the weather within the meaning of the Act. The Local Government has appointed the Engineer and Shipwright Surveyor for the Port of Calcutta under section 9 of Act VII of 1884. The Vice-Chairman of the Port Commissioners is appointed the officer to whom the declaration of surveyors should be sent under section 12. At present there are no rules in existence made under section 24 of the Act of 1884 ; they have been under consideration for the past 2 or 3 years. The surveys are made under the rules made under the previous Act (Act V of 1862).

*To the President.*—The Board of Trade refused to recognise a Calcutta survey certificate, unless the survey was made by one of their own surveyors, or one nominated by them. This is what I have heard. The Board of Trade accept Mr. Bushby's certificates. Before Mr. Bushby's arrival the survey was held by two surveyors, a shipwright and engineer surveyor. At that time also I employed an additional and independent surveyor under the Act of 1876 ; a fourth surveyor was employed by the Protector of Emigrants. I am quite satisfied with the way Mr. Bushby performs his work. I consider him an absolutely trustworthy officer, if anything overscrupulous. Even if Mr. Bushby had never been near the ship, and yet signed the survey, I should be satisfied with that survey and accept its contents as absolutely correct. Mr. McKellar is not a legally qualified ship's surveyor. I was not aware that Mr. McKellar conducted surveys alone in the absence of Mr. Bushby, except on occasions when Mr. Bushby was away on leave. An engineer-surveyor has not to pass any examination that I know of ; anybody nominated by Government could be an engineer-surveyor. I wish to correct the statement I made as to Mr. McKellar not being legally qualified ; he may have been specially exempted from examination under section 69, Act VII of 1880.

*Cross-examination to Mr. Henderson.*—I accepted the certificates signed by John McKellar regularly in 1885. I accepted his certificates because he was gazetted as Assistant Engineer-Surveyor. I considered Neustein's charges, on the face of them, false and frivolous. If I had thought there was any foundation in any of the charges, I should have caused an independent enquiry to be made. I am authorised under section 14 to order a survey to be made upon an application for a (B) certificate while an (A) certificate is still running. I have no recollection of having ordered a survey for the purposes of a (B) certificate while an (A) certificate is running.

ARTHUR W. STIFFE.

*George Pointon, sworn, to Mr. Henderson.*—I am Commander of the *Bassein*. Formerly I was employed as Chief Officer on the *Sir John Lawrence*. I know Captain Irvine intimately. I sailed with him about four years and a half ; previous to that time I did not know him. I have, since I left the *Sir John Lawrence*, been to visit Captain Irvine very frequently. When I sailed with Captain Irvine he was employed in the Chaudbally trade. In my opinion Captain Irvine was not a foolhardy man ; he certainly would not have risked the lives of his passengers unnecessarily. He treated his native passengers with exceeding kindness. I do not think there was any commander who sailed out of Calcutta who was kinder or more humane to his passengers. He was decidedly an honest man. He was decidedly not the kind of person who would smuggle excess

passengers with the object of putting money into his own pocket; nor was he likely to connive at any one else on board doing the same thing. I have been in the service of Macneill and Company. No Captain of any of the boats belonging to Macneill and Company have to my knowledge ever been driven to make a voyage irrespective of the risk of loss of life. I left the *Sir John Lawrence* before 1882. Up to that time I believe the *Sir John Lawrence* to be a staunch vessel and a good sea-boat. I should not have remained in her if she had not been seaworthy and staunch. I did not leave her because she was not staunch and seaworthy. Captain Irvine was a very sober man. We got everything we indented for.

G. POINTON.

Case adjourned till 1 p.m. on Friday next.

C. H. REILY.

*The 12th August 1887. John MacKellar examination continued.*—Some of the passenger declarations which are sent to the Port Office are signed by me alone. I was gazetted to act as engineer-surveyor for Bushby during his absence in England. During that interval, I alone surveyed the ships and signed the certificate. I was assisted by D. MacKellar of Lloyd's, who did the hulls and equipments of sea-going vessels. Mr. Bushby was absent during the months of July, August, and September 1885. During Mr. Bushby's absence out of Calcutta, when he is engaged in business elsewhere, I alone the certificates, otherwise he always signs whether he surveys the vessel or not. During Mr. Bushby's absence from Calcutta I do the whole of the survey myself. I was passed as a Shipwright Surveyor by Mr. Bushby. Mr. D. MacKellar was Gazetted a Shipwright Surveyor simply to assist me, because the work was so heavy for one man, not because I was not a qualified Shipwright Surveyor myself. To my knowledge I have only been gazetted once, and that as an Assistant Engineer Surveyor only. I have not been gazetted as a Shipwright Surveyor. Before I passed Mr. Bushby's examination I had no previous experience as a Shipwright Surveyor. The details of the surveys held by me upon the *Sir John Lawrence* in June 1885, April 1886 and October of the same year did not impress themselves on my mind beyond an impression that everything on board was all right. Before getting Neustien's letter, I remember noticing how the scuppers were fitted. I saw them from the main deck and from the between deck, not from the outside. I think there were about three scuppers on each side of the ship. I only observed some of them previous to Neustien's letter. I cannot say which of the scuppers I observed. I may have seen them all, but I did not look at them particularly. I never noticed any cement in connection with these scupper pipes. In the between decks there was enough light to see the scupper pipes. There were two hatches on the between decks—one on the fore and the other on the after hold. The between deck is one compartment. I do not remember seeing the after scupper pipes. I remember examining the soil pipes. I am not sure whether the scupper pipes were in the engine-room or in the after hold. It is quite easy to work along the stringer plate in the after hold. In ships as large as the *Sir John Lawrence* there would always be stringer plates. You cannot make a minute inspection of the inside of the hull from the bottom of the vessel. So when I can, I walk along the stringer plate. When I survey a ship I get into every corner of the ship it is possible to get into. Mr. Bushby is very particular in his surveys, and gets into every compartment of the ship he can. In October 1886, when the ship was coming out of dock, the windlass I noticed was under repair. I did not see the *Sir John Lawrence* in dock, I went on board on the 23rd as she was coming out. I examined the engine and boilers on the 23rd. Mr. Young pointed out to me the part of the windlass which was defective, I think Mr. Bushby saw the windlass on the 23rd. The 24th was a Sunday. On the 25th I again saw the windlass: they were finishing repairs. On the 26th I saw it again. The repairs were finished. I saw the windlass working. I believe, both port and starboard were in working order. It would be quite right to grant a certificate even when the windlass is not in proper working order. It is never, however, done in this port. I remember seeing Neustien on board the *Sir John Lawrence*. I remember his being dismissed. On the last two occasions to 25th and 26th October. I do not remember seeing Neustien on board, on the 23rd I saw Neustien on board. These dates are all written down in our order book. I examined the chain while the steamer was lying at the Salt Golahs on the 25th October 1886. I never examined the chains before that date. It is usual to examine chains in dock; I suppose I could not get the chains out of the locker through the windlass being defective. I presume that was the reason I did not examine the chain when the ship was in dock. It is not more inconvenient examining the chain when the ship is afloat than when she is in dock. It is not more inconvenient for the Surveyors, but may be more inconvenient for the crew and officers. It all depends on the facilities which exist for getting the chain out of the locker. I saw as much of it as there was on deck. The rest I could not see, through some misunderstanding between some of the ship's crew. Mr. Neustien was the responsible man. I passed the chain nevertheless. I saw 60 to 80 fathoms of each chain of the working part. The ship was moored fore and aft I suppose by her own chains. I could not examine that part of the chain which was under water, so do not know whether it was defective or not. After the vessel was unmoored I went in her through the bridge at that time, I saw the part of the chain which had been under water. I do not think 120 fathoms of chain were out taking both ends when the vessel was moored. I thought half of that would be enough. I watched the

windlass working taking in the chain as it went down into the chain locker. The chain was at once paid into the locker. It was not laid out for my inspection. I was looking at the windlass most of the time it was working. They were not ready with the steam for me to begin my survey. A ship could be painted over the rust, but the process would not last long; the scales would drop. It is quite as easy for a surveyor to detect rust underneath paint as rust without a dash of paint put over it. When ships are surveyed for the first time, there is a form in the office which has to be filled up with particulars. Where ships are surveyed over and over again, we do not fill up any form of the subsequent surveys. There is no diary in the office as to what was done by me in surveys held by me on the *Sir John Lawrence*. No diaries either of surveys held by Mr. Bushby. I do not know anything of any diaries of survey in our office. If everything is all right, we make no report to the owners. The diary book referred to in this blank form. Forms of this kind are applications put in by owners or agents of vessels, they are filed in the office, but never signed either by Mr. Bushby or myself; put in and marked 'S'. The document is only filed in the office, therefore it is unnecessary to sign it. We sign the declaration and we consider that sufficient. I remember that the patch on the starboard was above the main deck. I did not see any broken bunks or chest. I did not see any in that part of the fore-castle. The hole was four or five feet above the main deck. The awning deck extended to the fore-castle. The height of the fore-castle was six feet six. I never observed the deck was rotten near the chain locker pipes. I did not notice a chock of wood put there. We test the pumps on the occasion of every survey. We put water down the bilge pump to see whether the buckets and valves are in good order. When you pour water down, if the pump be in good order, you can see the water it would remain above the pump. If it ran away it would show that the pump was leaky or the valve out of order. I remember the *Sir John Lawrence* had a stump bowsprit. I did not notice that it was broken. There must have been a band at the end of the bowsprit, that is to say there ought to have been. I did not observe whether there was one or not. The *Sir John Lawrence* had no bobstay that I know of. She had shrouds: they were all right. When a vessel is in good order it takes from one to two hours to survey thoroughly, hull and equipments. I am alluding to the *Sir John Lawrence* class of ships. Mr. Young or Mr. Taylor were invariably present at surveys. The application for survey specifies a particular day, if it is possible for us to go on board on that day, we do so, without any further notice to the Superintendent. If we cannot go, we write and tell him so. There is no time fixed for our survey. The Superintendent awaits our arrival on board till we come. The Marine Superintendent has the responsibility of keeping the vessels in order. The captain and engineers can do everything necessary to assist us in our survey, but it is better that the Superintendent should be on board. I ask questions of the captain and chief engineer. I am in the habit of doing this. I ask them whether there is anything they would like my attention drawn to if there is anything defective in any way. I have asked questions of the captain and engineer direct. These officers have drawn my attention to defects when the Marine Superintendent was present. I cannot remember whether this has been done on board any of Messrs. Macneill's ships. We accept the original measurement of passenger space. Unless there has been any alteration we do not measure. No encroachment on passenger space can be made except under penalties. We trust to this proving a sufficient deterrent. We could generally tell if there had been an encroachment without measuring the space again. After receiving Neustein's letter I measured the vessel and found there had been an encroachment on passenger space. On receiving Neustein's letter I laid it before Mr. Bushby. There was a delay of a month or two before we went on board the *Sir John Lawrence*. When we did go on board we found everything all right. We went on board on the 30th or 31st January 1887. I got Neustein's letter about the 28th of October. I showed Mr. Bushby that letter within a week after I got it from Neustein. Our first visit on board the *Sir John Lawrence* in respect of the charges brought by Neustein was on the 31st January 1887. That was on receipt of the Government letter. If Government had never sent that letter, we should never have gone on board the *Sir John Lawrence* on 31st January. We were both quite satisfied with the condition of the vessel even before that visit.

*To Captain deSmidt.*—During my apprenticeship I was taught nothing but engineering. I was eleven years at sea before I was appointed assistant to Mr. Bushby. I used to look after the machinery of the vessels. I had to make ports tight, superintend the iron work on board the vessel. I was for three months superintending the construction of one of the Cape Mail Steamers. I superintended the building of a vessel 80 feet long of my own design—a screw vessel. I superintended the fitting of one of the British India vessels—the finishing. I know nothing about the general equipment of sailing ships. The survey of pilgrim ships are done under the authority of the Port Commissioners. I have measured the Chandbally passenger ships myself. I know all that is necessary for ships' boats. I was present when the patch was being fitted. I saw it finished. I looked at the thickness of the old plate, but did not measure the thickness. I should say the plates in the forepeak were at least  $\frac{1}{8}$  thick. I did not see them bored. If I had any doubt about the thickness of the plates in the forepeak I should have bored them. I had no doubt. I went by the thickness of the landing and the condition of the plate generally. I allude to plates in her hull, and on her poop and topgallant fore-castle. You find the thickness of the plate by boring it. There are also a small patch on the port bow; I did not put it on. None of the plates in the ship were tested after the complaint of Mr. Neustein. The end of the scupper outside is flanged over and beaten down on to the plate. There was no occasion from the way they were constructed to put an iron flange over the lead flange and bolted through with screw bolts. The leaden scupper would last as long as the ship. I think now



that there must have been 120 fathoms of chain out when the *Sir John Laurence* was moored at the Salt Golahs. There may have been four or five or six boilers in one ship.

*Cross Examination to Mr. Henderson.*—It is ridiculous to think that a boatman's bamboo could push in the scupper pipe. I know the *Arco* was in the river. Her scuppers are exactly the same as those on board the *Sir John Laurence*. They do not show scars made by boats hooks. The *Arco* has these scuppers since she was built and she passed her survey at Home-under the Board of Trade ten years ago. The flanges of the *Sir John Laurence*, scupper pipes were not rivetted. I know what lip-guards are, they do not add anything to the strength of the outer part of the scupper. There is no topgallant forecastle on the *Sir John Laurence*. I at the time was quite satisfied that the plate on which the patch was placed was thick enough. I was supposed to be competent when I was at sea to put a new plate on a vessel. I could have gone on board at any time the vessel was on the river after receiving Neustein's letter, and yet I considered it was unnecessary to do so; that was the reason I never went aboard till I got Government instructions. The encroachment I spoke of was on the forepart of the main deck by the erection of two cabins. The number of passengers allowed to be carried was reduced by fifteen as far as I remember. All passenger vessels require to be measured for space—all Indian passenger vessels. The more frequently I go on board, the less likely it is that there should be an encroachment. I did not notice. It is quite possible that the stump bowsprit owed its origin to the fact that on some former occasion it had been broken. I do not think it a fact that there was no band to the bowsprit would have escaped my notice. There is a separate receipt granted for payment of fees than appears in (S). I saw no paint put over rust in the *Sir John Laurence*. I could see the chain passing over the windlass and going into the locker. I could see every link of the chain as it came up. I was watching the chain for the purpose of survey, because we had not seen it in dock. I should have noticed any broken links or missing studs or bent links. I examined the scuppers particularly after getting the Government letter. I looked out every part mentioned in Neustein's letter. Apart from the encroachment of space already mentioned, I found nothing wrong with the ship. The charge as to the encroachment have been greatly exaggerated. I examined the scuppers thoroughly, and I am now in a position to say, that none of them were cemented. There is no ground, whatsoever in my opinion for the suggestion that new scupper pipes had been put in, in the interval between the writing of Neustein's letter and our visit to the ship on the 31st January 1887. I got no certificate from Mr. Bushby when I passed my examination, a report was made to the Port Commissioners; the result was that I was confirmed in my appointment. There are no other Engineer-Surveyors besides Mr. Bushby and myself. I have seen the condenser of the *Sir John Laurence* opened out nearly every time I surveyed the ship, the condenser was in good order, it was not a new condenser, but it was in perfectly good order.

*Re-examination to Mr. Kilby.* I do not think the mouth of the scupper has been repaired previous to our survey of January 1887.

JOHN. MACKEILLAR.

Court adjourned till 15th instant.

C. H. REILLY.

*The 15th August 1887.—Robert Lindsay Young, sworn, saith to Mr. Kilby.*—I am Superintending Engineer to the Rivers Steam Navigation Company, combined with marine duties. I am also Superintendent of the *Sir John Laurence* employed by the owners. I do not know who the owners were. I had to look after the hull and the equipment of the vessel. I am an engineer by profession. I served my apprenticeship in the engine shop of A. and J. Ingles on the *Clyde*. I have had to do with boring the stern posts of screw steamers which was done in the yard, and the fitting of machinery and sea cocks of ships, and one thing or another. Before the time I became Marine Superintendent, I had no further experience in ship building and in the gear and equipment of ships. I have, however, been to sea for many years, either as junior or chief engineer, about nine years. I knew the *Sir John Laurence* first in 1879. She was then running to Chandbally. Macneill and Company were the agents. I do not know who the owners were at that time. I have a general idea who the owners were. I cannot tell you whether the ship at that time was running in the interests of Macneill and Company. It was laid up in October 1881 as far as I remember; repairs were begun upon her about the end of July 1883. There were various reasons: the boiler was defective; the deck, the main deck, was bad, and part of the upper portion of the bulwarks were bad; the frames below the boiler were bad, and several other frames round the ship wanted repairs; the plates were in a fair condition. I did not advise Macneill and Company that she was not in a fit condition to run. We could not get a certificate for the vessel from the surveyors—Mr. Walker and Mr. Mitchell—Mr. Walker refused it. I cannot tell you whether they were surveyors under the Native Passenger Ships Act, 1876. The *Medina* was substituted for the *Sir John Laurence* when she was taken off. There were, I think, fifty-one all told on board excluding the commander; but I am not positive about this. I am positive the number was fifty one. The *Sir John Laurence* at the time she was lying off was advertised for sale. There was one offer made to buy her. I think Rs. 20,000 to Rs. 25,000 were offered for her by an Eurasian. Mr. Bushby surveyed her afloat in October or November 1882. I was present; no one else was present. This was under instructions from the Port Commissioners. After that survey she was docked in February 1883. Under my orders holes were bored in her bottom. She had been docked in one of the British India docks: the examination was satisfactory. Mr. Bushby saw the steamer while she was in dock after the boring; he paid one visit. I reported myself to

Messrs. Macneill and Company after the boring. I found the plates satisfactory. The vessel was some time after that taken down to the yard, 23, Garden Reach. The repairs were begun on the 1st August 1883. The vessel did not run again till June 1884. The repairs occupied till that time. We began by scaling the hull inside throughout. This I did on my own responsibility. There were a few places taken out below the sheer strake. No other plates were taken out below the main deck. No plates were taken out under the boiler. About 200 plates were supplied. A great portion of them was used on the upper framework of the vessel for renewing bad plates in place of plates which were taken out; the rest were used for doubling thin plates. About ten per cent. of the plates were used for the doubling. Mr. Bushby came on board about once a week. He saw the vessel after it was scaled inside. All the repairs to the iron work of the hull were done under his orders. All the bad frames which were above the water line, and which were defective, were repaired by putting on where required new reverse angles. We arranged for the putting up of the 25 feet of additional deck. We stripped the main deck, leaving only sufficient fore and aft to work the ship, so that she could be docked. We did the same thing to the awning deck, removing all the steam winches, deck hawsers and covering boards. We lifted the boiler out—both boilers; took the engines all to pieces, leaving on board only the condenser, cylinder and bed plate. That is about the extent of the repairs done at Garden Reach during this period. Mr. Bushby was on board six to eight times. We happened to be building new vessels there, and Mr. Bushby had to be there very often. We arranged for docking her at the Caledonian dock. This was done for the purpose of renewing the frames below the boilers and repairing the propeller shaft and sea cocks, as well as scaling the bottom outside and painting her. Not more than four or five plates were put on her when she was in the Caledonian dock, and about 8 to 10 frames. There was also the half of a plate doubled in her bottom. The ceiling in the boiler room was all renewed, the working men still working on the different parts of the vessel. She was in the Caledonian dock about two months. Mr. Bushby visited her at least once a week during that time. On leaving the Caledonian dock she was taken back to No. 23, Garden Reach. The work was still carried on, the new boiler put on board, and the engines put together. Repairs were finished at No. 23, Garden Reach. The price of the 200 plates would be about Rs. 3,300. There were about 4,000 feet of running feet of angle iron used; the cost of the angle iron would be about Rs. 2,100, rivets Rs. 840, labour Rs. 4,898-10-3. Besides there is the cost of coals, tools, and supervision. This is the expense we were put to in respect of the iron work alone. The cost of stores and materials supplied daily to the *Sir John Lawrence* from the stores of the Rivers steam workshops, 23, Garden Reach, from the month of September 1883 till June 1884 comes to Rs. 12,203 7-10. The items making up this sum are contained in the book I now produce. Part of the iron work and rivets, already mentioned, forms items in this book also. Besides these materials supplied from the work, there were materials also supplied by the Agents from other sources. The value of these materials so supplied comes to Rs. 11,262-13-9. The cost for the iron work, including labour and the materials supplied, both from the workshop and other sources by the Agents, amounted to about Rs. 28,361-15-10. This sum does not include deck woodwork, main boiler, doukey boiler and new crank shaft. There was spent in respect of laying decks, repairing engines, and fitting new boiler on board, and also fitting new crank shaft and caulking the deck—crew's wages, a sum of Rs. 20,191-6-2—making altogether a sum of Rs. 48,555-0-7. I put the repairs as a whole, including everything, at a lakh of rupees. Rupees 50,000 of this sum was spent on the new boilers and engine-room repairs and rigging. Mr. Bushby made about 15 official visits to the vessel when she was under repairs, and perhaps the same number of unofficial visits. The vessel was lying alongside other vessels which he had to visit in his official capacity. The fee paid for these official visits was, I think, three times thirty = Rs. 90 to the Port Commissioners. There must have been a fee paid to Mr. Bushby for his first official visit in October 1882. I cannot find the receipt for that. In February 1883 the vessel was docked, and Mr. Bushby was paid a fee for that survey. I have got the receipt. When the *Sir John Lawrence* was docked in January 1884, Mr. Bushby was paid a third fee. I have that receipt. There was a final survey in May, and a fee was paid for Mr. Bushby's attendance. I have that receipt. We paid the Commissioners four times 30 rupees. Rupees 30 is the survey fee for a vessel of the tonnage of the *Sir John Lawrence*. Over and above this nothing was paid, that I know of, to Mr. Bushby for the additional visits he paid the ship. I have not a plan of the *Sir John Lawrence*. Since the repairs of 1884 no plates have been taken out or put into the *Sir John Lawrence*. She was not docked in Ramkissen's dock to my knowledge. She may have been. The height between the main deck and between deck is 7 feet, but I never measured the distance. No report, whether official, or non-official was made to, or by, Mr. Bushby after the final survey, after the conclusion of the great repairs of 1884. There was absolutely no report of any kind made to us. I was present at the survey held in April 1886 and October 1886. I was not present at the survey held in September 1885. Mr. McKellar surveyed the hull and equipment in April 1886. He surveyed the vessel in the usual way. He looked at the boats, I cannot say whether he looked at the scuppers. He generally looked at the windlass, so I conclude he did on that occasion. He went down below into the holds. I went with him to each of the holds. I saw no rusty frames, stringers, or plates. I suppose he did look at the boats because he generally did so. I never remember a survey when he did not look at the boats. In October 1886 Mr. McKellar did the deck and equipments. He looked at the boats. I say this because he always does so. He passed all the boats. He looked at the windlass. He passed the windlass after the final survey. The windlass I believe was passed on the 26th. The only explanation I can give of the fact that the certificate for that survey bears date the 25th, and that the survey was not concluded till

the 26th, is that the certificate may have been prepared on that date, but not issued. The pumps were examined and passed on that October survey. Some of the pumps were repaired before the 26th October. The tonnage of the *Indore* was about 650 tons. I can't be positive. The *Indore* is a substantially constructed ship. I remember seeing a patch on the starboard bow. I looked at it from the inside in looking round the fore-castle: it was in the fore-castle. We were putting a patch on the port side, and I then noticed the patch on the starboard side. No one called my attention to it. I did not measure the thickness of the plate on which the patch was placed: the plate on the starboard side was quarter of an inch thick. I measured that plate. I therefore presume the plate on the starboard side was about the same thickness. The plates above the main deck were all the same thickness. I remember Captain Irvine very well. Whenever he applied for stores, I invariably supplied all he asked for. I never refused him anything he asked for. He never asked for anything he ought not to have asked for. He was a man upon whose indents I could rely. With the exception of the item relating to lip-guards and the gipsy, everything was provided as asked for before she sailed on the 27th October. The gipsy was being cast, and was, as a matter of fact, supplied on the following voyage. I did not have the pumps connected to the side bilges either. I myself did not think this necessary. A new boat was supplied. A port after boat was taken away, and a serviceable one supplied in its place. This was done in the morning of the 25th: it must have been. It was there—the new boat—before the survey took place. I dismissed Neustein the morning the *Sir John Lawrence* came out of dock. That was the morning of the 23rd. He left when Captain Smith joined two days after; about the 25th or 26th. I swear that the new boat was sent on board before the survey. The defective boat only wanted caulking: it had hung on the davits close to the funnel. I remember Mr. Leech being dismissed in September 1886. I gave him a certificate of competency (it was the first certificate I gave him after he was dismissed) to enable him to get a Government appointment. I had given him no certificate, except that one, since the time he was dismissed from the *Sir John Lawrence*. Some time after his dismissal he asked me to give him a certificate—about a month after. I did not give it him. I said I could not very well give him a certificate considering the reasons for which he had been dismissed, but I said I would not stand in his way if an opening offered. I gave him the certificate in March. He came to me and said he could get an appointment if I gave him a certificate, so I gave it him. He was dismissed about a mistake about coal—shortness of coal. There was no dishonesty about the transaction. He got Rs. 300 a month when in the *Sir John Lawrence*. His successor got Rs. 200 only: he was a second class engineer. We did not send a first class engineer with the ship on her last voyage. We sent him in connection with business in Cuttack. His being sent has nothing to do with the working of the *Sir John Lawrence*. It was a very serious matter, sending in a short account of coal. It might have resulted in sending the ship to sea short of coal. There is no etiquette that I know of which prevents either the Chief Engineer, Captain, or Chief Officer speaking direct to the Surveyor about defects or requirements on board, even in cases where the information given by the Chief Engineer might have the consequence of taking the ship off the trade in a busy time for a fortnight. I certainly would not resent his giving the information. I have known many occasions when the Chief Engineer and Captain have mentioned defects direct to the Surveyor, without having been mentioned to me at first—even in cases where I and the officer might differ. As to the necessity for making the alteration or repair, I should certainly not resent such officer appealing against my judgment to the surveyor. Neustein was very insolent. I dismissed him. Mr. McKellar told me of the letter he had received from Neustein. This was before the despatch of the letter by Messrs. Macneill and Company to the Port Officer recalling the certificate granted to Neustein.

*To Captain deSmidt.*—The *Sir John Lawrence* had compound horizontal engines. The new boiler was of the same size as the old boiler. The thinnest boring I got was, I think,  $\frac{3}{8}$ . These were the plates we doubled. Her rig was not much altered in the great repairs of 1884. We took down one yard. I don't think she had a topsail yard. The topmast and foremast were all one spar. The foretopmaststay we set up to the end of the bowsprit. The bowsprit itself had been shortened considerably. There was six feet of bowsprit outside the ship.

*To Mr. Treloarney.*—There is no truth in the report that I withheld the certificate ultimately granted to Mr. Leech because he was supposed to be about to bring a suit against Macneill and Company, or that he was in league with Neustein.

*To the President.*—Mr. Walker withheld the certificate mainly on the ground that the boiler was defective. His objection had nothing to do with the plates of the ship. If I was commissioned to build a ship of the size and tonnage of the *Sir John Lawrence*, I should put plates into her which would be required under Lloyd's rules.

*Cross-examination to Mr. Henderson.*—I have planned and built a number of vessels in the port. I have supervised the building of about 30 vessels—inland vessels, iron vessels. Very few of them were actually built out here; they were built at home and erected out here. I have planned and built two vessels out here. I have planned many vessels which have been built at home. This has been part of my duty since I was appointed Superintendent. During the big repairs there was a contract made with one Behari Lall Seal. This is the contract; the work mentioned in this contract was done to my satisfaction. I supervised the work. I saw that the ship was thoroughly scaled, scraped, and cleaned [contract put in and marked (7),] and the various pieces of work stipulated for on the contract carried out; the ship was at Garden Reach and in the Caledonian docks, while the work mentioned in this contract (7) was going on. The contract bears no date but I can say that the work was begun on the 1st August 1883. This is a bill for the work done under that contract;



put in and marked (8). Mr. Hutcheson was Chief Engineer on the *Sir John Lawrence* when the repairs mentioned in (7) were being carried out; he held a first class certificate; he was a competent man; he gave a certificate as to the carrying out of the work. This is in the handwriting of Mr. Hutcheson—I mean his signature. The red ink writing is in the handwriting of my Baboo, put in and marked (9). There was a dispute about the amount demanded Rs. 1,200 odd in (8).

R. L. YOUNG.

Court adjourned till to-morrow half past twelve.

C. H. REILY.

*The 16th August 1887—Robert Lindsay Young Cross examination to Mr. Henderson continued*—Mr. Hutcheson left the service of the Rivers Steam Company. This certificate (9) must have been given before he left. Looking at (8), I say that the chipping and scaling on the *Sir John Lawrence* was begun on the 1st August 1883 and finished on the 1st May 1884. The word scaling is the proper word to use in describing the action necessary to knock off the rust from the plates of a ship. Some people talk of chipping; it means the same thing. In the October survey, 1880, the *Sir John Lawrence* had gone into dock, on that occasion she was not scaled inside. Mr. Neustein did not in that occasion propose to have the outside of the vessel scaled. It is not true that when Neustein proposed to have the outside scaled, he was only permitted to have the paint lightly tapped off with scrapers. It is not true that Captain Irvine was peremptorily forbidden in 1884 to have the inside of the hold scaled. It is not true that in 1885 the *Sir John Lawrence* only received coats of paint over the rust in bad places inside and out. It is not true that the *Sir John Lawrence* was scaled only in places where it was safe to do so. It is not true that in any time after 1883, if the hammer had been used in the forepeak for scaling, it would infallibly have gone through the plate even before 1883. After the big repairs of 1884 we supplied paint to the officers on board, and they painted down the vessel, so I cannot say how many times she was repainted. I had nothing particularly to do with the supervision of the painting after she was painted in 1884. I went on board at the various surveys held after 1884. I observed that the ship was painted both in and out. If the ship had not been properly painted, I would have objected to it. One ton of paint was supplied to the *Sir John Lawrence* in one year 1885 to 1886, October to October, also 152 gallons of paint oil. I got this statement out of the items which may be examined in this indent book which I produce in Court. The amount supplied would be more than sufficient to paint down the *Sir John Lawrence* in and out with two coats of paint; this painting does not include the bottom of the vessel, which is painted in dock. The bottom was painted in the different docks she was in, or the British India dock. The oil and paint for painting the bottom were supplied by the dock people. Whenever a ship is docked her bottom is painted. The *Sir John Lawrence* was scaled both inside and outside in 1884. It is not true that the windlass at any time was utterly useless. I never observed that the gipsey on the starboard side had worn into the board. The first complaint, either verbal or in writing, made in respect of that windlass was contained in that document No. (1). The windlass, however, had been repaired before more than once. I was alluding to the repair made in October 1886; before that date for a whole year no complaint had been made about it. After No. (1) was handed to me, I took steps at once to have the windlass seen to and put right. After the repairs I saw the windlass; it was in thoroughly good working order. A small cast-iron bracket that takes the upright spindle was cracked; the starboard gipsey was set fast on to the spindle; this had gone wrong from the want of attention and the want of oil. The last time I paid particular attention to the windlass was in the survey of April 1887. I have had occasion to examine the chain. It was the Chief Officer and carpenter's duty to look after the windlass. The *Sir John Lawrence* in 1884 was supplied with chains in proper working order. The chains in 1884 were overhauled; if there had been defective links discovered, they would have been put right. Neustein never indented for new chains without getting them. In the October survey of 1886 I saw part of the chain. Between 1880 and 1886 chains were twice or thrice supplied to the *Sir John Lawrence*. If holes had been knocked in the scupper pipes outside the ship by boat hooks or any other instrument, I think I should certainly have noticed it. Previous to the date of document (1) no complaint was even made by Neustein or any one else about the state of the scupper pipes. During the time the vessel was under repairs for the purposes of the survey in October 1886, Neustein did not, except what is stated in No. 1, make any further complaint about the state of the scupper pipes. When (1) was sent in I examined the scupper pipes to see if anything was necessary. There had been lip guards at one time, but the holes have been filled up; there were no old bolts sticking on the outside. We had lip guards cast, but they were found not to be necessary. I never observed that the scupper pipes had been commented in any way. I do not believe they were. The after scupper leading from the main deck through the hold on the starboard side was not leaking that I know of. Leech did not complain to me about the state of the scupper. I know Gill of King and Company. No bill was ever sent in by King and Company for repairs done to the scuppers. The sending in of the indent (1) had nothing to do with the discharge of Neustein, and in no way influenced me personally. I never told Neustein not to go near the surveyor, because he knew too much about the ship. I never told him that I would get him sacked if he went near a surveyor. I never in any way gave Neustein to understand that if he spoke to the surveyors about the repairs of the ship, it would be the worse for him. A day or two after the 17th October 1886 Neustein did not draw my attention to the dangerous condition of the scupper pipes. He never mentioned the *Vingoria* to me in connection

with these scupper pipes. That is an entire fabrication. It is not true that Neustein whenever he got a chance drove these complaints into my ears; nor in consequence of his having done so did he get into ill-blood with me. Neustein was not dismissed the first day. I had words with him on the 19th. About the 19th October they were taking the propeller shaft out of the hold. I asked him to rig up the necessary locker and to lend a hand to get it over the side. He refused. He said he was a d—d sight too old for this sort of thing. I did not discharge him on that day. I, however, spoke to Captain Irvine who ordered Neustein and then he went to work with a very bad grace. On the 23rd Neustein came to me and wanted the cooking stove repaired. Instead of repairing it I ordered a new one; but during the time the vessel was in dock, he had without orders sent the old one down to the shop, and the new one had not been supplied. On that morning he came to me using very abusive language about it he said: A d—d fine ship this, I have got to build a brick fire to cook my breakfast with. I discharged him. Previous to this nothing had occurred between Neustein and myself to cause ill-blood between us. It is not true that I never paid any attention to Neustein's suggestion about repairs. I paid every attention to them. It is not true that my idea is that nothing nautical has anything to do with the safety of a vessel. I have had to do with the removing of plates from other ships. Plates are tested by boring. That is the method I adopted in the repairs of other ships. Boring is a proper test. I went round with Mr. Bushby when he went round to see what repairs were necessary to the plates of the ship, both at the time when the ship was afloat and in dry dock. The borings came under Mr. Bushby's observation. I was present when he directed what was to be done. His directions were carried out to the letter. It was my duty to see that those directions were carried out. All the orders he gave in respect of repairs connected with other portions of the ship were carried out under my supervision. I have had experience of Mr. Bushby's method of survey since he came here. He and Mr. MacKellar and sometimes he and sometimes Mr. MacKellar survey all our inland steam ships. In my opinion the surveys done by Mr. Bushby and Mr. MacKellar are thorough and satisfactory surveys, the same as I have seen surveys carried on at home. Previous to Mr. Bushby's arrival in Calcutta, I have had no ships surveyed by other surveyors. I do not think there is much difference between the nature of the survey performed by Messrs. Bushby and MacKellar and that done by other surveyors of whom I have had experience. They are not stricter than other surveyors are. It would not be correct to characterise the surveys made by Messrs. Bushby and MacKellar as a "mere walk round." There is not the slightest ground for suggesting that such surveys are mere walks round. If a ship had passed the survey of Messrs. Bushby or MacKellar, I should be perfectly sure that such ship was seaworthy and well fitted and found. To my knowledge nothing has been passed by either of these gentlemen which ought not to have been passed. At no one of the surveys held on the *Sir John Lawrence* was any part of the ship unvisited which could be got at; at a dry dock survey every part of the ship can be got at and examined. On each survey as a matter of fact the plates were examined on all parts of the ship except where the cabins were. The plates were looked at during the surveys. Mr. Bushby always took a light down. After receiving Neustein's letter I looked at, but never measured the thickness of the plate on which the patch was placed. From long experience as an engineer I can make a very accurate guess as to the thickness of a plate by looking at the edge. Had the plate been of insufficient thickness the fact would have forced itself on my notice when I looked at. In my opinion a quarter of an inch would be a sufficient thickness of plate for that portion of the ship,  $\frac{1}{4}$ th inches must be sufficient on that portion of the ship; the patch was eleven feet above the water I dare say. It was not possible that the plate on which the patch was put was only  $\frac{1}{4}$ th of an inch thick. When I went round with Bushby and MacKellar. I also turned my attention to the plates. It is not true that you could pick flakes of rust off any part of the sides and bottom of the ship. Never during the time I have been holding my appointment of Marine Superintendent was there ever a sound boat supplied in the place of an unsound boat with the object of enabling the *Sir John Lawrence* to pass his survey. During my time no boat was borrowed from the *Medina* to put on board the *Sir John Lawrence*. I was present at two surveys in 1886. Previous to the survey of April 1886, I did not see an utterly useless boat on board the *Sir John Lawrence*. An utterly useless boat did not pass the two surveys of April and October 1886. After the survey of 1886 no rotten boat was returned to the yard. During my time there never was a rotten boat on board the *Sir John Lawrence*. The jolly boat was never patched up with pitch just to bring it alongside. In October 1886 a sound boat was taken on board the *Sir John Lawrence*. I can't say whether that was the only boat which was changed on board the *Sir John Lawrence*. During the surveys boats were put into the water. I have seen this done myself. I have no doubt of this. Sometimes all the boats, at others not all the boats, were put into the water. The jolly boat was not often put into the water at surveys. When a boat was not put into the water, it was nevertheless examined by the surveyor to see if it be in good order. He always looked at the boat and its fittings. The canvas hose I know was changed from time to time on board the *Sir John Lawrence*. I have seen the port after boat; it was the port after boat which was changed in the survey of 1886 (October). I saw the rails examined on the awning deck. The awning stanchion was secured by bolts and coach screws. The screws were not torn out by the weight of the awning. It was not possible in ordinary wear and tear for the screws to be torn out. It is not true that the covering boards were rotten; they were new in 1884; they were made of teak; teak could not rot in three years. The rails in the wake of the main hatch were not unsafe. Nor the rails on each side of the gangway opposite the main hatch, the gangway stanchion properly secured. It is not true that in consequence of the screw of the stanchion having been torn out, the

water got into the holes. No complaint was ever made by Neustein about the state of the stanchion and the rails of the awning deck. It is not true that the rails in the spar deck were all loose. It was not in my opinion necessary to have the pumps connected with the side bilges. I would have heard if any complaints were made of damaged cargo; there were none that I heard of. In 1884, 25 feet deck was added. The 25 feet of deck was compensated for by taking down the deck house. The repairs and alterations left the ship in my opinion very much where she was as to stability. Captain Irvine never complained of her being top heavy or crank; he had been in command of her before the repairs of 1884; he never complained of an increase of rolling, so far as I know he was perfectly satisfied with the ship. It is not true, beyond the ordinary cleaning up, that eye wash was used previous to the surveyor coming on board. None of the paint was used to brush away defects in the ship. Covering up rust or anything of that kind, you cannot hide a rusty plate by putting paint on it—paint on the contrary only makes the rusty plate more liable to detection. I remember the condenser. All tubes were drawn in the repairs of 1883-84. The condenser cleaned out, the tubes were tested with water pressure and the defective ones renewed. If the condenser were defective, the consumption of coal would be greater. It is not to the interest of owners to have defective condensers. When the *Sir John Lawrence* went to sea last the condenser was in thorough working order. It is not true that Bushby never went down the hatches or that he merely looked down the hatches in making a survey. Both these statements are false. I was present at the survey made by the direction of the Port Commissioners in consequence of Neustein's letter to Government. That survey was made with special reference to the strictures made in Neustein's letters on the condition of the *Sir John Lawrence*. Each matter referred to in Neustein's letter was separately examined. Except the encroachment on the passenger space, none of Neustein's charges were correct. As to the encroachment his statements were exaggerated. The frames on the *Sir John Lawrence* were closer than ordinary. They were about 18 inches apart. The usual distance might be 21 inches. I never induced or endeavoured to induce either Mr. Bushby or Mr. MacKellar to pass over anything that ought not to have been passed over while making surveys of the *Sir John Lawrence*. I never endeavoured to induce them to withdraw recommendations for repairs which they may have been inclined to make. I remember the pumps being tried by Mr. Bushby by water being poured down. I do not remember any occasion when the pumps would not work when so tested. The pumps were in proper working order in the April survey. I have every reason to believe they were in perfect working order on her last voyage. When the cement was taken out below the boiler, the bloom was still on the iron we bored the plates all the same. There are store bills of materials supplied to the *Sir John Lawrence* from 12th July 1886 to 9th December of same year, put in the bundle marked (10). These indents date from 5th May 1885 to 31st December 1885. Every item mentioned in these indents was supplied except those scrubbed out with blue pencil, put in and marked (11). There are similar indents some for 1886 and some for 1887, to which the same remark applies, put in and marked (12). Looking at this bill I can say that 45 fathoms of 1½ inch chain cable was sent on board the *Sir John Lawrence* on the 16th November 1886. This was sent to supply the place of another length of chain. There are bills for materials supplied by Burn and Company to the *Sir John Lawrence*, October, November and December 1886, put in and marked (13). These are Howrah docking bills for October and November 1886, marked (14). These are bills for docking and other charges and for materials supplied from England for the *Sir John Lawrence* from February 1883 to February 1884, marked (15). This is a bill from John King & Co., for work done on board the *Sir John Lawrence* after the collision in 1885, put in and marked (16).

R. L. YOUNG.

Court adjourned till Thursday next, the 18th instant.

C. H. REILY.

*The 18th August 1887—Robert Lindsay Young.* Cross examination continued to Mr. Henderson. I dismissed Leech. At the time I dismissed him there was intention in my mind to put Mr. Ogg in his place or a man on a reduced salary. No consideration of that kind had anything to do with dismissing Leech. There was no suggestion here made to me by Macnoill and Company or any one to get rid of Leech, or order to get a cheaper man. I had known Captain Irvine from 1879. He treated his passengers well.

*Re-examination to Mr. Kilby.*—The ton of paint and 152 gallons of oil were supplied on twelve different occasions throughout the year October 1885 to October 1886. The bulk of that supply was not supplied in October 1886. The indent put in will show the approximate time when this paint and oil was supplied. Such part of the chain I saw was all right. The part I did not see I never heard to be defective. The 45 fathoms of chain supplied on 16th November 1886 was to the best of my belief to take the place of an anchor and part of a chain lost at Chandbally. The anchor and chain must have been lost after Neustein left. I did not think the lip-guards necessary, except for throwing the water off. Both the surveyor and I always examined the sea connections of the engines. I do not remember how long the after port boat had been on board the *Sir John Lawrence* before I had it taken away in October 1886. It must have been on board when I came back in 1885. The boat which replaced the after port boat was an inland steamer boat. I have never built a sea-going steamer. I would not like to risk the steamers I build in a voyage to Chandbally during the monsoon. I do not know how Mr. Bushby got his information about the thickness of the plates on the *Sir John Lawrence*. He went on board with me after the plates had been

bored. I cannot say how he remembered the details. I kept no memorandum of the thickness of the plates. The hull of the *Indore* projects from 6 to 9 inches beyond the stringer plates of the upper deck. The *Indore*, at her stern, when loaded would be about 4 feet out of the water.

To Mr. Henderson.—It is quite possible, judging from the build of the *Sir John Lawrence*, for the upper deck of the *Indore* to have struck the *Sir John Lawrence*, while the hull never touched her at all. The forepeak of the awning deck on the *Indore* ended in a sharp point—a triangular plate to which the two angle-irons on the sides are rivetted.

R. L. YOUNG.

Duncan McKellar—Sworn saith to Mr. Kilby. I am Lloyd's surveyor to this port. If I were surveying a ship either for the purpose of classing or to see whether she were worth repairing or not, I would first have her placed in dry dock. I would have stages made outside and inside all round the ship, and have all ballast and cargo removed and the holds cleared. I would have a portion of the ceiling removed. I would have the plates and angles scaled of all rust and oxidation, outside and inside. I would then examine the plates and angles, try them with a hammer, and when I thought the plates were thin, I would have holes drilled through to ascertain the thickness. I would examine the cement in the bottom to see whether it were sound or broken and whether it was adhering to the iron. I would examine the decks, if wooden decks and appeared to be worn. I would have holes bored through to ascertain thickness. I would examine her windlass, and her rudder and steering gear. I would have her engines, if a steamer, examined by an Engineer-Surveyor, I myself doing the equipments. I would keep a note of the condition of the plates and angles, deck and equipment. If I was surveying the vessel for classification, I would report all those particulars to Lloyds. If I was surveying for another party to see whether the ship was worth repairing or not, I would report to them what I thought was the condition of the ship in writing. Unless I was asked to do so, I would not set out particulars of any survey. If the owners decided to repair the ship, then I should recommend what repairs should be done in detail. I should say so many plates or angles—specifying them—are to be changed. In that way I would specify everything that was to be done to the vessel. You must have stages to examine the outside of a ship. I should say the class at Lloyds A 90 would be quite sufficient for a vessel engaged on the Chandbally passenger trade. The plates for a ship of 160 tons net should, according to Lloyd's rules, be  $\frac{1}{4}$  of an inch thick amidship and  $\frac{1}{8}$  forward and aft. This is when the ship is new. The scantling 20 years ago was a good deal heavier. Unless one-fourth of the thickness was worn away, it would not be necessary to change the plate. If the vessel was taken care of and the plates protected, the plates here and there would want renewing. It is a proper procedure to double instead of renewing a plate. I often do so myself. The plates used for poop and fore-castle might be one-fourth thinner. The garboard strake ought to be  $\frac{1}{4}$  when the ship is new to satisfy Lloyd's requirements for class 90A; the sheer strake  $\frac{1}{4}$ ; the bilge strake  $\frac{1}{8}$ . From the garboard strake to the sheer strake  $\frac{1}{8}$ . I never surveyed the *Sir John Lawrence*. I measured her holds in May last in order to ascertain her carrying capacity. The holds seemed to me in good condition, properly painted. I did not notice any rust. I was on ten or twelve occasions on board the *Sir John Lawrence* in May last. I do not remember being on board in any other time. When I saw the ship in May she seemed a sound good ship. I took my last measurements on the day before she started on her last trip. I was down between decks and in the lower hold. As far as I can remember, she was closed in from the engine-room right forward, so as to be protected from the weather in case of a cyclone. I think a thousand people in a cyclone could take refuge in the main and between decks. I did not look at her equipments, but she did not seem to be in bad order anywhere. She did not strike me as being skinned in any way. The Mate was with me most of the time I was making my measurements.

To Captain de Smidt.—The poop and topgallant fore-castle plates might be one-fourth of an inch quite safely. A plate between the guard-room and sheer strake, I should say, should be  $\frac{1}{4}$  when the vessel is new.

To the President.—I knew Captain Irvine, but not intimately. My impression was that he was a steady, careful man, who did not drink and was a good commander. I had known him ten or fifteen years.

Cross-examination to Mr. Henderson.—I was down in the hold of the *Sir John Lawrence* on each occasion I visited her. If the plates had been rusty, I must have noticed it. If the angle-iron frames had been worn, I would have noticed it. I did not notice either that the plates were rusty or the angle-iron worn. In surveying for measurement as to capacity you do not take into consideration the strength of the ship. When I survey for class at Lloyds it is for four years. The *Sir John Lawrence* at one time was classed at Lloyds. Originally she was classed \*A.A. the star means that the vessel was built with heavier plating than that required by the rules at the time she was built in 1865. The plating required in 1865 was heavier than now required by Lloyd's rules for the same class of vessel. The *Sir John Lawrence* continued till 1879 in the class \*A.A. She was taken off her class in 1879 at the request of her owners—Messrs. Macneill and Company. This letter is a copy of one preserved in my office. I have compared this letter (put in, marked 17). In 1877 Mr. Stewart was Lloyd's Surveyor. I produce the survey of 19th October 1877 held by Mr. Stewart. I produce the copy kept in our office. This is Mr. Stewart's signature. (Put in certificate marked (18) and report marked (18)). Taking into consideration

the general condition of the *Sir John Lawrence* as specified in report (18<sup>1</sup>) of 1877 and the thickness of the plates at that time, I do not think it likely that the same plates in 1887 in the fore part of the vessel could be under one-fourth of an inch below the main deck. The borings specified in (18<sup>1</sup>) were made below the main deck. Sometimes we bore the fore-castle head plates I know Mr. Stewart. He was a careful surveyor, and a man thoroughly competent for the post. In 1865, when the *Sir John Lawrence* was built, in order to comply with the rules applicable to the class in which she was fixed, she should have  $\frac{1}{2}$  garboard strake, from garboard strake to upper part of the bilge, and the sheer strake  $\frac{1}{4}$  from the upper part of the bilge to the steer strake  $\frac{3}{16}$ . The star shows that the *Sir John Lawrence* must have been built with heavier plating than the figures I have given. While I was on board the *Sir John Lawrence* neither the Ma'o nor any one else made any complaint to me about anything being wrong. I have been associated with Mr. Bushby in making surveys more than once. In my opinion Mr. Bushby carried out the surveys in a proper and efficient manner. I had no reason to believe that he conducted the surveys in which he was associated with me in a perfunctory manner—quite the contrary. I have no reason to believe that Mr. Bushby does conduct surveys in this port in a perfunctory manner. I don't think making notes have anything to do with the efficiency of a survey: they only serve for future reference. I have had to do with surveying ships under the Native Passenger Act. I have granted declarations under the Act. These declarations can only be granted after a proper survey, and should be a record that proper survey had been made. If I were called upon to survey a passenger steamer under the Native Passenger Act, 1876, for the purpose of seeing whether a certificate should be granted, all I should do, if I found her in proper order and seaworthy, would be to sign the declaration required by Act. I should deem it necessary to send a report of a survey held by me on the direction of the Port Officer under the Native Passenger Act to the owners of the vessel. If directed by the Port Officer to make a survey, I should report that survey to the Port Officer alone and not to the owner.

D. McKELLAR.

*Robert Bushby.—Recalled by Mr. Kilbey.*—I have no memoranda of the details of the thickness of the various plates. I am trusting to my memory alone in giving those details. You must remember I made a very careful survey of the *Sir John Lawrence*—the last survey of all, shortly before she went down. I did not bore any of her plates on that occasion.

*To Mr. Henderson.*—When I bore plates, I do so to ascertain whether they are thick enough. When I pass the plates as thick enough, I do so with reference to some standard, and I would not pass the plates unless they came up to that standard. In regulating the standard, I take into consideration the service for which the ship is intended. By this means I am in a position to say that plates on a certain ship I have passed are not in certain places below a certain thickness. That is how I am in a position to state that the plates in the *Sir John Lawrence* were of the particular thickness in the different parts of that ship as stated by me.

ROBERT BUSHBY.

Court adjourned till to-morrow.

C. H. REILY.

*The 19th August 1887. John Simpson sworn, saith to Mr. Henderson*—I am Foreman to Messrs. John King and Company, Shipbuilders and Iron Founders. I remember the *Sir John Lawrence*. I have been many times on board the *Lawrence*. I think it was in June 1885, I went on board her after a collision. We fastened a patch on the starboard side just above the main deck in the forepart of the ship in the fore-castle. The "rags" had been cut when I saw it; it was about 16 inches square; the patch had been previously bolted on. We rivetted the patch. I thought the plate was quite thick enough to put a patch on. I have had experience in putting plates on. I have thirty years experience as shipwright and apprentice. I have no doubt the plate was thick enough for that patch. The plate was not less than  $\frac{3}{16}$ , it may have been a quarter of an inch. The plate was in a good state of preservation. Rivets were put through the frames as well as the plate. In my opinion after that patch was rivetted the plate was perfectly safe, and the ship, so far as that patch was concerned, seaworthy. I think the space between the frames were between 20 inches to two feet, I cannot say, I never measured them.

*Cross-examination to Mr. Kilbey.*—The patch was over two feet. The plate was rivetted to one frame not to two frames, the plate was two feet to two feet six, square. It was such a long time ago, I do not remember exactly. I am not sure whether the plate was rivetted to both frames. What I think was that it was rivetted to one frame, and to the plate on the other side with a strap at the back to take the rivet. I remember using a strap. The ship was painted red below and black above, the patch was on the black. I am sure of that. The scaffolding hung from the ship's side. I used to go in my own boat and get on to the stage from the top of my boat's cabin. The stage was a permanent stage, I had a considerable distance to step up from the top of my boat to the

stage. The ship was not very deep. I cannot say the depth of water she was drawing. She was in the usual trim. She was sufficiently trimmed to go to sea. She was a little heavier than ballast trim. The scaffold was about my middle, as I stood on the cabin. The top of the cabin was about four to six from the water. The hole was eighteen inches or so above the scaffolding. I am quite sure the patch was in the forecastle. I am positive I did not go below the forecastle into the forepeak. I remember there was the ordinary coating of paint on that plate. The *Laurence* was kept just like an ordinary vessel in the trade.

*Re-examination.*—She was as well kept as any other vessel.

JOHN SIMPSON.

19TH AUGUST 1887.

*Minden Augier, sworn saith to Mr. Kilby*—I was appointed to a post in Chandbally, Sub-Deputy Collector, Customs Officer, with powers of a Deputy Collector under Act of 1878. In addition to this, my predecessor, Mr. Chapman, was Inspector of Chandbally Police. I was nominated to the duties of Inspector by the Magistrate, Mr. Trevor Grant. I took over my Chandbally appointment at Chandbally on the 18th March 1886. I took over temporarily the charge of the Inspectorship of Police from Mr. Chapman on the same day. Mr. Chapman held all the other appointments also. At the end of May 1886, Mr. Grant asked me to submit the usual application to him to be appointed Inspector. I never ceased doing the work of the Inspector. I was obliged to do this, as there was no other officer to do it. From the 18th March the same Inspector under my direct supervision counted the Chandbally passengers as they came and went. I left Chandbally on the 30th July on sick leave. During the interval between the 18th March 1886 and 3rd July of the same year Mr. Palmer had nothing to do with the counting of the passengers to the best of my knowledge. I was in no way subordinate to Mr. Palmer; they were two distinct departments. Mr. Palmer was Honorary Magistrate. As such Magistrate he did have a certain control over the police in respect to cases which happened on land; he had no control over them in regard to passenger counting. I received verbal instructions pending the ratification of my appointment by the Inspector-General of Police, both from the Magistrate of the district and the Commissioner to carry out the duties of Inspector of Police with regard to the counting of passengers only. I endeavoured to carry out these duties to the best of my ability always. Soon after I returned from Balasore, after seeing Mr. Trevor Grant, my suspicions being aroused, I determined to do the counting myself. On the 21st June the first vessel which came in was the *Curlew*. I boarded her and found she had excess passengers. I found she had 610 passengers on board; she was allowed to carry 560. She had therefore 50 excess passengers; but the Captain challenged this counting. I had no means to test the accuracy of the Captain's statement, as the passengers had disembarked, and as he admitted to having 23 excess passengers on board I reported him to Mr. Trevor Grant, my immediate superior. Mr. Trevor did nothing to my knowledge on that report. The next vessel was the *Sir John Lawrence*; she came on the 24th June. On the morning of the 24th, as I looked down the river, the *Sir John Lawrence* not having come in, I noticed about two and a half miles from her mooring place the masts of the vessel evidently at anchor. The whole day passed (I had noticed this about 7 A.M.) till 3 o'clock P.M., when I saw Captain Bulloch's launch, called the *Jack*, leave her moorings and silently floating down the stream. She did not blow her whistle. She ought to have done so, and had always done so previously. In the course of about two hours the *Jack* returned with a crowd of passengers. I immediately sent two constables to count her passengers, while I went with two others on board the *Laurence*, which had followed the *Jack* up the river. I met the *Laurence* and went on board at the jetty. The two constables I had sent I saw board the *Jack* at her usual mooring place. I went on board and sent for Captain Irvine and also the Agent, Juggobundhu Baboo. I then asked Captain Irvine to keep tally with me. Captain Irvine and the Agent as well said it was useless giving this trouble, for there were no excess passengers on board. I insisted upon the Captain keeping tally with me. We counted the passengers, and our tally agreed; there were 561 passengers on board the *Laurence*, whereupon both the Agent and the Captain declared that I had given them unnecessary trouble. By this time the counting of the passengers on the launch *Jack* was reported to me.

*Question.*—Was any report made to you on that day or at that time by the police you had deputed to count the passengers on board the *Jack*?

*Answer.*—Yes.

*Question.*—Did they report to you at the time the number of passengers they had found on the *Jack*?

Mr. Henderson objects.

I think under the circumstances of Mr. Henderson's objection I must disallow this question.

*Examination continued.*—After getting that report I spoke to Captain Irvine on the subject.

*Question.*—What did he say?

Mr. Henderson objects.

Objection overruled.



*Answer.*—He merely said to me that he was obliged to get the assistance of the launch in consequence of her having run on the sand bank to lighten her weight by removing a certain amount of her passengers, and he admitted the counting on the launch. He said the counting on the launch was about right. I had told him the number on the launch reported to me.

*Examination continued.*—I reported the matter to my official superior, Mr. Trevor Grant. I have a copy of the letter I sent to Mr. Trevor Grant with me. I produce it. I made that copy at Chandbally from the original on the same day that I despatched the original. I compared this copy with the original after I made it. It is a correct copy.

Mr. Kilby tenders the copy.

Mr. Henderson objects.

Objection upheld.

*Examination continued.*—Shortly after this report had gone in, I received a copy of a letter. I have the letter by me. On the occasion of last year's cyclone, the 17th or 18th of June, I was standing on the wharf at Chandbally with the Commissioner Mr. Metcalfe. At that moment the *Laurence* was coming into Chandbally. Mr. Metcalfe's son was a passenger by that vessel. The *Laurence* appeared to me overcrowded. I got instructions from the Commissioner. I superintended the counting of the passengers, which was done by Sub-Inspector and head constable. I asked for the usual report and got it in writing. I doubted the statement I received. I went over to the Agent's office; then Juggobundhu Babu showed me a letter.

*Question by the President.*—From your experience gained as an Inspector of Police at Chandbally, and officially responsible for the counting of passengers arriving and departing in the steamers at that port, give me the conclusions you have arrived at as to the nature of the manner in which that counting is done.

*Answer.*—I have no hesitation in saying that there is no reliance to be placed upon the report of the subordinate police staff, and from the nature of the system it can never be satisfactory.

*Examination continued.*—When the ship arrives very often at midnight, passengers may escape from all sides of the vessel without being detected. The Sub-Inspector, head constable or policemen keeping tally are very likely to make a mistake. When passengers disembark they do so over a stage erected between the vessel and the wharf. The stage is six feet wide and there is a general rush—sometimes one, sometimes six abreast, all pushing to get ashore. The counting is done by a single man, and at the conclusion of the counting he reports what he likes. There is no means of either checking his counting or establishing a prosecution against the Captain. In the case of departure from Chandbally it is a common practice for passengers to go aboard when the vessel has left the wharf and is in mid-stream; the police having returned after the final counting. I have also noticed passengers go aboard when the vessel has proceeded about 500 yards down from its mooring place, and I have drawn the attention of my superior to the fact. I have documents now in my possession here, on which I base the allegation I have made as to the manner in which the counting is performed at Chandbally. I have been backwards and forwards to Chandbally about ten times. I returned the last time in the *Laurence*. There was not as many pilgrims as usual. When I went aboard it was in the slack time in November. In the *Sea Gull*, on one occasion, it took one half an hour to get a distance of sixty feet on the lower deck, it was so crowded. The passengers were closely packed, jammed so close together, there was no lying down room. Not a single passenger on that deck could have laid down. The *Sea Gull* generally does the passage in 14 or 16 hours. In the foul weather season she could not do the passage in that time. On dark nights the steamers have to anchor in the river; then she would take 28 hours. I have noticed very many cases of passengers, after disembarking from all the ships, die from exhaustion caused by sea-sickness, or whatever else, half an hour after they landed. Last year, between June and July, in one day I counted as many as 18 dead bodies; these included dead bodies of persons who had been brought from Puri to the *Laurence*. During the pilgrim season, which begins about the middle of May and lasts till about the end of September at least, that was the last year, I saw at least 100 dead pilgrims a month; this was the case from the beginning of June to the end of July. These pilgrims include those which came from Puri and those which came off the ships. A good number of pilgrims die who come off the ships. There is no inquest held on these dead bodies; the police I believe make the usual report. I was not dismissed from the Government service for withholding Government money. I have not been dismissed. I was removed from the service at Chandbally. On the 30th July I left Chandbally on sick leave. At the time I had in my possession a sum of Rs. 300 entrusted to me; about this sum. Not having received any orders what to do with this money, and being too ill to transmit it from a treasury 45 miles off, I sent for a native assistant and told him that I would take this money with me to hospital, I did so. I brought the money to Calcutta. I got 10 days' casual leave. Eventually I paid Mr. Trevor Grant the money. I had previously informed Mr. Grant I had the money by me. I put in two certificates I have received from the Government. (I) and (V).

*Cross-examination by Mr. Henderson.*—I was removed; my services were dispensed with. If an officer is dismissed the Government service he has no hope ever to regain admission. I was only "removed." The letter telling me that I was to cease serving Government as Sub-Deputy Collector of Chandbally is at Serampore. I could produce it by Monday. I am suffering from pleurisy. I obtained casual leave from the Commissioner through Mr. Grant. I went to Balasore on the 27th August. I had been 10 days in

Calcutta when I got a doctor's certificate from Mr. Crombie for a month. I got no further certificate. I was not in hospital. I was an out-door patient. I visited the hospital daily. I was not arrested when I got to Balasore. I have never been arrested by the police. My account books were at Chandbally; pending their arrival I had to find bail in the sum of Rs. 500. When the books arrived, and when done with, I was told I might go back to Calcutta. Mr. Trevor Grant made the order directing bail in Court. I went direct to Court from the ship. I signed no bond. Mr. LePatourel of the steamer *pilot*, stood bail. He is still my friend. The sum was Rs. 318. I handed that sum to Mr. Trevor Grant. According to Mr. Grant's reckoning my accounts were about Rs. 282 short, but there was a difference of opinion between us. Captain LePatourel lent me the Rs. 282. I handed it in under protest. This Rs. 282 was not a part of the Rs. 300 I paid to Mr. Trevor Grant. I have repaid Mr. LePatourel the sum of Rs. 282 which he lent me to pay Mr. Trevor Grant. I appealed to Government, and the Government refunded me Rs. 282. Before appealing to Government I never applied to Mr. Trevor Grant for the return of that money. I gave LePatourel a piano for the Rs. 282 he lent me. When I said that I had repaid Mr. LePatourel in money, I meant that I had repaid him the full equivalent of the Rs. 282 by the piano which he wanted. I paid two sums to Mr. Grant—Rs. 318 on one day and Rs. 282 on another day. Captain LePatourel was in Calcutta the day before yesterday. The piano transaction was an out and out sale. I swear it was not handed over to Captain LePatourel as security, a *bond-fide* sale. He has never either written or spoken to me on the subject. I served the Government originally as Assistant Sub-Deputy Opium Agent. I was on the supernumerary list. My services were not dispensed with in that department. I never served Hoare, Miller and Company, nor the Calcutta Steam Navigation Company. I cannot say whether I did apply to Hoare, Miller and Company for work. I was never in the service of the East Indian Railway Company. The native I told about my taking the money with me is named Baboo Jan. Mr. Grant admitted that he had seen that letter. I know Captain Palmer. I never saw Captain Palmer interfere in any way with the counting of the passengers. It is not true that the police have to report any excess to him, and have done so right through. I made two reports to Mr. Trevor Grant about the counting of passengers. I insisted on the removal of the Sub-Inspector because I reported him. He was removed in consequence of my report; no other policeman was removed on that report. I only reported against the Sub-Inspector. I emphatically deny that I had nothing to do with the counting of the passengers at Chandbally. I certainly did not clear out of Chandbally because the place was made too hot for me. I got Sunday and holiday fees. I never drew the extra salary of Rs. 50 a month, though the appointment comes to that sum. It was never notified to me that I should get that sum. I did apply for that sum. Juggobundhu Babu did not tell me that neither he nor Captain Irvine were allowed to pass excess passengers. I swear that he never told me that there were orders of the Agents against carrying excess passengers. The Babu never mentioned the Agents to me at all. I have not the faintest recollection of having either verbally or in writing stated that the Agents prohibited the carrying of excess passengers. I did not wear uniform as a policeman. If I had stated it in any report that would be true. The Sub-Inspectors were never charged with bribery in any court that I know of. I was supposed to keep a diary, but I do not do so, because I had not a copy of it. I kept the written reports; filed them in my office. The documents I have with me I did not take to hospital; it was in my office in Chandbally. My office is my bungalow. I removed those papers from my office. I removed nothing that had been filed as part of the records of the office. The papers I have with me are mine. I have seen a ship arrive at midnight I should say about fifty times from the 18th of March to the 18th November. When I was strong I went down to meet these midnight arrivals. When I was ill, I depended upon the Sub-Inspector. I first took ill about the beginning of May. I applied for leave immediately but did not get sanction. The suggestion was from Mr. Grant that I should perform the duties of Inspector. On the 18th June as reported by the Sub-Inspector the *Sir John Lawrence* carried 613 passengers, on the following week 24th June 678 passengers, on the week following the 24th June I cannot give you the number. I kept special note of the 18th and 24th June, because I had doubts at the time of the reports made me by the Sub-Inspector. I saw two dead bodies thrown out of the *Cocanada* on one occasion. I saw a body also on board the *Sea Gull*. I made no report of the dead-bodies I saw.

MINDEN J. W. AUGIER.

Case adjourned till Monday next.

C. H. REILY.

*The 22nd August 1887 Minden Augier—Cross-examination continued to Mr. Henderson.* I produce the letter of Government directing my removal dated 18th October 1886, put in and marked (19). There was a Deputy Collector and Magistrate named Davidson at Bhudruck, 45 miles away. Deputy Collector Davidson was not my immediate superior. When I took sick leave I received no instructions from Mr. Davidson to await his arrival; I can swear that no instruction reached me which I saw telling me to await the arrival of Mr. Davidson. I understand that Mr. Davidson arrived the day after I left Chandbally. The piano was not under hire from Harold and Company or from any other Company. I bought the piano from Greenwood and Company about May 1886. The price was Rs. 450. I agreed to pay



Rs. 50 a month. I paid two instalments when my trouble came upon me. I still owed Greenwood Rs. 350. I did borrow money from a man named Mohamed Bhoj Badamjee, he holds; a hand note of mine. I did not borrow money from Golam Mohamméd; I did receive Rs 100 as a deposit from the sirdar of the Chandbally hât, and I credited it to Government; that Rs. 100 was part of the Rs. 318, I delivered to Grant. I did not ask Juggobundhu Baboo to get up a memorial on my behalf I asked no body to do this. When I came back from sick leave the Sub-Inspector I had reported against was gone. This letter was sent me for my information by the Sub-Inspector of Police at Chandbally, put in and marked (20) After the receipt of this letter I ceased to act as Police Inspector as far as counting passengers was concerned, the letter got to me some time between the 10th and 12th July. I never heard of any decrees for execution sent to Chandbally against me or even to Balasore.

MINDEN J. W. AUGIER.

*Donald Fraser Mackenzie sworn saith to Mr. Kilby.* I am a partner in the firm of Messrs Macneill and Company. My firm were proprietors of  $\frac{3}{4}$  of the *Sir John Lawrence* at the time she foundered. Mr. William Mackinnon was proprietor of  $\frac{1}{4}$  and Duncan Macneill and Company were proprietors of  $\frac{1}{4}$ , that proprietary was for September 1884 to date. From November 1875 to July 1881, Macneill and Company of Calcutta were proprietors of  $\frac{3}{4}$ . British India Steam Company  $\frac{3}{4}$ , Duncan Macneill and Company  $\frac{1}{4}$ . From August 1881 to August 1884, Macneill and Company, Calcutta, were proprietors of  $\frac{1}{4}$ , British India Company  $\frac{3}{4}$ , Duncan Macneill and Company  $\frac{1}{4}$ . We bought the *Sir John Lawrence* from Mr. Shepherd of Bombay. I cannot tell you what William Mackinnon and we paid the British India for their share. The transfer was done at home. The price of the  $\frac{1}{4}$  we bought was also arranged at home. I cannot tell you what we paid. According to my calculation from documents in the possession of my firm, we spent Rs. 95,000 on the repairs of the *Sir John Lawrence* in 1883-84. The *Sir John Lawrence* was insured at the time of her loss for £5,000 at home. I am not aware of any survey being held on the *Sir John Lawrence* for the purpose of this insurance, nor am I aware of their being any necessity for such survey. I produce the pay sheet and postage bill from it. I can say that in the month of March 1887, that the *Sir John Lawrence* carried 31 deck crew and 22 engine-room crew, the April pay bill went down in the ship; I believe there was no material variation in the number of the crew mentioned in the March and April pay bill. The deck crew consisted of the master, mate, clerk, Chinaman carpenter, butler, two cuddy servants, one cook and cooksmate, one saloon topaz, one deck serang, one tindal, ten lascars, two deck topazes, three seacunnies, one leadsman, one bhundari, or sailor's cook, and one pannewalla. I was not in Calcutta when the great repairs of 1883-84 were undertaken. I do not know therefore what the negotiation were which preceded the decision that she should be repaired. A sum of money was paid to Mr. Bushby by our firm for his professional advice as to the requirements of the Board of Trade in regard to the alteration on the hull of the vessel. Mr. Young was Superintending Engineer, who carried out the repairs not being cognizant what those requirements were. The honorarium paid to Mr. Bushby was Rs. 1,000. All fees were paid to the Port Commissioners. The tickets sold on the last voyage made by the *Sir John Lawrence* were as follows:—

|   |     |     |                   |
|---|-----|-----|-------------------|
| For accommodation in after saloon (zenanah) | ... | ... | 13                |
| Second class passenger or saloon            | ... | ... | 1                 |
| Third class Nos. 5836 to 5837               | ... | ... | 2                 |
| 5840 to 6557                                | ... | ... | 718               |
| 5765 $\frac{1}{2}$ ticket                   | ... | ... | $\frac{1}{2}$     |
|   |     |     | 731 $\frac{1}{2}$ |
| Less No. 6316                               | ... | ... | $\frac{1}{2}$     |
|   |     |     | 731               |
| Deduct refunded ticket—                     |     |     |                   |
| 6125 to 6135                                | ... | ... | 11                |
| 6356  | ... | ... | 1                 |
| 6431 to 6433                                | ... | ... | 3                 |
| 6357 to 6361                                | ... | ... | 5                 |
| One ticket torn up                          | ... | ... | 1                 |
|   |     |     | 21                |

Of the 710, some 30 or 40 passengers were allowed to proceed by the *Mahratta*. No note was kept of the number of these tickets. The license number was 735. She was therefore short of 25 passengers apart from those which went by the *Mahratta*. The Captain would report to Mr. Currie the money collected on board from passengers without tickets. Commanders have instructions not to leave port with an excess number of passengers on board, and as a natural consequence of those instructions, the Commander would not lift anchor so long as he had an excess number on board. I should not myself necessarily be aware what the sums would be the Captain might pay in as received from passengers who had gone on board without tickets. We continue selling tickets till the evening of Tuesday. Before closing the office we advise the Captain as to the number sold, and if there be a margin, the Captain is authorized to receive passengers on board without tickets till the number representing the margin is exhausted. The money paid into the office by the Captain through Mr. Currie would be entered, or received, "from Captain Irvine dock freight account *Sir John Lawrence*," there are such entries I believe. I have not looked specially for them.

The court rose for lunch.

*Donald Fraser Mackenzie Examination continued.*—By reference to our cash sheets during the interval when the court rose, I have ascertained that the entries are made as above. These cash sheets do not refer solely to the *Sir John Lawrence*, but to the above cash transaction of our firm. My head book-keeper showed me these entries. I saw two entries, one in the subsidiary book and one in the cash sheet. I did not observe the amounts particularly, it was a small amount. I would not necessarily be likely to know the fact if the Captain at any time did receive moneys from passengers who did not buy tickets. We keep a registrar of tickets issued for each voyage. I produce the register. The register dates from 5th January 1885 to 6th July 1887. During this time, in my belief, no instances occur when tickets were issued by my firm in excess of the maximum license number at each season of the year of passengers on board the *Sir John Lawrence*. It has never come to my knowledge that passengers in excess of the authorized licensed number were carried by the *Sir John Lawrence*. On the 18th of May 715½ tickets were sold to passengers for the *Sir John Lawrence*. The Captain collected about Rs. 100, but I won't swear to the actual amount. I only looked at the entry casually. I could not tell you how many or if any passengers paid money to the Captain, it is quite possible that the sum mentioned was obtained on freight alone. The Captain would have nothing to do with cargo charges excepting deck freight. The Captain would pay his collections to us in Calcutta. Not so far as I know have we as owners nor Captain Irvine been fined for carrying excess passengers. Except the Captains tally we kept no check on the number of the passengers actually landed at Chaudbally or in Calcutta. Absolutely no commission was paid to the Captain in respect of passengers who went on board without tickets or for anything else. These documents are signed by Mr. Currie on behalf of the firm, put in and marked (V). These two documents are also signed by Mr. Currie on behalf of my firm, put in and marked (W).

*To Captain deSmidt.*—The *Sir John Lawrence* was insured at home, but how the knowledge of the risk was obtained, I am unable to say. As far as I know no report was sent from Calcutta of the condition of the vessel with the object of effecting that insurance. I do not know what suggestion Mr. Bushby made as to the proposed alteration in the hull. Our boats are surveyed under the Indian Passengers Act, I believe.

*To Mr. Trelawny.*—Captain Irvine stood very well with our firm. I have made several voyages with him and never saw him drink anything stronger than gingerade. I most certainly never saw him under the influence of liquor at any time, and I believe him to be thoroughly kind and considerate to his passengers, he was a regular typical old sailor.

*To the President.*—The price of tickets sometimes rose, according to the demand. On the last voyage the prices rose from Rs. 3 to Rs. 6. We refunded money on 21 tickets, 11 of them at Rs. 3 and the remainder at Rs. 5. Speaking from the sale of tickets in our office and deducting those allowed to proceed per *Mahratta*, she had 670 passengers. Our maximum number is 735 passengers in foul weather. If the police evidence be correct that she left with 735 passengers on board, there must have been 65 without tickets. I can give no explanation, because I was not there how it came about that some of the persons who bought tickets for that voyage were not received on board. The captain would be aware of the variation in the price of tickets. I can give you no reason why the number of passengers is not filled in our application for (B) certificate marked (W). On getting information of Mr. Neustein's charges, I referred the particulars of those charges to Mr. Young for report, and on hearing what he had to say, I consulted my Solicitors as to the advisability of prosecuting Mr. Neustein for defamation. The fair season is from the 16th November to the 31st March and 16th August to 30th September. The foul season is from 1st April to 15th August and 1st October to 15th November.

*Cross-examination to Mr. Henderson.*—The notice has to be given at least 24 hours before the vessel sails; the application is sent in at least 24 hours before the vessel sails, passengers are granted tickets right up to the end of the day before the ship sails. It would be impossible to state on that application the number of passengers she was to carry in any particular voyage. The application was drawn under Mr. Currie's directions. I do not know why the prices were increased on the 24th May. At that time the Chandbally steamers were running under an arrangement with a common price, the increased price of the tickets would go with the common price. No instructions were given

to Captain Irvine or anybody on board to turn away people with tickets, or order to take passengers on board without tickets and charge them the highest price for which tickets were sold. I trusted entirely to Captain Irvine. I have had no reason to doubt Captain Irvine in reference to his dealings with passengers and passenger money. There was a clerk on board. He had been on board for six or seven months. His duties were to collect the tickets and the deck freight, and make out the manifest. It was his duty to count the passengers and to report if there was any excess. He never reported any excess passengers on board the *Sir John Lawrence*. At the time the *Sir John Lawrence* was lost there was no competition between the *Sir John Lawrence* and the other steamers in the same trade. No inducement was held out to Captain Irvine by our firm to make quick passages, or to get to Chandbally before the other boats. About the time the *Sir John Lawrence* was lost, there was every probability of the steamer coming back comparatively empty on the return voyage.

D. F. MACKENZIE.

Court adjourned till to-morrow, half-past 12.

C. H. REILY.

*The 23rd August 1887.—Donald Fraser Mackenzie cross-examination continued to Mr. Henderson.*—Neustein applied for a certificate. I did not write out the certificate myself. I said to Neustein, when he came to the office, well Mr. Neustein I have nothing to say to you. According to your own story, you are too old for your work, and I have no intention of keeping officers of that description about me. Neustein replied: That was not the reason of my dismissal. I was dismissed for pressing upon Mr. Young repairs which were necessary to be done to the vessel. I replied that I was quite satisfied that Mr. Young was competent to decide what repairs were necessary or otherwise, and that that story would not do. Neustein said—Well I do not ask to be kept on, but as I wish to apply for permission to attend the examination for the river, I want a certificate of the time I have been in the employ. I rang my bell and told the peon to call Mr. Currie. On Mr. Currie coming in, I asked him, saying, give this man a certificate of the time he has been in our employ. The certificate came in initialled by Mr. Currie along with several other letters similarly initialled in a basket, and I signed it without reading it. It is not true that several days elapsed between the date of the certificate and the date it was handed to Neustein. It was given him on the same day of his application. I swear he never asked for a certificate which should embrace either character or ability; otherwise I should have refused it flatly at the time. There is no ghat serang in our employ in respect of the *Sir John Lawrence*. We never paid a claim for damaged cargo yet on board the *Sir John Lawrence*, and so far as I know none were made. Leech was also dismissed from our service. So far as I know there was no connection between the dismissal of Leech and the engagement of Ogg. The surveyors were never at any time influenced or attempted to be influenced in any way by Macneill and Company as to the nature of the report which they should make. The Rs. 1,000 paid to Mr. Bushby was paid, I believe, some time in 1886. As far as I know there was no arrangement made with him that he should be paid the Rs. 1,000 at the time of the repairs. So far as I know I have no reason to believe that Bushby expected to get anything.

*Re examination to Mr. Kilby.*—I believe the payment of Rs. 1,000 was by a cheque; I am almost certain, but I cannot swear the payment was by cheque. I cannot say whether the money was handed to Bushby direct or sent him through some one else. I have no doubt it was debited in the *Sir John Lawrence* accounts. I have no reason to suppose that Mr. Young knew of the payment of the Rs. 1,000. There is no reason why he should. I was not in the country when the arrangements were made about the big repairs done to the *Sir John Lawrence*. I made the payment; if it was a cheque, I signed the cheque. The chances are it was sent with a note asking him to accept it. I have certainly no recollection of Mr. Bushby asking for payment, or for any sum of money. I have absolutely no recollection of Mr. Young suggesting to me that I should give Mr. Bushby any sum of money. The joint purse arrangement had been in force some time before the *Sir John Lawrence* left here on her last voyage. How long exactly, I cannot say.

D. F. MACKENZIE.

*Barry LePatourel, sworn saith to Mr. Henderson*—I am in command of the steamer *Pilot* at Balasore. My steamer runs between Balasore and Calcutta. I carry native passengers. I am supposed to carry a particular number. A check on the number is kept by the police at Balasore. I know Mr. Augier; he was never a friend of mine, an acquaintance.

Mr. Kilby objects to any further questions being put to this witness.

Objection allowed.

BARRY LEPATOUREL.

*Joseph DeSilva, sworn, saith to Mr. Kilby.*—This (B) certificate, dated 10th May 1887, is signed by me for the Port Officer. I usually sign these (B) certificates for the Port Officer. (B) certificates are generally issued a day before the vessel starts; they are issued in the afternoon, put in and marked (VI). This certificate (B), dated 21st September 1886, is signed by me for Port Officer. The two documents appended to the certificate is signed by the Agents (Mr. Henderson admits the signature to be that of Macneill and Company), put in and marked X. This (B) certificate, dated the 4th January 1887, is signed by me for Port Officer, put in and marked (Y).

J. DESILVA.

*Phillip Arden, sworn, saith to Mr. Henderson.*—I am Commander of the Steam-tug *Hunsdon*. I remember something about the cyclone of the 23rd of May last. On the morning of the 25th, 7 A.M. I was below Saugor, anchored near the Long Sand light. Between 9 and 10 A.M. I moved up between 6 or 7 miles. I anchored then until the following morning till 10 A.M., when the chain parted. At noon I came to Diamond Harbour. I had a very good opportunity of judging the strength of the cyclone. I know the channel taken by the Chandbally steamers. It was possible, but not probable, that a ship of the *Sir John Lawrence's* size could have lived through that cyclone. Even a brand new ship of the *Sir John Lawrence* would not, in my opinion, have returned to port.

*Cross-examination to Mr. Kilby.*—This cyclone was not only intense, but irregular. The sea was the worst I have seen at Saugor. A perfectly new ship of the highest class at Lloyd's would have very little chance in that cyclone.

P. ARDEN.

*Juggobundhu Chatterjee, solemnly affirmed, saith to Mr. Henderson.*—I am Agent to Messrs. Macneill and Company at Chandbally. I have been there 4 years and 3 months. I have kept the account of passengers booked from Chandbally to Calcutta; the number of tickets sold. The police keep a tally and also the Captain kept a tally of passengers who went on board at Chandbally. Similar tallies are kept in respect of passengers landed from the ship at Chandbally. I know Mr. Palmer; he is Port Officer there; he sometimes comes and watches the landing of the passengers there. I cannot say whether he has anything officially to do with the landing and embarking of passengers. I know Mr. Chapman; he was Inspector of Police at Chandbally up to May 1886. He was succeeded by Mr. Augier. I remember on one occasion Mr. Augier counted passengers. I sometimes, when it is necessary, used to go and meet the steamers on arrival. I was in the habit of going. I did not go every time when there was a rush of passengers.\* I almost always went on board; that was during the pilgrim season. Last year I did not go on board every time passengers were landed during the rush. I cannot recollect whether he went and counted passengers on any other occasion. While Augier was at Chandbally during the busy season, I went to meet the steamer more than once. During these occasions I did not see Augier have anything to do with counting passengers. I saw Mr. Augier count the passengers only once as I have said, and I think that was in June. I cannot remember the day in June. I remember the occasion when the *Sir John Lawrence* stranded some little distance from Chandbally, the *Jack* went to the assistance of the *Sir John Lawrence*. On that occasion Augier took part in the counting of the passengers. I was not present at the counting. I could see Augier counting from my office; just at the landing stage. Augier told me there were a few passengers in excess. I took steps to see whether that was so or not; there was no excess. I have verbal orders from Macneill and Company not to sell tickets in excess of the licensed number. On that occasion passengers were landed on the *Jack*. The police keep proper tally at Chandbally. I had opportunities of seeing how the police did their duty, sometimes there has been a discrepancy discovered between the number of tickets sold and the number counted. The discrepancy was between 5 to 10, sometimes more, sometimes less than the number of tickets sold.

So far as I can judge the police did their duty in connection with counting the passengers properly. During the four years I was at Chandbally it never came to my knowledge that more than the licensed number of passengers were ever carried by the *Sir John Lawrence*. I was never present at any conversation between Captain Irvine and Augier. Augier gave us to understand that he had some power to count passengers. Afterwards a Sub-Inspector told us Mr. Augier had no power to count passengers, that was while Augier was in Chandbally. Augier left Chandbally for Calcutta on a plea of sickness in July 1886, that was before Mr. Davidson arrived. If excess passengers had been carried and I discovered it I should have reported the matter to Macneill and Company. I have never known passengers landed before the steamer got to Chandbally in order to evade the counting by the police. I believe the *Jack* whistled when she left her moorings to go to the help of the *Sir John Lawrence*. I was sent for by Augier on that day. I have never known the passengers on board the *Sir John Lawrence* so closely packed that they could not lie down.

*Cross examination to Mr. Kilby.*—On the occasion when Mr. Augier told me there were excess passengers I enquired of the Captain what tally he kept. He said he kept tally of 170 passengers landed in the *Jack*, and 561 on the *Sir John Lawrence*, he had a total of 731. Mr. Augier came to my office, I showed him the letter of advice received from Macneill and Company, it showed a less number than 735, how much less I do not know. The police do not report to me the numbers show by their tally. We enquire from them, they are not bound to report. We invariably enquire both in respect of passengers arriving and those departing; we ask for the number given by the tally of disembarking passengers in order to see if the number shown in our advice note agrees with that tallied by the police. The advice note only shows the passengers who are ticket-holders: when the tally does not agree with the advice note, we enquire of the discrepancy from the Captain. The Captain is not subordinate, nor does he have to report to me about any of the passengers he brings from Calcutta. I do not see his accounts, nor do I supervise them. I go on board when I am wanted, otherwise I do not go on. I may pay the steamer ten visits in the 24 hours.

*Re-examination to Mr. Henderson.*—I have never known the number given by the police exceed the number the ship was licensed to carry. I have never known the advice note give a number above the number the ship was licensed to carry. So far as I know there was never any occasion when Chaptain Irvine smuggled passengers on board.

JUGGOBUNDHU CHATTERJEE.

*Daniel Currie sworn saith to Mr. Henderson:*—I am an assistant to the firm of Messrs. Macneill and Company off and on for about five years. I was agent to that firm at Chandbally. I came up here in July 1881. At that time an account of the passengers landing and embarking was kept by the police. It was properly kept. During these four years I never saw dead bodies taken off the steamers. I remember Neustein coming to the office for a certificate. He came to me first. I refused him a certificate and told him he might go to Mr. Mackenzie. Mr. Mackenzie called me in and told me to make out a certificate for Neustein. At the time I wrote out the certificate I put in it what I considered was the instructions Mr. Mackenzie gave me. I was afterwards told I had exceeded those instructions. I heard afterwards that Captain Irvine gave a certificate to Neustein. As far as I can remember now Mr. Mackenzie told me to give Neustein a certificate for service. On those instructions I wrote what I did. Captain Irvine told me that he gave Neustein a certificate. When I asked Irvine about that certificate, he said he did not want to take the bread out of Neustein's mouth. Neustein wrote to the Lieutenant-Governor and others and backed it up by stating that he held a certificate from Macneill and Company and the Captain. Neustein left the service in October. I spoke to Captain Irvine after the 20th October. Captain Irvine said he was a lazy good-for-nothing fellow. That was that all was said. I have had to do with the Chandbally line. I am positive that excess passengers are not carried. I have no reason to doubt Captain Irvine's honesty.

*Cross-examination to Mr. Kilby.*—As Agent for five years at Chandbally, I made trips about once a month between Chandbally and Calcutta, and have every opportunity of judging. As a rule, I had sold the tickets previously; so on getting on board then I knew how many people ought to be on board. I invariably asked the police what was the number of passengers they counted: this applies both to passengers arriving and departing. I did this to know how we compared with other companies running steamers there. I am sure the other companies did not carry excess passengers, because if the fare is Rs. 2 and the fine Rs. 20, it does not pay. I have, when there was occasion to do so, assisted the police to count passengers. I was acting in Macneill and Company's interests and assisting the Captain. I am now speaking of passengers embarking merely. I assisted the police in every way possible by giving men to keep back the rush in order that they might keep a proper tally. I assisted the Captain in counting. I have counted every passenger at times, in order to see that the whole of the ticket-holders went on board. I am speaking of what I used to do six years ago. Baboo Juggobundhu Chatterjee performs that duty now at Chandbally. I have not been down to Chandbally since October last year. We had a fair number on the voyage down. Juggobundhu did not tally the passengers out on that occasion. We had only 300 on board—about. The Captain, every Saturday on his return from Chandbally, paid me all sums he had received as dock collections. He had no orders to pay it to me, but I being in charge of the department, he did pay it in to me. He has paid the money in to me since 1881. The payments were generally small sums, varying from Rs. 5 to 20. Now and again I may have received as much as Rs. 100. In competition times the dock collections were infinitesimal, because passengers could get tickets for 4 annas, and they could not go on board without them, when they would have to pay Rs. 2. The nominal fare was Rs. 2, if they did not take out tickets. Competition lasted up to about March this year. The pilgrim rush began in June and sometimes in July. The morning of the 25th May was the first big rush of the season. There had been a pretty good number of tickets sold in the previous week.

*Re-examination to Mr. Henderson*—On the 24th May the other steamers had got their full complement. I once personally telegraphed to Captain Irvine to return—that was indirectly, though a cyclone in the Bay, a tidal wave at False Point, and also because the *Medina* had not been sighted at Saugor, and therefore would not have been in time to start again on Wednesday.

D. M. CURRIE.

*John Henderson sworn saith to Mr. Henderson*.—I am Chief Engineer to the Rivers Steam Navigation Company. I have been Chief Engineer for twenty years in that service. I remember the collision between the *Indore* and the *Sir John Lawrence*. I put the patch on the starboard plate on board the *Lawrence*. The plate was in the fore-castle: it was not in the fore-peak. The patch was bolted on: it was not rivetted. Red lead packing was used. I saw the plate both before and after the jagged edges were cut. I was present when they were cut. I was present when part of the cutting of the jagged edges was done. The plate was a quarter inch thick. I went inside the fore-castle. The plate was in a very fair state. There was paint on it, both inside and outside. No suggestion was made to me that the plate was too thin to put a patch on. I saw Leech on board. He made no suggestion about the plate being thin. Neither he nor any one else. When I went into the fore-castle, I observed the frames. I went on purpose to observe frames: they were in a good state. It is not true to say they were nearly eaten through: they were about  $\frac{3}{4}$ th inch thick. I have had a good deal of experience in putting plates on to Inland vessels. I have no doubt in my mind that the plate on which patch was put was thick enough. The repairs I made was temporary, as far as the bolts were concerned. At the time it was fully understood that later the bolts would have to be taken out and rivets put in. The patch was a perfectly safe patch, as I made it. After being rivetted on the plate it would, in my opinion, be perfectly safe as a permanent repair.

*Cross-examination to Mr. Kilby*.—I did not see the collision occur. I know the damage which was done to the *Lawrence*. The starboard boat smashed and the two davits on which it hung bent. There was a slight indentation near the knight head. There was the hole which was patched also. Besides this there was no other damage. I understood that the *Lawrence* ran into the *Indore* from Mr. Leech. The plate was put on in May 1885. I have had to do with the repairs of a good many ships, but we have to put on patches as engineers. I have put on a good many patches on Inland vessels. It is hardly a thing to forget that the patch was put on. The circumstances that impressed the position of the plate in my mind was that it was the plate just above the sheer strake. I remember admiring the thickness of the sheer strake, it was of such unusual thickness. The hole was in one plate. the breadth of the plate was about 2-6, it may have been more. It was an irregular hole after it was cut; I should say after it was cut it was between 15 inches and 16 inches square. The hole was in the centre of the plate; it must have been in the centre of the plate. I don't remember distinctly, but my strong impression was, it was in the centre of the plate. I am quite positive the plate immediately below was the sheer strake plate. I could stand upright in the fore-castle. The hole was about 18 inches above the main deck. The deck was not injured in any kind of way. The hole was about 8, 9 or 10 feet above the water as she was when I saw her.

*Re-examination to Mr. Henderson*.—I did not observe how close the frames were. I had not repaired a sea-going ship before.

J. HENDERSON.

Case adjourned to Thursday the 25th instant.

C. H. REILY,

*The 25th August 1887 Huttaman Singh sworn saith to Mr. Henderson*.—I am an assistant to Messrs. Macneill & Co.

*Cross-examination to Mr. Kilby*.—I look after and issue and sell tickets for the passage on the *Sir John Lawrence*. I have sold tickets since last November, before that a Babu sold tickets. The maximum licensed number is 1,038 in fair-weather and 735 in foul weather, I believe. I know what is the fair weather season and what is the foul weather season. I have never known a single instance where more than the authorised number of tickets were sold. I have nothing to do with the deck collections or with money received from passengers who go on board without tickets.

*Re-examination to Mr. Henderson*.—I worked under Mr. Curries' supervision.

HUTTEMAN SINGH.

No.

FROM C. H. REILY, Esq.,

*Chief Presidency Magistrate and President of the Court appointed to inquire into the circumstances connected with the loss of the S. S. "Sir John Lawrence,"*

TO THE HON'BLE COLMAN MACAULAY, C.I.E.,


*Secretary to the Government of Bengal,*

*Marine Department.*

*Dated Calcutta, the 8th September 1887.*

SIR,

WE have the honour to submit the following report on the circumstances attending the loss of the steamer *Sir John Lawrence*.

The *Sir John Lawrence* was an iron screw steamer built in London, 1865, 90 horse-power. Her registered tonnage was (nett) 466.58, gross tonnage 686.14; official number 52713. At the time when she was built she had three masts, was schooner rigged, and two decks, with poop and fore-castle. She was classed at Lloyds \*  100. We have no evidence before

us of the history of the vessel till the year 1874, when we find her trading on the coasts of India. She is described at that time as a staunch vessel with everything good about her. She was still classed at Lloyds. In 1875 the vessel was the property of a Mr. Sheppard of Bombay, and in November of that year she was purchased from that gentleman by the firm of Macneill and Company. From that date till October 1881 she was employed in the coasting trade, for the larger portion of the time running between Calcutta and Chandbally. During this period in the year 1877 she was surveyed by Captain Stewart, Lloyds' Surveyor. On this occasion she retained her class. In 1879 her owners requested the Secretary of Lloyds' Register to remove her name from the books. In October 1881 Messrs. Walker and Mitchell, Surveyors, refused to grant her a certificate for various reasons. Among these, as stated to us, was the defective condition of her boilers, main deck, upper portion of the bulwarks, frames below the boiler, and several other frames round the ship. In consequence of the action of the Surveyors she was laid up, and on the 8th September 1882 an application was made to the Port Commissioners, requesting them to send their Engineer-Surveyor on board the *Sir John Lawrence*, with a view to report what repairs it would be necessary to effect before a certificate could be granted under which she could recommence running in the Chandbally trade. In accordance with this request the Port Commissioners deputed their Surveyor, Mr. Bushby, to make the necessary survey. This officer's opinion as to the condition of the vessel at that time is expressed in the letter (M). After declaring that she was in many respects not seaworthy, he stated that it would be necessary "to renew all defective frames, floors, stringers, beams in boiler and bunker space, repair and test boiler (the front combustion chamber and tubes will probably require renewal); the casing round boiler from top to bottom is worn out, and also the main funnel will require renewal. The upper plating at ends of ship, in cabin and fore-castle, require to be stripped, and defective parts renewed; the main deck is very defective, and should be lifted, and all defective beams, &c., made good." On the receipt of this report the owners of the *Sir John Lawrence* apparently decided to repair the ship.

H.  
ves  
187.



Repaired  
1884.

She was docked in February 1883, and continued under repair till June 1884. During this time the repairs indicated by Mr. Bushby seem to have been taken in hand. We are told that the plates of the ship were bored in a hundred different places, the hull scaled throughout, about 200 new plates were supplied, ten per cent. of these being used for doubling over thin plates; a large number of the frames were renewed, the main deck was stripped, and a new deck laid; there was also a new awning deck, and 25 feet additional space of deck added, filling the gap between the poop and awning deck. The fore and main masts were lifted, and she was fitted with entirely new rigging. Mr. Bushby during this year paid the vessel frequent visits in his official capacity, and the repairs indicated were apparently carried out under his immediate superintendence. In proof of the extent and thoroughness of the repairs done, the owners have put in a large body of documentary evidence in support of the general assertion made on their behalf that a sum of Rs. 95,000 was spent in refitting the *Sir John Lawrence*. On the completion of her repairs she was surveyed by Mr. Bushby, and commenced to run once more in 1884 in the Chandbally trade, and so continued till the day of her loss. During this period she was surveyed at intervals of six months and docked annually, the Surveyors being Messrs. Bushby and John Mackellar; the survey held in April 1886 being done by the latter gentleman alone. The last Surveyor's declaration is dated the 25th April 1887, and is signed by Mr. Bushby. This certificate was intended to remain in force until the 21st October 1887. It describes the condition of the hull, general equipment, and ground tackle as "good" for ocean navigation. She was commanded by Mr. Peter Irvine, who held a certificate of competency as master, one officer, 24 (Native) deck crew, 3 engineers, and 12 engine-room crew. She appears to have been last docked on the 21st October 1886. Her engines are represented at 90 nominal horsepower. Her boiler was new in 1884, and was passed for pressure of 80 lbs. to the square inch. She had four boats of the aggregate capacity of 987 cubic feet, two of which were life-boats. The survey is also accompanied by a compass certificate, signed by the master and mate of the vessel. At the time of her loss she was insured in London for a sum of £5,000.

Condition  
of weather  
on 25th May  
last.

The *Sir John Lawrence* left her moorings at daylight of the morning of the 25th May, having about 80 tons of cargo, and, if the evidence of the police can be accepted, her full complement of passengers, in number 735. She was preceded that morning on her voyage by two steamers, bound for the same port—the *Tyrone* and *Curlew*. The masters of each of these vessels have been examined, and it is to their evidence we for the most part have to look for any subsequent information about the ill-fated vessel. The *Tyrone* and *Curlew* apparently steamed down the river together, and both Captains agree in their description of the state of the weather up to the moment when they anchored at Kedgerree. Captain Spence, of the *Tyrone*, states that the weather began to get very bad before his vessel reached Fisherman's Point, and that he at this comparatively early period of his voyage, about 24 miles from Calcutta, had made up his mind not to go to sea. Both vessels reached Mud Point about 10-30 a.m. It was raining heavily at this time, and the weather is described as "very dirty." Captain Moore of the *Curlew* turned his vessel round and waited for a temporary break in order to enable him to distinguish the nature of the signal flying at Mud Point. He discovered eventually that the signal was an inverted cone over a ball, and known as No. 8. According to the Government Notification this signal indicates the probable passage northward, and to the westward of Saugor Island and north of False Point of a cyclonic storm of small extent and intensity. This signal leaves it optional to vessels of light trim and fast steaming to proceed to sea. After a short consultation carried on by signal and board, Captains Spence and Moore decided to go no further down the river than Kedgerree. Both Captains assert that even if they had not been able to discover the signal at Mud Point, the appearance of the weather and the indications of the barometer were such as to convince them of the absolute necessity of going no further down the river than the safe anchorage of Kedgerree. After these vessels had been at anchor about two hours, the *Sir John Lawrence* passed them half a mile off. No signals were exchanged. The *Sir John Lawrence* did not stay her course, but under steam and with her sails set, proceeded out to sea. Captain Spence describes the ship as being in

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light trim when she passed him. If we accept a remark made by Mr. Pedler, that the *Sir John Lawrence* was seen from the signal station by the telegraph-master off Saugor Island, this apparently was the last view obtained of the vessel on that day. Taking the time stated by Captains Spence and Moore as fairly accurate, it is more than probable that the *Sir John Lawrence* must have passed her first signal about half-past twelve. The question whether Captain Irvine did see the signal at Mud Point is conjectural. Captain Moore, as we know, had to turn his vessel round and wait for a favourable opportunity before he could obtain a glimpse of the signal station. The weather, according to this witness, had got more squally and thick in the two hours which intervened between the time when the *Tyrone* and *Curlew* passed Mud Point and the passage of the *Sir John Lawrence*. The signal station would be about five to six miles from the channel ordinarily taken by vessels engaged in the Chandbally trade. It being therefore impossible to arrive at any definite decision whether Captain Irvine did sight the storm signals at Mud Point, it becomes extremely important to note the state of the weather at the time when the *Sir John Lawrence*, leaving the *Tyrone* and *Curlew* at anchor at Kedgerree, went on her way out to sea. On this point both Captains Spence and Moore speak in no doubtful terms. In addition to the remarks made by Captain Spence as to his opinion of the weather, he says that had he been in command of the *Lawrence* he would not have gone to sea. He further asserts that at the time the *Sir John Lawrence* passed him he considered that there was going to be a cyclone. Captain Moore on this point is even more emphatic: he says that in his opinion eight out of ten Masters of ships would have hesitated to go out to sea in such weather. He continues,—“No man of any sense would have gone out in that cyclone except he was driven,” though he is unable to give any reason which might have influenced Captain Irvine to go to sea against his will. He says the Chief Officer, Mr. Smith, “was a tear-away sort of a man, and one who would have urged the Captain to go on.” “I am of opinion,” he further states, “that no man with a straight head on him would have gone to sea on that day.” Philip Arden, the Master of the steam tug *Hunsdon*, which was anchored below Saugor on the morning of the 25th, describes the cyclone as very intense, and that the wind and sea was very strong. He says, “I never saw the sea so bad at Saugor.”

After careful consideration of the evidence we have epitomised, it seems to us unnecessary to consider whether or not Captain Irvine saw the storm signals at Mud Point and Saugor. We have no difficulty in arriving at the conclusion that Captain Irvine, in proceeding out to sea in the face of the appearance of weather described by Captains Spence and Moore, was guilty of an act of foolhardiness which in some of its aspects was almost criminal. In saying thus much we feel we are treading on safe ground, for our conclusion is based on the evidence of witnesses who have every inducement to place Captain Irvine's conduct in as favourable a light as possible under the circumstances. When we attempt, however, to extract from the evidence given any definite or satisfactory reasons which may have induced Captain Irvine to act as he did, our task becomes a difficult one. On the one side, although we are told that Captain Irvine was a humane man, popular, on account of his kindness and consideration, with his Native passengers, we find him, in the face of every indication it was possible to give a sailor of his experience, proceeding out to sea with a full complement of Native passengers, a large proportion of whom were women and children, on a voyage which, whatever the ultimate result, must have entailed hours of intense misery, danger, and (if the evidence of Captain Spence may be accepted on this point) possible destruction of some of the lives of the passengers who had entrusted themselves to his care. The hint thrown out by one of the witnesses, that Captain Irvine may possibly have been an unwilling agent in the matter, and influenced by what he knew or suspected to be the wishes of his owners on the subject, is based on no evidence whatsoever, and is, in our opinion, practically absurd. If one theory more than another is to be accepted, we would give the preference to the view which attributes Captain Irvine's conduct to a mere act of bravado, stimulated possibly at the sight of the two steamers safely anchored at Kedgerree. We are quite aware that in accepting this explanation we have to ignore a considerable body of evidence which describes Captain Irvine as a careful and

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conscientious sailor. The whole subject, however, is wrapped in mystery, and in the absence of any definite evidence we fear we have no alternative but to leave it still a matter for mere conjecture.

The next question which has to be considered is whether the *Sir John Lawrence* at the date of her last voyage was in a seaworthy condition. Among the papers connected with this branch of the subject are a series of letters written by one of the witnesses, Mr. H. W. Neustein, a discharged servant of the firm of Macneill and Company, part owners and agents of the ship. This witness served as Chief Officer on board the *Sir John Lawrence* for a period of 13 months, from September 1885 to 25th October 1886. On that date he was discharged from his post, and shortly after wrote a series of letters addressed to various officials, among whom were the Port and Health Officers. A communication of a similar kind was also forwarded to the Local Government. In these letters Mr. Neustein makes a number of charges connected with the seaworthiness of the *Sir John Lawrence*; he also declares that the surveys held on board the vessel were neither adequate nor satisfactory, and seriously impugns the motives which he alleges influenced the officials charged with this duty. This action of Mr. Neustein resulted in a departmental inquiry, and, as we are informed, in a Resolution by the Local Government. We are ignorant of the contents of this document; nor are we aware whether at that time any further action was taken by the Government in the matter. The *Sir John Lawrence* was lost at sea on the 26th May of this year, and shortly after this occurrence Mr. Neustein for a second time circulated a fresh series of letters, reiterating the same charges against the owners and agents of the vessel and the officials who surveyed her. These letters have been put in as evidence, and Mr. Neustein has himself been examined as a witness. We desire to indicate here, in support of the attitude assumed by this Court in regard to this branch of the inquiry, that the papers included with the formal notification sent to the President clearly indicate that the Local Government were desirous that the charges made by Mr. Neustein should engage the serious attention of the Court. In order to give practical effect to this intention, it was necessary to deal with each charge separately. Mr. Neustein, it must be remembered, came into Court with definite allegations which, if the vessel had only been afloat, could have been accepted or rejected after a local inspection—a task which might have been completed in a single day. The *Sir John Lawrence* having foundered, it was impossible, except after a long and patient hearing of the evidence on each of the points indicated by Mr. Neustein, for us to come to any definite conclusion. We are quite alive to the fact that this inquiry has been protracted far beyond the ordinary limits of an investigation of this kind. Although we regret the circumstance, we can see no reason for believing that its duration could have been shortened either by the action of Mr. Kilby, who was charged with the conduct of the inquiry, or the Court which was called upon to report upon the case placed before it for disposal.

Mr. Neustein, on entering the witness-box, was asked to specify those among the number of the charges he brought against the owners and Surveyors of the ship which in his opinion contributed towards the unseaworthiness of the *Sir John Lawrence*. He thereupon called attention to—

- (1) the windlass,
- (2) the state of the scuppers,
- (3) the pumps,
- (4) the state of the ship's plating, directing attention more particularly to a patch which had been rivetted on to a plate, which he stated was too thin to bear it.

The evidence given in regard to the state of the windlass is in some respects contradictory—a remark which unfortunately may be applied to the allegations made by the witnesses on every point at issue in this inquiry. After a careful consideration of all that has been adduced either in support of or against Mr. Neustein's allegation, we are of opinion that the windlass in October 1886 was in a great measure unserviceable; that the evidence on this point on the whole contradicts the statement made by Mr. Neustein, that the windlass had remained in a state of disrepair for a considerable time previous to that date. We also find that the windlass was taken to pieces and thoroughly and efficiently repaired shortly after the October survey of 1886, and that there is every reason

Mr. Neustein's charges.

Reasons for protracted nature of inquiry.

The windlass.

for believing that it was in a sound and workable condition when the *Sir John Lawrence* made her last voyage to sea.

Mr. Neustein's description of the state of the scuppers has not in our opinion been borne out by the evidence. We are inclined, however, to endorse his views of the danger attending the absence of lip guards or flanges securing the outer ends of the scupper to the ship's sides. There is, however, the evidence of the two Surveyors that such precautions were unnecessary, and we therefore, in the presence of this opinion, do not feel disposed to lay much stress on this omission. As to the general state of the scuppers, we think that one at least was defective, in that it did on one occasion require the application of cement on the inside to render it perfectly water-tight. On this point we have the statement of Mr. Neustein, corroborated by that of Mr. Leech. The absence, however, of any mention of the scuppers in the numerous lists or indents for repairs submitted by Captain Irvine leads us to believe that the repairs, if needed, were of a trivial kind; and, apart from the danger which may be supposed to have been incurred through the absence of the lip guards or flanges, we are of the opinion that the condition of the scuppers did not in any way tend towards rendering the *Sir John Lawrence* unseaworthy at the time of her loss.

In May 1885 a collision occurred between the inland steamer *Indore* and the *Sir John Lawrence*, which knocked a hole into the starboard bow of the latter vessel. This hole was patched in the first instance by a plate being bolted on, and afterwards the bolts were replaced by rivets. The knowledge gained by the circumstances attending the fitting on of this patch has been utilised as the basis for the charge brought by Mr. Neustein as to the general condition of the hull of the vessel. Mr. Neustein is himself uncertain of the precise position of the hole; his impression, however, is that it was below the main deck. That part of his statement which relates to the condition of the plate to which the patch was bolted is, as he himself admits, mere hearsay. His evidence therefore, if it can be believed, is only important in so far as it can be trusted to indicate the exact situation of the patch; and even here we have nothing more precise than the 'impression' of this witness. It is a matter of extreme importance to determine with some degree of precision the situation of this patch. If, as stated by some of the witnesses, it was above the main deck and in the forecabin, it is obvious that the thickness of the plate at a spot so much above the body of the ship would not be a matter of such serious importance if the hole, as stated by a second set of witnesses, were below the main deck and in the forepeak. Mr. Neustein's evidence on this point does not, for the reason already given, assist us towards coming to a conclusion. His statement is to a certain extent borne out by Mr. Leech and the witness Thorpe, who both place the patch in the forepeak. The former of these witnesses, however, if his evidence be carefully considered, shows signs of hesitation and uncertainty in speaking of the situation of the patch. Thorpe, though confident that the patch was below the main deck, asserts that it was on the port-side, and apparently was ignorant of the meaning of the term he used. As against these allegations, there is a firm and compact body of evidence given by the two Surveyors and the witnesses Taylor, Young, Lindsay, and Simpson, who are all unanimous in placing the position of the patch above the main deck in the forecabin. We do not lose sight of the fact that the evidence so given is drawn from not altogether disinterested sources; yet on the whole we are inclined to the belief that the patch was situated, as stated by them, in the forecabin and above the main deck. We are fortified in this opinion by such of the facts as have been elicited as to the manner in which the accident occurred to the *Sir John Lawrence*.

The evidence as to the precise thickness of the plate is hopelessly contradictory. We discard at once Mr. Neustein's statement that it was only  $\frac{1}{32}$  of an inch thick as ridiculous. Leech, a witness on whose word we feel inclined to place great reliance in this matter, as he himself superintended the putting on of the patch, tells us that the plate was  $\frac{1}{8}$  of an inch thick. Thorpe also corroborates this assertion; while Simpson, who superintended the rivetting of the patch, puts the thickness at  $\frac{3}{16}$  to a  $\frac{1}{4}$ . All the other witnesses who speak to the fact are unanimous in their opinion that the plate was a quarter of an inch thick. The difficulty we have experienced in our endeavour to extract a few grains of truth from this mass of contradictory evidence has been very great.

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Leaving aside for the moment the oral evidence, we find from a report of survey of repairs by Lloyds' Surveyor on the *Sir John Lawrence* in October 1877 that the ship was described to be "in first rate condition." Accepting this assertion as giving a true indication of the then state of the ship's plates, we find only four years later the ship condemned by Mr. Bushby himself as being in many respects unseaworthy. Among the causes which contribute to this view was (as stated by Mr. Bushby himself) the defective state of the upper plating at the ends of the ship in cabin and forecabin. He also admits in his evidence that he insisted on some of the plates in the forepeak being doubled, although he makes no definite mention of the doubling and renewing of defective plates described by him in the forecabin. This evidence in our opinion tends to show that the deterioration in the condition of the plates in the *Sir John Lawrence* from October 1877, the date of the report of Lloyds' Surveyor, and Mr. Bushby's report as he saw the vessel in 1882, must have been, either through neglect or the nature of the cargo carried, extremely rapid. We have before us the fact that the plating in the forecabin was defective, and, on the other hand, an absence of all evidence to show that those plates were doubled or renewed—a circumstance which in our opinion adds force to the statement made by Leech, that the plating in the forepart of the vessel soon after the great repairs of 1883-84 was abnormally thin. None of the witnesses took the trouble to measure the actual thickness of the plate. The evidence on this point, although that of experts; is after all obtained by the eye alone. On the whole, in our opinion the balance of truth lies in the direction of the statements made by Leech and the witnesses which support his account, that the plate on which the patch was put was nearer  $\frac{3}{8}$  than  $\frac{1}{4}$  of an inch in thickness.

Plates in upper structure of vessel below standard of safety.

Mr. Duncan Mackellar, with Lloyds' Rules before him, gave it as his opinion that for a vessel of the tonnage of the *Sir John Lawrence* plates  $\frac{1}{4}$  of an inch would be "quite safe for the poop and forecabin." Accepting this statement, we have no difficulty in coming to the conclusion that this particular plate was abnormally thin; and taking the thickness of this plate as an indication of what was probably the condition of the plates in the upper structure of the vessel, we think Mr. Leech was justified in the opinion he formed, that the plates in the forepart of the vessel generally were below the standard of safety.

Minor charges by Neustein.  
Pumps.

We have now dealt with those charges brought by Mr. Neustein which in our opinion are of primary importance, in that they are directly connected with the seaworthiness of the ship. With regard to the minor allegations made by this witness, we deem it sufficient to do no more than express the conclusion we have arrived at on them.

It would have been as well perhaps if the pumps, as suggested by Mr. Neustein, had been connected with the bilges; but we do not consider that this omission tended in any way to lessen the seaworthiness of the ship.

After port boat.

A great deal of contradictory evidence was given in connection with the condition of the after port boat, more with the object, however, of indicating the manner in which the surveys were carried out than for the purpose of showing the state of the general equipment of the vessel. We do not feel disposed to lay any very serious stress on this charge, and on the whole are inclined to accept Mr. Young's explanation of the circumstance, that the boat, from exposure to the sun and its proximity to the funnel of the vessel, had opened out her seams, and was naturally in a very leaky condition when first put into the water, and in all probability therefore only required re-caulking.

Bulk heads.

Rudder pendants.

As far as the bulkheads are concerned, we consider that those on board the *Sir John Lawrence* were sufficient for the safety of the vessel. The removal of the partition bulkhead in the engine-room, referred to by Mr. Neustein, did not, in our opinion, tend to lessen the stability of the ship.

The rudder braces (or pendants) should, we consider, have formed part of the necessary equipment of the rudder, as, in the event of an accident occurring to its upper portion, it would still be possible to steer the vessel.

Mr. John Mackellar's evidence as to the state of the cable at the time of his survey in October 1886 was not satisfactory; and if the decision on this point depended on the evidence given by this witness alone, there would be good reasons for giving some heed to Mr. Neustein's statement on this subject. We however find it difficult to believe that Captain Irvine would have refrained

from indenting for a new length of cable had the one on board been in a defective condition; and the absence of any mention of this item in the numerous lists of repairs sent in by the Captain about this period confirms us in our opinion that the cable did not in any particular merit the description of it given by Mr. Neustein.

The allegation that the agents and owners were unduly parsimonious in their manner of dealing with the general up-keep of the vessel rests entirely on the words of Mr. Neustein. With this exception the whole of the evidence, both oral and documentary, on this point is all the other way, and we come without any hesitation to the conclusion that the vessel was supplied with all needful stores and material, and that the owners and agents did not on any occasion exhibit the slightest reluctance to comply with any reasonable request for repairs or stores made upon them by the Chief Engineer or Captain.

We have now dealt with or noticed all the specific charges made by Neustein against the stability of the vessel which we consider worthy of attention. There remains for consideration the broader question whether the ship was seaworthy so far as the frames and plating of her hull were concerned. On this point we have Lloyds' certificate of survey for our authority that the plating of the *Sir John Lawrence*, when she was first built, was of extra thickness. We know also that she preserved this distinction up to the year 1877. From that period until October 1881, when Messrs. Walker and Mitchell declined to pass her, she must have, as we have already stated, deteriorated very rapidly; and this assumption, we think, would be justifiable even if we were disposed to accept Mr. Young's statement that her failure to pass Messrs. Walker and Mitchell was due to the defective state of her boiler alone, because we find from Mr. Bushby's report in September 1882 that the ship, both as to her hull and equipments, was in a dangerously unseaworthy condition.

There is no doubt that at this period the ship underwent extensive repairs, and it is equally clear that the nature and extent of these repairs were regulated by the advice given from time to time by Mr. Bushby himself. While these repairs were in progress Mr. Bushby, in his capacity as Surveyor to the Port Commissioners, made three official surveys, visiting the vessel for that purpose on fifteen different occasions. Under these circumstances we naturally looked to Mr. Bushby for complete and satisfactory evidence as to the manner in which these extensive repairs were carried out. In this expectation, however, we have been disappointed, for Mr. Bushby has nothing better to offer us than such scraps of information as his recollection affords him after a lapse of three years of an extremely busy life. He either failed, or thought it unnecessary, to support his statements with notes, memoranda, or indeed any documentary evidence made at the time—a fact when taken in connection with an incident subsequently elicited, and which illustrates the nature of his connection with the owners of the vessel, justifies us in limiting our acceptance of the statements he made only so far as we find them corroborated by other evidence given in the case. Putting aside, therefore, Mr. Bushby's evidence for the moment, the only other witness who gives us any important information about the repairs effected in 1883-84 is Mr. Young, Superintending Engineer to the owners of the vessel. Although it may be said that his evidence must in a certain sense be biased by the nature of his position, yet he, unlike Mr. Bushby, comes before us with a large body of documentary evidence in support of the allegations he makes as to the thoroughness of the repairs effected on that occasion. This documentary evidence has been filed in Court, and has received very careful inspection at our hands; and we find on the whole that the repairs carried through under Mr. Bushby's supervision must have been, as indeed is stated by him and Mr. Young, of a very thorough and satisfactory nature. There is no doubt that the ship was sealed throughout. We are also inclined to believe that a large number of borings were made in various portions of the hull, and the renewing and doubling of the plates was effected to the extent indicated by Mr. Bushby and Mr. Young. The allegation that those repairs cost Messrs. Macneill and Company the sum of Rs. 95,000 is borne out by the indents and various bills connected with these repairs which have been filed; and on the whole we are of opinion that the ship, with the exception of the light plating already alluded to in connection with her upper structure, was, when her repairs were completed, in a seaworthy condition.

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The *Sir John Lawrence*, in the interval between August 1884 and the day on which she foundered, was surveyed every six months and docked once a year. The official survey certificates filed show that her hull and equipments remained good. We are aware, of course, that doubt has been thrown on the trustworthiness of these surveys. But even if we felt inclined to share Mr Neustein's suspicions on this point, there is yet sufficient evidence beyond the four corners of the survey reports themselves, all tending to show that the vessel was kept up in an efficient manner, and, excepting ordinary wear and tear, had deteriorated very little since her repairs in 1883-84. In support of this view we have the evidence of Mr. Leech, and indirectly that given by Mr. Duncan Mackellar. We have also the indents for stores and materials of various kinds made by the Captain during the period—evidence which satisfies us not only of the liberal spirit exhibited by the owners in supplying those requirements, but also as giving prominence to the fact that the repairs and defects for which they were needed were in reality of a comparatively trivial and unimportant kind. We therefore come to the conclusion that the *Sir John Lawrence* on the 25th May, when she started on her last voyage, was, with the exception already noted, in a seaworthy condition.

The next point we have to consider is whether the loss of the *Sir John Lawrence* could in any way be connected with the number of passengers she took out with her to sea on the 25th May last. The evidence given by the police on this point is that she carried no more, nor less, than her full number of licensed passengers,—735 all told. We cannot, however, for the reasons to be presently given, place implicit reliance on this statement. The evidence shows that the maximum number of passengers licensed to be carried by the *Sir John Lawrence* varied with the season of the year. During what is termed "fair-weather voyages," a period extending from 1st January to 31st March, 16th August to 30th September, and 16th November to 31st December, the limit was 1,038; in "foul-weather" trips, which was from 1st April to 15th August and 1st October to 15th November, the number was reduced to 735.

The carrying capacity of these steamers, so far as Native passengers are concerned, is regulated by measurement; each passenger in fine weather being entitled to six feet by one foot of space: in foul weather the space reserved to each passenger is somewhat larger, being nine feet by one foot, and in addition each passenger accommodated on the main deck or 'tween decks is entitled to a further space of four feet by one foot on the upper deck. It is part of the duty of the river police in Calcutta to count every passenger on board—first when a vessel starts for Chandbally, and again upon her arrival in port on her return voyage. In addition, there is precisely the same process to be gone through with the passengers either embarking or disembarking at Chandbally.

Steamers engaged in the Chandbally trade on arrival in this port are moored in midstream, and discharge their passengers with the aid of Native boats. As a rule, passengers are not permitted to go on board until sunset of the day preceding the morning fixed for their departure. From 6 o'clock until daylight the next morning passengers are at liberty to embark by the starboard gangway ladder. At its foot, previous to the arrival of the passengers, is placed a flat-bottomed Native boat, which serves as a platform; a police boat is moored alongside, and we are told that the Native corporal in charge is supposed to continue counting the passengers as they arrive throughout the night until the small hours of the following morning.

In our opinion, even if this duty was, under the conditions stated, conscientiously performed, there would still remain ample opportunities for serious mistakes. But the nature of the evidence given both by the police and the Native witnesses who were examined indicates very clearly to us that this alleged counting of passengers previous to the departure of the vessel from Calcutta was little better than a mockery and a show. In the first place the full responsibility for the due performance of this duty is left to a Native officer of police alone, a corporal on a salary of Rs. 12 per month. No precautions are apparently taken by the police to guard against the surreptitious smuggling of passengers who may be admitted through port-holes or any other mode of access to the ship. It is in evidence also that passengers are permitted to come on board by the gangway ladder on the port-side, where the police do not even pretend to have a boat in attendance. It is also equally clear that a large proportion



of the passengers come alongside attended by relatives and friends who go to see them off. There is no attempt made to separate passengers from their friends, who apparently all go on board together in one living stream up the gangway ladder. It seems to us therefore impossible to believe that the counting done under these circumstances could ever hope to be either accurate or satisfactory. We even go further in our belief that the Calcutta police knowingly spend very little pains over this portion of their duty, trusting to the more conscientious method of counting they hope may be practised by the Chandbally police on the arrival of the vessel at that port. It is not seriously contended by the Calcutta police that they make any further effort to ascertain the number of passengers who arrive from Chandbally than an application to the Captain or Chief Mate of each vessel for the information they require; and the evidence shows that the passengers are permitted to scramble down the side of the vessel into boats and find their way to the shore long before the vessel reaches her moorings, where the police boat with the officer charged with the duty of counting arriving passengers is in waiting for her. A duty so perfunctorily performed by the police in Calcutta finds worthy imitation by their brethren in Chandbally. At that port the vessel goes alongside a jetty, and the passengers are supposed to embark and disembark over a stage about six feet in width. Here, again, the task of counting rests with a Native subordinate officer alone. We have it in evidence that the steamers arrive at Chandbally both by day and night; that boatloads of passengers follow a ship after she has left her moorings; and that passengers reach the shore in boats before the vessel gets alongside the jetty. Even the witness Captain Palmer, who was prepared to pledge his word as to the accuracy of the counting done at Chandbally, is forced to admit that under the system of counting which he claims to have introduced mistakes to the extent of ten or twelve passengers might occur. In our opinion it is very problematical whether Captain Palmer did interest himself in the task of counting the passengers to the extent he would fain have us believe. Mr. Augier bluntly declares that Captain Palmer never had anything to do with the counting, while Juggabundo Chatterjee puts Captain Palmer's exertions no higher than an occasional visit to the jetty to watch the passengers land. On the whole, we feel much more disposed to accept Mr. Augier's version of the manner in which the counting was performed; and we say this after giving due weight to the circumstances urged by Counsel who appear on behalf of Messrs. Macneill and Company against placing any reliance on the statements made by this witness. Holding, therefore, these views in connection with the manner in which the counting was done both in Calcutta and at Chandbally, the conclusion forces itself upon us that every inducement exists for the Captains, or even for the owners of the vessels engaged in the Chandbally trade, to avail themselves of the opportunity to carry more than the licensed number of passengers.

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We do not understand that any serious objection is made to the conclusion we have arrived at on this point. It has, however, been urged upon us that the conduct and character of Captain Irvine as described by the witnesses is a safe indication that he would not contravene the law. This argument, however, has not much weight with us: it might have been made equally applicable to the case of Captain Spence if unfortunately his ship, the *Curlew*, had foundered with all on board instead of the *Sir John Lawrence*. But we have it from Captain Spence's own mouth that he was convicted on one occasion of carrying 70 passengers in excess. We therefore decline to allow our opinion in the matter to be influenced by any *a priori* views entertained of Captain Irvine's character by his friends. The safer, and we think the wiser, course is to follow the indications given by the evidence before us. Leaving Neustein out of the question, we have Leech's statement that the *Sir John Lawrence* occasionally carried during his time between 1,300 and 1,400 passengers; there is also the evidence of the Native witnesses in the case of the closely-packed condition of the awning deck and part of the main deck. We do not, however, place very much stress on this portion of the evidence, because it is clear that at the moment when these witnesses made their observations there must have been an appreciable number of friends with the intending passengers. But by far the most cogent part of the evidence comes from the witnesses representing the interests of the owners. Mr. Mackenzie tells us that the sale of tickets to passengers for the *Sir John*

Mr. L.  
evidence

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kenzie's evi-  
dence.

*Lawrence* on the occasion of her last voyage began at Rs. 3 and gradually rose to Rs. 6. He also informs us that his firm sold 710 tickets for that voyage: of these some 30 to 40 passengers went by the *Mahratta*. He also tells us that he refunded money on 21 of these tickets after the vessel had started. It is therefore obvious that the *Sir John Lawrence* started that morning with only 669 passengers holding tickets. The police, however, tell us that the *Sir John Lawrence* left with her full complement—735 all told. It must therefore follow with mathematical certainty that there were at least 66 passengers on board who had no tickets. The Captain was aware that the price of tickets had risen to six rupees. We may safely therefore assume that Captain Irvine would have been justified, and indeed did collect that sum from each of the candidates who came on board without tickets, which gives in the aggregate Rs. 396. Now Mr. Currie, who was put forward to give the Court information of the manner in which Messrs. Macneill and Company arranged for the sale of their tickets to passengers journeying to Chandbally, describes what he calls the “deck collections” (which, if we understood him rightly, not only included money for extra luggage, but the sums paid by passengers who had no tickets) as comparatively insignificant sums ranging from Rs. 5 to Rs. 20, and perhaps

Mr. Currie's  
evidence.

on extraordinary occasions being as much as Rs. 100. We consider it a curious and somewhat ominous contrast to this evidence that on the only occasion when it was possible to test the accuracy of these calculations we find that the difference lies between a sum of Rs. 396 and Rs. 100. A further circumstance worthy of note is the evidence, quite uncontradicted, that a party of Native passengers holding tickets issued for that voyage by Messrs. Macneill and Company were foiled in their attempt to go on board the *Sir John Lawrence* as early as 9 o'clock in the evening, the Captain basing his refusal on the ground that the ship had already received her full complement of passengers. Now, we know on unimpeachable evidence that nothing like the full number of tickets was sold by Messrs. Macneill and Company for that voyage: how came it, therefore, that the vessel had taken in her full complement of passengers at that comparatively early hour, except on the supposition that the Captain, mindful of the fact that every passenger taken on board without a ticket represented a larger margin of profit than a ticket-holder, preferred filling up the space at his disposal with passengers at Rs. 6 a head than with passengers the possessors of tickets sold beforehand at less remunerative rates?

Conclusion.

From these circumstances we come to the conclusion that the *Sir John Lawrence* did on the morning of the 25th May proceed on her voyage, taking with her a larger number of passengers than she was entitled to carry. We think that Captain Irvine was undoubtedly aware of this fact.

“Impres-  
sion” on  
manner in  
which pas-  
senger traffic  
is conducted.

Before leaving this branch of the subject, we think it desirable to place on record the impressions we have formed in connection with the manner in which the passenger traffic is conducted between Calcutta and Chandbally. We use the word “impressions” advisedly, because this was a subject which only came before us indirectly, in so far as it could be made relevant to the question of the seaworthiness of the *Sir John Lawrence*. Such evidence, however, which has been forthcoming has forced upon us the very uncomfortable feeling that the interests of the passengers are not sufficiently safeguarded, and that the subject is one worthy of the serious attention of the Government. We have already given reasons for the belief we entertained that the counting of the passengers both in Calcutta and Chandbally is so unsatisfactory as to be almost useless, and that there is practically, therefore, every temptation for indulgence in an illicit traffic in passengers. It is clear also that this temptation is, if possible, aggravated by the profits, which at certain periods of the year must be enormous. The normal rate for passengers is, we are told, Rs. 2. This charge, however, as we know, often trebles itself before an appreciable number of intending passengers have had time to secure their tickets at the normal rate. The increase in the profit therefore obtainable on the Rs. 2 scale can be calculated by a simple sum in multiplication, and will give, if the experiment is tried, a sufficiently startling result. We have it on Mr. Mackenzie's own evidence that his firm reposed implicit confidence in Captain Irvine, and placed no check or restraint upon the manner in which he conducted the passenger traffic on board his ship. Mr. Mackenzie further failed to explain how it came about that the Captain refused to receive on board eleven passengers



armed with tickets at Rs. 3 a head at so early an hour as 9 o'clock in the evening, when, as he himself admits, the full number of tickets had not been sold for that voyage. This incident in our opinion shows that the supervision which is apparently exercised by Messrs. Macneill and Company over this branch of their trade is both loose and unsatisfactory, and only emphasises the necessity for the Government to take upon itself the performance of a duty which the owners and agents apparently deem it undesirable to assume.

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We are also strongly of opinion that the number of passengers carried under the rules as they at present exist results in overcrowding, and entails much discomfort on the passengers. The facts on which the Government limit is based should, we think, be looked into and revised. In no case in our opinion should passenger space have been permitted between decks on the *Sir John Lawrence*. The ventilation, so far as we could judge, in this part of the vessel was both scanty and imperfect, and on the occasions when passengers were forced below must have resulted in much suffering. We say nothing on the question of sanitation, because this point was not even indirectly before the Court, except the single remark that in our opinion the matter should have the attention of some competent medical officer before vessels are permitted to carry Native passengers.

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There remains only one more point, and in some aspects it is perhaps the most important one we had to consider during the course of this long and protracted inquiry. We allude to the manner in which the surveys of ships are conducted under the auspices of the Port Commissioners and Port Officer of Calcutta. The requirements of the law as they obtained on the date when the *Sir John Lawrence* foundered at sea are to be found in the *Inland Steam Vessels' Act of 1884*, the *Indian Steam Ship Act* of the same year, the *Native Passenger Act of 1876*, and in the *Indian License Act Amendment Act of 1880*. The surveys apparently under Act VII of 1884 are to be made by Surveyors appointed in that behalf by the Local Government. The declaration given to the Master of a ship after the survey of his vessel by a duly qualified Surveyor has to be presented to an officer appointed to receive it by Government—in this case the Vice-Chairman of the Port Commissioners. If the Local Government (apparently on the authority of the Vice-Chairman) is satisfied that the declaration is in accordance with the requirements of the Act, a duplicate copy of that certificate is delivered through an officer appointed for that purpose to the Master of the ship. We are not aware whether the officer to whom this duty is assigned is the Vice-Chairman of the Port Commissioners or the Port Officer. The same procedure in the matter of survey is prescribed in the *Inland Steam Vessels' Act of 1884*. We assume that the officer under this Act directly responsible to Government for the manner in which surveys are conducted under that Act is, as in the case of the surveys held under the *Steam Ship Act of 1884*, the Vice-Chairman to the Port Commissioners. Under the *Native Passenger Act of 1876* the Master, owner, or agent of any ship in which it is intended to carry Native passengers is bound to give notice of that intention to the officer authorised in that behalf by the Local Government, who happens to be, as Mr. Bushby informs us, the Port Officer, Captain Stiffe. That officer is therefore authorised, either himself or by his delegate, to enter and inspect the vessel, and the fittings, provisions, and stores, and on satisfying himself that he can safely do so, grant two certificates, known respectively as Certificate A and Certificate B. No vessel carrying passengers can obtain her port clearance unless these certificates have been filed with the officer charged with the duty of receiving them. Certificate A contains the declaration that the ship is seaworthy and properly equipped, fitted, and ventilated, and the number of passengers she is capable of carrying. The particulars of Certificate B will be found set forth at length in section 11 of the Act, and include, *inter alia*, the statement of the complement of the number of officers and seamen, the quantity of pure water and fuel and other things made requisite under section 46, the nature of the voyage, and the existence of substantial bulwarks, double awning, and other sufficient protection against the weather. The conclusions we draw from this exposition of the law as it existed at the time, is that at any rate so far back as the year 1884 it was the intention of the Legislature that there should be two separate and distinct surveys made in the case of steam-ships which at the same time happened to be Native passenger steam-ships,—one conducted by a Surveyor under the direct control of the Port Commissioners,

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Certificate  
A.

and the other conducted by Surveyors (not one Surveyor, as in the former case), for which the Port Officer is directly responsible. Captain Stiffe, the Port Officer, was called as a witness in this inquiry, and when questioned on the manner in which he discharged the duties imposed upon him by the Act of 1876, says that so far as the granting of Certificate A is concerned he is, under definite instructions to that effect given him by the Local Government, compelled to accept the materials requisite for that certificate furnished him by the Port Commissioners' Office, and apparently taken from the declaration made by their Surveyor after his survey held under one or other of the steam-ship Acts of 1884. In support of this statement Captain Stiffe has filed an official letter received from Government, and bearing date the 16th January 1884, and marked exhibit R in this case. We do not know, and indeed are not concerned with, the reasons which may have weighed with the Government in sending such letter; nor indeed does it concern us to inquire whether Captain Stiffe was justified in placing the interpretation upon the directions contained in it he apparently seems to have done. We only desire to note the fact that Captain Stiffe has considered himself, on the authority of this letter, absolutely absolved from any responsibility imposed upon him by the Act in the issue of this certificate. In order to indicate how far Captain Stiffe has carried this repression of his official self, we may point out that he admits that he has no personal knowledge of Mr. John Mackellar's capacities as a Surveyor. He asserts that he does not recognise this gentleman as a Surveyor, yet we find him accepting declarations made by this assistant to Mr. Bushby without the slightest demur. The excuse that he has done so because Mr. John Mackellar had, on the occasion when Mr. Bushby was on leave, been gazetted an Engineer-Surveyor by the Government will not explain the occasions when he utilised surveys made by Mr. John Mackellar alone, after the return of Mr. Bushby, for the materials wanted for his Certificate A. The fact therefore remains that Certificate A, instead of being the record of the opinions of independent Surveyors, is simply an empty repetition of the conclusions arrived at by the Surveyor to the Port Commissioners.

Certificate  
B.

With regard to Certificate B, Captain Stiffe admits that he grants it on the bare representation of the owners and agents that the requirements of the law described in the section have been complied with. As a matter of fact the specimens of Certificate B which fell under our notice were not even signed by Captain Stiffe, but by Mr. DeSilva, his head assistant—a fact which makes it extremely probable that the Port Officer seldom sees these certificates before their issue. With these facts before us, we deem ourselves amply justified in coming to the conclusion that the surveys insisted upon by the Native Passenger Act of 1876 have no real or independent existence. If this assumption be correct, we are thrown back on the survey held under the Acts of 1884 to discover the manner in which such duty is performed by the officers appointed thereunder. We find that the surveys for which the Port Commissioners are responsible are conducted by two officers—Messrs. Bushby and John Mackellar, sometimes acting in concert, but more often separately. Mr. Bushby was at one time a Board of Trade Surveyor. He combines within himself also the double qualifications of Engineer and Shipwright Surveyor, and, so far as his professional capacity is concerned, we readily admit him to be in every way fitted for the responsible position he holds. The case, however, is different with Mr. John Mackellar. Before receiving his present appointment Mr. John Mackellar was Chief Engineer on board a British India steamer. Throughout his career he has served in some such capacity the owners and agents of that Company, if we except a brief period of 1½ years spent in the British and African service. He himself admits that he is not a Shipwright Surveyor, and has no qualifications for the post. He was apparently nominated to his present appointment by Mr. Bushby, who set him a series of examination papers, which he answered to the best of his ability, and shortly afterwards found himself gazetted as Assistant Surveyor to Mr. Bushby.

Messrs.  
Bushby and  
John Mac-  
kellar.

Mr. John  
Mackellar's  
qualifica-  
tions.

We have been unable to discover any rules framed for the purpose of insuring the necessary qualifications in an Engineer-Surveyor. We are told they do not exist. Be that as it may, a very elaborate procedure is prescribed to secure the appointment of competent persons as Ship Surveyors under Chapter 4 of Act VII of 1880. Mr. John Mackellar admittedly never passed for a ship Surveyor. It is urged on his behalf that having been gazetted by the Local

Government he could legally discharge the duties of both an Engineer-Surveyor and Ship Surveyor combined. Whether this argument be a valid one or not, it is certain that Mr. John Mackellar does perform both duties. He himself tells us that, although he has no qualifications as a Ship Surveyor, he, independently of Mr. Bushby altogether, surveys something over 100 vessels in the year; Mr. Bushby and he apparently dividing the year's work between them. There is, therefore, no escape from the conclusion that quite one-half of the vessels surveyed during the year are entrusted for that purpose to an officer whose qualifications as an Engineer-Surveyor are problematical, and who is manifestly by previous training quite unfitted to discharge the duties of Ship Surveyor. The argument that the fact of Mr. John Mackellar having been gazetted by Government should silence any criticisms on his qualifications seems to us absolutely futile. Even if this were true, it only goes to show that the Local Government has been induced, for reasons of which we are ignorant, to ratify Mr. John Mackellar's appointment as a Surveyor without calling upon him to pass the necessary examinations, and in exercise of extraordinary powers reserved to it under the law. But it is by no means certain that the Government ever intended that Mr. John Mackellar should be permitted to exercise the double duty of Engineer and Ship Surveyor. Such evidence as we have before us points quite the other way. The only official notification we have seen in connection with this matter was the one which appoints Mr. John Mackellar to act for Mr. Bushby in the absence of that gentleman on leave; and in that notification the Government, we see, is careful to restrict Mr. John Mackellar's duties to those of an Engineer-Surveyor alone. Indeed the succeeding paragraph to that notification was one which appointed Mr. Duncan Mackellar (Lloyds' Surveyor) to act as Ship Surveyor to Government and assist his namesake in the surveys he might be called upon to make in the absence of Mr. Bushby. From this it seems to us clear that the Local Government never intended Mr. John Mackellar to perform the duties of a Ship Surveyor, but that this is just what he, ever since the return of Mr. Bushby, has been doing with, we presume, the full knowledge and consent of the Port Commissioners. The facts therefore, so far as Mr. John Mackellar is concerned, are that he, an old servant of the British India Steam Navigation Company and the Rivers Steam Company, is left untrammelled by any supervision whatsoever to perform duties which, according to his own showing, he is to a great extent manifestly unfitted to perform, and which in a large number of cases is exercised in respect of ships the property, either directly or indirectly, of his old employers.

We have already expressed our opinion of the professional capacity of Mr. Bushby. That the Local Government fully shared in this opinion is apparent from the fact that Mr. Bushby shortly after his arrival was gazetted to various appointments, which practically placed the surveys of nearly every vessel in the port in his hands. The magnitude of the responsibility entrusted to him discloses itself when we come to remember that in India we have no equivalent for what is known as "Lloyds' Rules." A glance at the bulky volume containing these rules shows that they relate to the minutest details connected with the construction and equipment of a ship. The survey of a vessel, therefore, when conducted in England, is for the most part a mechanical performance, requiring no more special knowledge than would be necessary to see that the requirements specified in the rules have been complied with in the construction and equipment of the vessel under survey. In Calcutta, on the contrary, the case is altogether different. Mr. Bushby tells us the question whether a ship shall or shall not pass his survey is left entirely to his discretion. As a matter of precaution he occasionally consults the Board of Trade's requirements or adopts so much of Lloyds' Rules as he may deem desirable. He keeps no notes or memoranda of any of his surveys, and therefore possesses no reliable data upon which he could afford trustworthy evidence as to the manner in which he performed any particular survey. Mr. Bushby is a gazetted officer of the Government, and is in receipt of a salary of Rs. 1,000 per month. The proceeds of the fees paid for his services go to the Port Commissioners and increase their revenues, according to Mr. Bushby, by a yearly sum of Rs. 20,000. Mr. Bushby informed us that beyond his monthly salary he received nothing in the shape of fees. He, however, omitted to mention (it is only fair to say

Mr. Mackellar acts as Engineer-ship surveyor.

More 100 vessels surveyed by John Mackellar in the year.

Mr. John Mackellar gazetted Engineer-Surveyor only.

Extent Mr. Bushby's jurisdiction as Surveyor to the Port Commissioners.

His discretion practically limited.

Cheque of  
Rs. 1,000  
sent to Mr.  
Bushby by  
owners or  
agents of the  
"Sir John  
Lawrence."

Mr. Mac-  
kenzie's ex-  
planation of  
this action  
discussed.

Effect of  
such incident  
on mind of  
Court.

Mr. John  
Mackellar's  
evidence.

Reform in  
method of  
surveys as at  
present con-  
ducted ur-  
gently press-  
ed upon the  
Government.

Evidence  
of Mr. Pedler,  
Meteorolog-  
ical Reporter.

Suggested  
addition to  
Storm Signal  
Code.

Cable be-  
tween Port  
Blair and  
main land.

Cable be-  
tween Dia-  
mond Island  
and Bassein.

Conduct of  
cases before  
Marine  
Courts of  
Inquiry  
should be  
entrusted to  
firm of Sol-  
icitors.

the question was not put to him in direct form) that he had been offered, and we presume accepted, a cheque for Rs. 1,000, presented to him by Mr. Mackenzie, one of the partners in the firm of Macneill and Company, as an honorarium for professional advice given that firm in respect of certain alterations connected with the hull of the *Sir John Lawrence*. Mr. Mackenzie's explanation of the circumstance is that the money was given for Mr. Bushby's "professional advice as to the requirements of the Board of Trade in regard to the alterations in the hull of the vessel; Mr. Young, our Superintending Engineer, who carried out the repairs, not being cognisant what those requirements were." In the absence of any explanation of this circumstance which Mr. Bushby may hereafter be in a position to afford, we do not desire to add our comments upon an incident which came upon the Court with a shock of painful surprise. We deem it, however, our duty to point out that Mr. Mackenzie's explanation, instead of alleviating, tends rather to deepen, the sinister aspect of the action. The question may naturally be asked why the owners and agents of the vessel should so suddenly have conceived a desire that their vessel, which was apparently never intended to travel beyond the local coasting trade, should be made to comply with the requirements necessary for vessels employed in foreign trade. Nor can we understand how it came about that the payment of the money admittedly earned in 1883-84 was delayed until 1886. We do not feel ourselves called upon to say more on this incident except the remark that it has thrown a shadow of suspicion and doubt over the whole of the evidence given by Mr. Bushby, and has forced us to place him in the category of a witness whose word, so far as the facts of this case are concerned, needs the support of corroborative proof.

We have now indicated the value we set on the evidence given by Mr. Bushby; that given by Mr. John Mackellar was not altogether satisfactory. We are not in a position to accept his version of the facts connected with the examination of the chain cable in the October survey of 1886; and we think the reluctance he exhibited to produce his diary containing the details of the survey of the *Sir John Lawrence* in April of that year extremely reprehensible. We also fail to understand how he brought himself to give the necessary certificate after the October survey of the *Sir John Lawrence*, when at the moment when he signed that certificate the windlass was in an absolutely unserviceable condition. His explanation that the certificate could be granted with the windlass still in the state in which he described it is in our opinion both erroneous and absurd.

The deductions which follow upon the facts we have here indicated lie so completely upon the surface that we refrain from adding more than the expression of an earnest hope that the Government will take into its early and serious consideration the thorough revision and reform of the method of surveys at present observed in the Port of Calcutta.

The evidence given by Mr. Pedler, the Meteorological Reporter to the Government, has afforded us interesting and important information on the rise and progress of the cyclone across the Bay of Bengal. We desire to make one or two practical suggestions on the strength of the evidence so given. In the first place we think a new signal should be added to the Code, which, irrespective of the nature and probable position of an approaching cyclone, should, when hoisted, serve as an imperative prohibition to any ship, whatever her draft or size, from going to sea. We also echo with emphasis the suggestion that telegraphic communication should be established between Port Blair and the main land, and that the telegraph cable between Diamond Island and Bassein should be subjected to a thorough and careful supervision, so as to minimise the prospect of what indeed happened on this occasion—the sudden cessation in the punctual despatch of important information at a time when its value was incalculable.

We desire to point out that the incidents of this case have brought into strong relief the inconvenience involved in leaving the conduct of an inquiry of this protracted and intricate kind to a department which has no machinery at its disposal for collecting and tabulating evidence before the date fixed for such inquiry. In making this remark we have no wish to comment unfavourably on the way Mr. Kilby performed the long and arduous labours thrown upon him. We deem it, however, desirable that for the future the conduct of a Marine

Court Enquiry likely to involve a protracted hearing should be entrusted (as indeed is the case in England) to a firm of Solicitors charged with the special duty of collecting the necessary materials before the matter is deemed ripe for the consideration of members forming such Court of Enquiry.

The conclusions we have arrived at after this long and protracted inquiry may shortly be epitomised as follows:—

1. That the *Sir John Lawrence* foundered at sea with all hands on board probably between the Ridge Light and Palmyra Point; that Captain Irvine, who perished in the vessel, committed an act of foolhardiness, almost criminal in its nature, in taking the vessel out to sea on the morning of the 25th of May.

2. That the vessel, with the exception of the plating in her upper structure, which was abnormally thin, was in other respects seaworthy.

3. That the *Sir John Lawrence* carried more than her proper complement of passengers when she started on her last voyage, but that such overcrowding, in the face of the violent cyclone she encountered, aided very little, if anything, in hastening the disaster which befel her.

4. That the method of survey adopted under the auspices of the Port Commissioners and Port Officer is extremely unsatisfactory, and in urgent need of speedy and thorough reform.

5. That the Storm Signal Code can be amended with advantage; that cable communication should be established between the Andamans and main land; and that the cable already in existence between Diamond Island and Bassin should be overhauled and placed in a state of thorough repair.

We have the honour to be,

SIR,

Your most obedient servants,

C. H. REILY,

*Chief Presidency Magistrate and President of  
Marine Court of Enquiry.*

HENRY DESMIDT,

*Marine Surveyor.* } *Members.*

EDWARD TRELAWNY. }



# MATRICULATION REGULATIONS OF THE UNIVERSITY OF LONDON.

## NOTIFICATION.

*The 6th October 1887.*—The Regulations for Matriculation in the University of London are published for general information.

P. NOLAN,  
*Secretary to the Govt. of Bengal.*

## REGULATIONS FOR MATRICULATION IN THE UNIVERSITY OF LONDON.

### EXAMINATIONS IN 1887-88.

The following are the dates at which the several Examinations in the University of London for the year 1887-88 will commence:—

**MATRICULATION.**—Monday, June 13, 1887 and Monday, January 9, 1888.  
**BACHELOR OF ARTS.**—Intermediate, Monday, July 18; B.A., Monday, October 24.  
**MASTER OF ARTS.**—Branch I, Monday, June 6; Branch II, Monday, June 13; Branch III, Monday, June 13; Branch IV, Monday, June 27.  
**DOCTOR OF LITERATURE.**—Tuesday, December 6.  
**SCRIPTURAL EXAMINATIONS.**—Tuesday, November 29.  
**BACHELOR OF SCIENCE.**—Intermediate, Monday, July 18; B.Sc., Monday, October 17.  
**DOCTOR OF SCIENCE.**—Within the first twenty-one days of June.  
**BACHELOR OF LAWS.**—Intermediate and LL.B., Monday, January 2, 1888.  
**DOCTOR OF LAWS.**—Tuesday, January 17, 1888.  
**BACHELOR OF MEDICINE.**—Preliminary Scientific, Monday, July 18, 1887 and Monday, January 16, 1888; Intermediate, Monday, July 11, 1887 and Monday, January 16, 1888; M.B., Monday, October 31.  
**BACHELOR OF SURGERY.**—Tuesday, December 6.  
**MASTER IN SURGERY.**—Monday, December 5.  
**DOCTOR OF MEDICINE.**—Monday, December 5.  
**SUBJECTS RELATING TO PUBLIC HEALTH.**—Monday, December 12.  
**BACHELOR OF MUSIC.**—Intermediate, Monday, December 12; B. Mus., Monday, December 19.  
**DOCTOR OF MUSIC.**—Intermediate, Monday, December 12; D. Mus., Monday, December 19.  
**ART, &c., OF TEACHING.**—Tuesday, March 1.

## REGULATIONS.

### MATRICULATION.

[Candidates for any Degree in this University must have passed the MATRICULATION EXAMINATION. No exemption from this rule is allowed on account of Degrees obtained or Examinations passed at any other University.]

[This Examination is accepted (a) by the College of Surgeons, (b) by the Incorporated Law Society, in lieu of their Preliminary Examinations. It also exempts candidates for admission to the Royal Military College from the Preliminary Test, except in Geometrical drawing. And it is among those Examinations of which some one must be passed (1) by every Medical Student on commencing his professional studies; and (2) by every person entering upon articles of clerkship to a solicitor,—any such person who may have Matriculated in the Honours or in the First Division being entitled to exemption from one year's service.]

[This and all other Examinations of the University, together with the Prizes, Exhibitions, Scholarships, and Medals depending upon them, are open to women upon exactly the same conditions as to men.]

THERE shall be two Examinations for MATRICULATION in each year; one commencing on the second Monday in January, and the other on the third Monday in June.<sup>1</sup>

No candidate shall be admitted to the MATRICULATION EXAMINATION unless he have produced a certificate showing that he has completed his sixteenth year.<sup>2</sup> This certificate shall be transmitted to the Registrar at least *one calendar month* before the commencement of the Examination.

A fee of two pounds shall be paid at Matriculation. No candidates shall be admitted to the Examination unless he have previously paid this fee to the Registrar.<sup>3</sup> If, after payment of his fee, a candidate withdraws his name, or fails to present himself at the Examination, or fails to pass it, the fee shall not be returned to him, but he shall be allowed to enter for any subsequent MATRICULATION EXAMINATION upon payment, at every such entry, of an additional fee of one pound, provided that he give notice to the Registrar at least *one calendar month* before the commencement of the Examination.

The Examination shall be conducted by means of printed papers; but the Examiners shall not be precluded from putting, for the purpose of ascertaining the competence of the candidates to pass, *vice roce* questions to any candidate in the subjects in which they are appointed to examine.

<sup>1</sup> These Examinations may be held not only at the University of London, but also, under special arrangement (see Appendix I.), in other parts of the United Kingdom, or in the colonies.

<sup>2</sup> A certificate from the Registrar (General in London or from the Superintendent Registrar of the district, or a certified copy of the Baptismal Register, is required in every case in which it can possibly be obtained. In other cases a declaration of the candidate's age, and that he is unable to procure his certificate of Birth or Baptism, made before a Magistrate by his parent or guardian, or by himself if of full age, will be accepted.—Every such document will be returned to the candidate on or before registration (see Note 1 on page 54).

<sup>3</sup> Fees must be paid when candidates inscribe their names on the Register of the University, and should not be sent in advance. Information respecting the time and place of Registration will be sent to candidates with the acknowledgment of their certificates of age or their notices.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the following subjects, according to the details specified under the several heads—

1. Latin;
2. One<sup>1</sup> of the following Languages—Greek, French, German, Sanskrit, Arabic<sup>2</sup>;
3. The English Language; and English History, with the Geography relating thereto;
4. Mathematics;
5. Mechanics;
6. One<sup>3</sup> of the following Branches of Experimental Science :—Chemistry; Heat and Light; Magnetism and Electricity.

The following are the particulars of the foregoing subjects of Examination—  
LANGUAGES.

#### LATIN.

One Latin subject to be selected by the Senate one year and a half previously from the works of the undermentioned authors :<sup>4</sup>

*Virgil*.—Two Books of the *Æneid*.

*Horace*.—Two Books of the *Odes*.

*Sallust*.—The Conspiracy of Catiline, or the War with Jugurtha.

*Cæsar*.—One of the longer or Two of the shorter Books of the Gallic War.

*Livy*.—One Book.

*Cicero*.—De Senectute or De Amicitia, with One of the following Orations :—Pro *Lego Manilia*. One of the four *Catilinarian* Orations, Pro *Archia*, Pro *Balbo*, Pro *M. Marcello*.

*Ovid*.—One Book of the *Metamorphoses* (or Selections from Two Books) and One Book of the *Epistles* or of the *Tristia*; or Six of the *Heroides*; or Two Books of the *Tristia*.

The Paper in Latin shall contain passages to be translated into English, with questions arising out of the book or books selected. Short and easy passages shall also be set for translation from other books not so selected. A separate Paper shall be set containing questions in Latin Grammar, with simple and easy sentences of English to be translated into Latin.<sup>5</sup>

#### GREEK.

One Greek subject, to be settled by the Senate one year and a half previously from the works of the undermentioned authors :<sup>6</sup>

*Homer*.—One Book.

*Xenophon*.—One Book.

*Æschylus*.—The *Persæ*.

*Euripides*.—*Hecuba*; *Andromache*; *Hercules Furens*; *Medea*; *Alceste*; *Electra*; *Heracleidæ*. (One Play.)

The Paper in Greek shall contain passages to be translated into English, with questions arising out of the book selected, and with general questions in Grammar.<sup>6</sup> Short and easy passages shall also be set for translation from other books not so selected.

#### FRENCH.

The Paper in French shall contain passages for translation into English, and questions in Grammar, limited to the *Accidence*.

#### GERMAN.

The Paper in German shall contain passages for translation into English, and questions in Grammar, limited to the *Accidence*.

#### SANSKRIT.<sup>7</sup>

Sanskrit Subjects, to be selected by the Senate one year and a half previously from the undermentioned works.<sup>8</sup>

*Hitopadeśa*, Books II to IV.

*Pañchatantra*, Books II to V.

*Sâhityaparichaya*, Parts I and II., pp. 1-93.

*Râmâyana*, Book I.

*Mahâbhârata* (Story of Nala, Story of Sâvitri, Bakavadhaparvan, Sakuntalopakh-yâna).

*Manu*, Books II to VII.

[N.B.—Special stress is laid on correct spelling and grammar in the answers to the questions.]

<sup>1</sup> No credit will be given for more than one of these subjects.

<sup>2</sup> Candidates desiring to be examined in either Sanskrit or Arabic must give at least *Two Calendar Months'* notice to the Registrar.

<sup>3</sup> The LATIN Subjects for 1888 and 1889 will be—

For June 1888 :—*Cæsar*, Gallic War, Book VII.

For January 1889 :—*Sallust*, Conspiracy of Catiline.

For June 1889 :—*Virgil*, *Æneid*, Books I and V.

<sup>4</sup> Special stress is laid on accuracy in the answers to the Grammar questions, and on the correct rendering of English into Latin.

<sup>5</sup> The GREEK Subjects for 1888 and 1889 will be—

For June 1888 :—*Xenophon*, *Cyropædia*, Book I.

For January 1889 :—*Homer*, *Iliad*, Book VI.

For June 1889 :—*Xenophon*, *Cyropædia*, Book V.

<sup>6</sup> Special stress is laid on accuracy in the answers to the questions in Greek Grammar.

<sup>7</sup> See the third Note in page 54.

<sup>8</sup> The SANSKRIT Subjects for 1888 and 1889 will be—

For June 1888 :—*Pañchatantra*, Book I.; *Mahâbhârata*, Story of Sâvitri; *Manu* IV., 128-267.

For January 1889 :—*Hitopadeśa*, Book III; *Mahâbhârata*, *Sakuntalopakhyaṇam*; *Manu*, VI 1 to VII 53.

For June 1889 :—*Pañchatantra*, Book IV; *Mahâbhârata*, *Bakavadhaparvan*; *Manu*, VII 64-225.



The Paper in Sanskrit shall contain passages from the books selected, to be translated into English, with questions in Grammar. A passage or short passages shall also be set for translation from other books not so selected.

**ARABIC.**

The Paper in Arabic shall contain passages for translation into English, and questions in Grammar.

**ENGLISH.**

The General History and Grammatical Structure of the Language.

History of England to the end of the Seventeenth Century, with Geography relating thereto.

**MATHEMATICS.**

**ARITHMETIC.**

The ordinary Rules and Processes of Arithmetic, including—

Proportion.

Vulgar and Decimal Fractions.

Extraction of the Square Root.

**ALGEBRA.**

Addition, Subtraction, Multiplication, and Division of Algebraical Quantities.

Reduction and manipulation of Algebraical Fractions.

Arithmetical and Geometrical Progression.

Simple Equations and easy Quadratic Equations, with questions involving their use.

**GEOMETRY.**

The subjects of the First Four Books of Euclid, and simple deductions.

**MECHANICS.**

Elementary notions as to Velocity, Acceleration Force, Mass, Momentum, Work, and Energy.

Composition and Resolution of Velocities, Accelerations and Forces, in one plane.

Moments and Couples, in one plane.

Centre of Gravity, or Mass-centre.

Transmission of Pressure in Liquids; Variation with depth of the pressure due to weight of liquids.

Specific Gravity, and modes of determining it. Pressure of gases and laws relating thereto.

Atmospheric pressure.

Common instruments and apparatus whose action depends upon the pressure of liquids, or of the atmosphere, or of both.

**EXPERIMENTAL SCIENCE.**

One of the three following subjects, at the option of the candidate :—

**I. CHEMISTRY.**

The following elements, and their compounds as enumerated below; their chief physical and chemical characters; their preparation; and their characteristic tests :—

Oxygen, Hydrogen, Carbon, Nitrogen. Chlorine, Bromine, Iodine, Fluorine. Sulphur Phosphorus, Silicon.

Combining Proportions by weight and by volume. General nature of Acids, Bases, and Salts. Symbols and Nomenclature.

The Atmosphere—its constitution; effects of Animal and Vegetable life upon its composition.

Combustion. Structure and properties of Flame. Nature and composition of ordinary Fuel.

Water. Chemical peculiarities of Natural Waters, such as rain-water, river-water, spring-water, sea-water.

Carbon Monoxide. Carbon dioxide. Oxides and Acids of Nitrogen. Ammonia.

Olefiant Gas, Marsh Gas, Sulphur Dioxide, Sulphuric Acid, Sulphuretted Hydrogen.

Hydrochloric Acid. Phosphoric Anhydride and common Phosphoric Acid.

**II. HEAT AND LIGHT.**

*Heat.*

Expansion of Solids, Liquids, and Gases accompanying rise of Temperature: Laws relating thereto. Thermometry. Calorimetry. Specific heat. Liquefaction and Solidification. Vaporization and condensation; ebullition; properties of vapours, saturated or unsaturated. Latent heat.

Transmission of heat by conduction and convection.

*Light.*

Propagation of light in straight lines in uniform media. Velocity of light and modes of determining it. Intensity of light, its variation with distance. Shadows. Photometry. Reflection and Refraction at plane or spherical surfaces. Formation of Images by plane and spherical mirrors, and by simple lenses (excluding aberration). Decomposition of white light by a prism. The prismatic Spectrum.

### III. MAGNETISM AND ELECTRICITY.

#### *Magnetism.*

Simple experimental properties of Magnets. Effect of a magnet on a neighbouring piece of soft iron or of hard steel. Terrestrial magnetism: behaviour of a declination needle and of a dipping needle at different parts of the earth's surface.

#### *Electricity.*

The two Electrical States and their mutual relations. Attraction and Repulsion. Conduction and Insulation. Electrostatic Induction. The common plate and cylinder electrical machines. Electrical condensers. Distribution of electricity upon conductors.

Current electricity. Common forms of battery. Ohm's law and its simple applications. Heating chemical, and magnetic effects of electric currents.

Simple experimental methods of generating currents by relative motion of conductors and magnets. The simple laws of magneto-electric induction.

The Examinations shall be conducted in the following order:—

#### MONDAY.

*Afternoon, 2 to 4.* Latin.

4 to 6. Latin. Grammar and Composition.

#### TUESDAY.

*Morning, 10 to 1.* Greek, French, German, Sanskrit, or Arabic.

*Afternoon, 2 to 5.* Arithmetic and Algebra.

#### WEDNESDAY.

*Morning, 10 to 1.* Geometry.

*Afternoon, 2 to 5.* Chemistry; or Heat and Light; or Magnetism and Electricity.

#### THURSDAY.

*Morning, 10 to 1.* English Language.

*Afternoon, 2 to 5.* English History, with the Geography relating thereto.

#### FRIDAY.

*Morning, 10 to 1.* Mechanics.

At 2 o'clock on Monday in the week next but two after the Examination, the Examiners shall publish a List of the Candidates who have passed. And at 2 o'clock on the Monday next following the Examiners shall publish a List of the candidates who have passed, arranged in Three Divisions—in the Honours Division in the order of proficiency<sup>1</sup>; in the First and Second Divisions in alphabetical order.

A Pass Certificate signed by the Registrar shall be delivered to each candidate after the Report of the Examiners shall have been approved by the Senate.<sup>2</sup>

If, in the opinion of the Examiners, any Candidates in the Honours Division of not more than 20 years of age at the commencement of the Examination shall possess sufficient merit, the First among such Candidates shall receive an Exhibition of Thirty Pounds per annum for the next two years; the Second among such Candidates shall receive an Exhibition of Twenty Pounds per annum for the next Two Years; and the Third shall receive an Exhibition of Fifteen Pounds per annum for the next Two Years; such Exhibitions to be payable in quarterly instalments, provided that on receiving each instalment the Exhibitioner shall declare his intention of presenting himself either at the two Examinations for B.A., or at the two Examinations for B.Sc., or at the INTERMEDIATE EXAMINATION IN LAWS, or at the PRELIMINARY SCIENTIFIC and INTERMEDIATE EXAMINATIONS IN MEDICINE, within three Academical Years<sup>3</sup> from the time of his passing the MATRICULATION EXAMINATION.

Under the same circumstances, the Fourth among such Candidates shall receive a Prize to the value of Ten Pounds in Books, Philosophical Instruments, or Money; and the Fifth and Sixth shall each receive a Prize to the value of Five Pounds in Books, Philosophical Instruments, or Money.

Any Candidate who may obtain a place in the Honours Division at the MATRICULATION EXAMINATION in January shall be admissible to the INTERMEDIATE EXAMINATION either in ARTS or in SCIENCE in the following July.

<sup>1</sup> The places of candidates in the Honours Division are determined by their respective degrees of proficiency in the subject of the Examination taken collectively.

<sup>2</sup> Certificates are generally ready for issue about a month after the publication of the classified list of each examination; and, in the absence of any request to the contrary, they will be posted to the addresses given by the Candidates on their Schedules of Entry.

<sup>3</sup> By the term "Academical Year" is ordinarily meant the period intervening between any Examination and an Examination of a higher grade in the following year; which period may be either more or less than a Calendar year. Thus the interval between the *Intermediate Examination in Arts, Science, and Medicine*, and the *Degree Examinations* of the next year in those Faculties respectively is about sixteen months; whilst the interval between the B. A. Examination and the M. A. Examination of the next year, or between the B.Sc. Examination and the D.Sc. Examination of the next year, is less than eight months. Nevertheless, each of these intervals is counted as an "Academical Year."

## APPENDIX.

## I.

## PROVINCIAL EXAMINATIONS.

THESE Examinations are appointed by the Senate from time to time, upon the application of any City, Institution, or College desiring to be named as a local centre for one or more examinations; and are carried on simultaneously with the examinations in London, under the supervision of Sub-Examiners also appointed by the Senate.

Candidates wishing to be examined at any Provincial centre must give notice of entry (naming the centre they select, and inclosing their certificate) to the Registrar of the University of London, who will make all necessary arrangements.

A fee usually varying from 1*l*. to 2*l*. is charged by the local authorities, in addition to the University fee.

Both fees are payable on Registration, which takes place at the Provincial centres at a time of which due notice will be sent to candidates.

The answers of the Candidates at the Provincial Examinations are reviewed by the Examiners at the same time with the answers of the Candidates examined in London; and a List of the Candidates who have passed at each Provincial Examination is published, at the time fixed by the Regulations, at the place where such examination has been held.

The MATRICULATION EXAMINATION of JUNE 1887 was held at—

*Aberystwith* :—University College;  
*Bangor* :—University College;  
*Birmingham* :—Queen's College;  
*Bristol* :—University College;  
*Cardiff* :—University College;  
*Cheltenham* (for Ladies only) :—The Ladies' College;  
*Downside* :—St. Gregory's College;  
*Eastbourne* :—New College;  
*Edinburgh* :—The Literary Institute;  
*Epsom* :—The Royal Medical College;  
*Leeds* :—The Yorkshire College;  
*Liverpool* :—University College;  
*Manchester* :—The Owen's College;  
*Newcastle-on-Tyne* :—The School of Science and Art;  
*Nottingham* :—University College;  
*Oswestry* :—The High School;  
*Sheffield* :—Firth College;  
*Stonyhurst* :—Stonyhurst College;  
*Ushaw* :—St. Cuthbert's College;  
*Ware* :—St. Edmund's College.

The MATRICULATION EXAMINATION of JANUARY 1888 will be held at—

*Birmingham* :—Queen's College;  
*Cardiff* :—University College;  
*Glasgow* :—The Training College, New City Road;  
*Leeds* :—The Yorkshire College.

The MATRICULATION EXAMINATION of JUNE 1888 will be held at—

*Birmingham* :—Queen's College;  
*Bristol* :—University College;  
*Edinburgh* :—The Herriot-Watt College;  
*Leeds* :—The Yorkshire College;  
*Liverpool* :—University College;  
*Nottingham* :—University College;  
*Oswestry* :—The High School;  
*Sheffield* :—Firth College.

The INTERMEDIATE EXAMINATION IN ARTS, 1887, was held at—

*Aberystwith* :—University College;  
*Birmingham* :—The Mason Science College;  
*Cardiff* :—University College;  
*Cheltenham* (for Ladies only) :—The Ladies' College;  
*Liverpool* :—University College;  
*Manchester* :—The Owen's College;  
*Newcastle-on-Tyne* :—The School of Science and Art;  
*Ushaw* :—St. Cuthbert's College;  
*Ware* :—St. Edmund's College.

The INTERMEDIATE EXAMINATION IN SCIENCE<sup>1</sup> and the PRELIMINARY SCIENTIFIC (M.B.) EXAMINATION,<sup>1</sup> 1887, were held at—

*Birmingham* :—The Mason Science College;  
*Cardiff* :—University College;  
*Cheltenham* (for Ladies only) :—The Ladies' College;

<sup>1</sup> With the exception of the Practical Examination in Biology, which must be carried on at the University.

*Liverpool* :—University College ;  
*Manchester* :—The Owen's College ;  
*Newcastle-on Tyne* :—The School of Science and Art. .  
 The B.A. EXAMINATION, 1887, will be held at—  
*Liverpool* :—University College ;  
*Manchester* :—The Owen's College.

## II.

### SCHOLARSHIPS, &c.

[*Note*.—The undermentioned Gilchrist and other Scholarships and Prizes are announced at the request and on the authority of the respective Educational Bodies by whom they are offered for competition. They are awarded upon the result of the University Examination; but the University cannot guarantee or be responsible for the award, over which it has otherwise no control.]

### GILCHRIST SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.

#### 1. BRITISH SCHOLARSHIPS, &c.

##### (a) For Male Candidates.

1. A Scholarship of the value of Fifty Pounds per annum, tenable for three years, is biennially offered to Candidates intending to pursue, at OWEN'S COLLEGE, MANCHESTER, their studies for Graduation in one of the Faculties of the University of London; a single Scholarship of Fifty Pounds per annum for three years being awarded to the highest of those Candidates at the June Matriculation Examination who shall have been previously approved by the Principal of Owen's College, provided that he pass in the Honours Division, or, in case — Candidate should so pass, two Scholarships each of Twenty-five Pounds per annum, being awarded to the two Candidates as aforesaid who shall stand highest in the First Division. Particulars may be obtained on application to the Principal of Owen's College, Manchester.

2. A Scholarship of Fifty Pounds per annum, tenable for three years, is annually awarded to that Candidate in the Honours Division at the June Matriculation Examination who shall stand highest of the Candidates previously approved by the Principal of UNIVERSITY COLLEGE, BRISTOL; and who intends to study at that College with a view to Graduation in one of the Faculties of the University of London. [*N.B.*—This Scholarship is open to Women.] Further particulars may be obtained on application to the Principal of University College, Bristol.

##### (b) For Female Candidates.

1. Two Exhibitions, one of Thirty Pounds, the other of Twenty Pounds per annum, tenable for two years, are annually awarded at the June Matriculation Examination to the two Female Candidates of not more than Twenty years of age at the commencement of the Examination, who pass highest in the Honours Division, to assist them in pursuing their studies at some Collegiate Institution approved by the Gilchrist Trustees.

2. Two Exhibitions, one of Forty Pounds, the other of Thirty Pounds per annum, tenable for two years, are annually awarded to the two Female Candidates who pass highest at the Intermediate Examination in Arts (provided that they obtain in the one case at least two-thirds, and in the other at least three-fifths, of the total number of marks), to assist them in pursuing their studies at some Collegiate Institution approved by the Gilchrist Trustees.

3. A Book Prize of the value of Ten Pounds is annually awarded to the Female Candidate who passes highest at the B.A. Examination, provided she obtain not less than two-thirds of the total number of marks.

[See also the BRISTOL Scholarship above.]

Further particulars may be obtained on application to the Secretary to the Gilchrist Educational Trust, 4, Broad Sanctuary, Westminster, S.W.

## II. INDIAN SCHOLARSHIPS.

A Scholarship of the value of One Hundred and Fifty Pounds per annum, and tenable for four years, will be awarded to the Native Candidate who passes highest in the January Matriculation Examination, 1888, carried on at CALCUTTA, BOMBAY, MADRAS and COLOMBO; provided that such Candidate passes either in the Honours or in the First Division, is not more than 22 years of age, and is desirous of prosecuting his studies, either at the University of Edinburgh or at University College, London, with a view to Graduation in one of the Faculties of the University of London.

Further particulars of this *Indian Scholarship* may be obtained on application to the Secretary to the Gilchrist Educational Trust, 4, Broad Sanctuary, Westminster, S.W.

## III. COLONIAL SCHOLARSHIPS.

1. A Scholarship of the value of One Hundred Pounds per annum, and tenable for three years, is annually awarded to the highest among those Candidates at the January Matriculation Examination carried on at MELBOURNE, SYDNEY, ADELAIDE, and HOBARTON, who passes either in the Honours or in the First Division, is not more than 22 years of age, and is desirous of prosecuting his studies either at the University of Edinburgh, or at University College, London, with a view to Graduation in one of the Faculties of the University of London.

2. A similar Scholarship, under the same conditions, is biennially awarded to the Candidate who passes highest at the January Matriculation Examination carried on in New Zealand.

3. A similar Scholarship under the same conditions is triennially awarded to the Candidate who passes highest at the June Matriculation Examination carried on at FREDERICTON (New Brunswick), HALIFAX (Nova Scotia), and CHARLOTTETOWN (Prince Edward's Island).

(Note.—Every Candidate for a Colonial Scholarship must either be a Native of the Colony in which he presents himself, or have resided therein for the five years immediately preceding).

Further particulars of the *Colonial Scholarships* may be obtained on application to the Secretary to the Gilchrist Educational Trust, 4, Broad Sanctuary, Westminster, S.W.

#### WEST SCHOLARSHIP.

This Scholarship, of the value of Thirty Pounds, and tenable for one year, is awarded by the Council of University College, London, to that Candidate at the June Matriculation Examination who distinguishes himself the most in English. Further particulars may be obtained of the Secretary of University College, Gower Street, London, W.C.

#### TUFFNELL SCHOLARSHIPS.

Two Scholarships, of the value of about 100*l.* each, and tenable for two years, are awarded by the Council of University College for distinction in Analytical and Practical Chemistry, and in General Chemistry, alternately, to that Student of the College, *being an Undergraduate of the University of London of not more than three years' standing*, who shall have passed the most distinguished Examination in the subjects for which the Scholarship is to be conferred, and shall have evinced sufficient merit to entitle him to the Scholarship. Further particulars may be obtained of the Secretary of University College, Gower Street, London, W.C.

#### REID STUDENTSHIPS FOR WOMEN.

A Free Studentship at Bedford College, value 30 guineas per annum, tenable for two years, will be awarded to the Woman taking the highest place in the Honours Division of the January Matriculation Examination, and to the Woman taking a similar place at the June Matriculation Examination.

A Free Studentship at Bedford College, value forty pounds per annum, tenable for two years, will be awarded to the Woman taking the highest place in the Intermediate Examination in Arts.

For further particulars application should be made to "The Reid Trustees," Bedford College, York Place, Portman Square, London, W.

### III.

#### INSTRUCTIONS TO CANDIDATES FOR MATRICULATION.

All applications for admission to the Examination must be made *by letter only*. No special form of application is necessary. Care must be taken to give a correct postal address, and the Candidate's name *must be written in full*.

Every application, if made for the first time, must be supported by the requisite document giving proof of age. No Candidate, whatever his age, is admitted to the Examination on his first application without the production of such a document.

Candidates who have previously presented themselves at the Examination must state that fact upon again applying for admission, but need not produce their Certificates of Age a second time.

Applications should not be made earlier than eight weeks, and must not be made later than a month, before the commencement of the Examination.

The age of a Candidate with regard to entry is reckoned up to and inclusive of the first day of the several Examinations, that day being computed to fall as late as the Regulations will possibly allow. The two dates, in the case of the Matriculation Examinations, are January 14th and June 21st. Only those Candidates therefore who shall have *completed their sixteenth year* on or before either of those dates will be admissible to the January or the June Examination, as the case may be; and not those who shall complete such age after those dates.

Fees must be paid on Registration, and not before.

The full marks obtainable at the Matriculation Examination are 2,500. Of these 1,900 qualify for a Prize, 1,700 for Honours, and 1,300 for the First Division. There is no regulation fixing the minimum number of marks required for the Second Division. No further details as to the marking at this or other Examinations can be furnished.

The Alphabetical Pass-List is sent, when ready, to every College or School from which any Candidate (whether successful or not) has immediately proceeded to the Matriculation Examination.

The Classified List is sent, when ready, to every College or School from which a *successful* Candidate has immediately proceeded. It is also widely circulated among the leading Newspapers of the United Kingdom.

Lists cannot be supplied to individual Candidates or their friends.

The Examination papers of past Examinations are not published separately; but the papers of the previous academical year are printed in the University Calendar of the current year; which is issued annually at the beginning of April, and is to be obtained (price 4*s.*) of the publishers, Messrs. Eyre and Spottiswoode, East Harding Street, E.C.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 8th October 1887.

| No.                       | District and date of return.        | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|---------------------------|-------------------------------------|---------------------------------------|---|
| <b>BENGAL.</b>            |                                     |                                       |   |
| <i>Western Districts.</i> |                                     |                                       |   |
| BUREDWAN DIVN.            | 1 Burdwan, Oct. 8, '87              | Nil                                   | Weather—hot and dry. Rain urgently wanted for winter rice, which is beginning to wither in parts. Prices rising. Cholera died out. Fever prevalent.   |
|                           | 2 Bankoora „ 8, '87                 | Nil                                   | Weather—hot and dry. <i>Aus</i> and <i>kalas</i> paddy are being gathered. <i>Amun</i> plants are suffering for want of rain in the Bishenpur sub-division, and have begun to wither in almost all the thanas in the Sudder. If it does not rain soon a very poor crop will be reaped, and scarcity may ensue. Prices have risen. Fever in a mild form is reported to be prevalent in the sub-division. |
|                           | 3 Beerbhoom „ 8, '87                | Nil                                   | Weather—unseasonably warm. No rain since 27th ultimo, and <i>amun</i> paddy suffering most severely. In the absence of a timely downpour within the next ten days, a partial failure is apprehended. <i>Aus</i> paddy is being harvested. It is an insignificant crop in this district. Sugarcane looks well. Public health very indifferent. Fever prevalent to a very unusual degree.                 |
|                           | 4 Midnapur „ 8, '87                 | 0.80                                  | Weather—oppressive except in early morning. State and prospects of crops good.  |
|                           | 5 Houghly „ 8, „                    | 0.02                                  | Weather—very hot. Prospects of winter rice affected by absence of rain, especially to the west. <i>Aus</i> harvest nearly over with good outturn. Public health good for time of year.  |
| PRESIDENCY DIVN.          | Howrah „ 8, '87                     | 0.65                                  | Weather—sultry with prospect of showers. Prospects of winter rice in the north of the district improved by late rain; no change in the south. Harvesting of <i>aus</i> <i>dhau</i> completed with fair results. Jute harvest almost finished. Public health good.   |
|                           | Oolcoberish up to 6th October 1887. | Nil                                   |   |
|                           | <i>Central Districts.</i>           |                                       |   |
|                           | 6 24-Pergas. „ „                    | .....                                 | Report not received.  |
|                           | 7 Nudda „ 8, „                      | 0.34                                  | Weather—sultry. More rain wanted for <i>amun</i> rice in places. Prospects of crops on the ground fair. Fever prevalent.  |
| RAJSHAHY DIVN.            | 8 Khoolna „ 8, '87                  | 0.11                                  | Weather—very hot, with slight rain. Prospects of <i>amun</i> crop favourable. Ploughing for winter crops has commenced. Some fever prevails, but general health fair.   |
|                           | 9 Jessore „ 8, „                    | Nil                                   | Weather—very hot, but mornings getting cool. Early <i>amun</i> in ear. Prospects good. Lands are being prepared for winter crops. Public health fair.   |
|                           | 10 Moorshedabad „ 8, '87            | 2.12                                  | Weather—seasonable. Prospects of <i>amun</i> good. Sowing of <i>til</i> and <i>kalai</i> going on. Sugarcane promising. Fever as usual in this season prevails.   |
|                           | 11 Dinagepur „ 8, '87               | Nil                                   | Weather—seasonable. State and prospects of <i>haimanti</i> paddy and sugarcane good. Rice selling at from 20 to 28 seers per rupee.   |
|                           | 12 Rajshahye „ 8, '87               | 0.08                                  | Weather—seasonable. <i>Aus</i> harvest completed with an outturn of ten annas. Prospects of <i>amun</i> paddy and other standing crops continue good. Public health fair.   |
| RAJSHAHY DIVN.            | 13 Rungpur „ 8, „                   | Nil                                   | Particulars not furnished.  |
|                           | 14 Bogra „ 8, '87                   | Nil                                   | Weather—very warm for this time of the year. State and prospects of crops continue satisfactory on the whole. Public health fair.   |
|                           | 15 Pubna „ 8, '87                   | 0.04                                  | Weather—hot. Public health and prospects of crops good.   |
|                           | Serajgunge „ „                      | 0.09                                  |   |
|                           | 16 Darjeeling „ 8, '87              | 0.03                                  | Weather—fine. State and prospects of crops fair.  |
| DACC DIVISION.            | 17 Julpigoree „ 8, „                | Nil                                   | Weather—seasonable. Prospects of crops fair. Lands are being prepared for winter crops. Cattle-disease prevalent in places. Public health good.   |
|                           | <i>Eastern Districts.</i>           |                                       |   |
|                           | 18 Dacca, Oct. 8, '87               | 0.16                                  | Weather—fine and hot. <i>Ashvini</i> paddy is being harvested. <i>Rosakia</i> and <i>amun</i> paddy thriving, but some damage anticipated for want of rain.   |
|                           | Manickgunge „ „                     | Nil                                   | Ploughing for winter crops going on. On the whole prospects of crops good. Public health good.  |
|                           | Munabigunge „ „                     | 0.9                                   |   |
| DACC DIVISION.            | Nuraingunge „ 8, '87                | Nil                                   | Weather—hot. State of <i>amun</i> good. Jute harvest nearly completed with good outturn. Public health good.  |
|                           | 19 Furreedpur „ 8, '87              | 0.85                                  |   |
|                           | 20 Backergunge „ 7, '87             | Nil                                   | Weather—seasonable. Prospects of crops good. General health fair, except at Persepur and Matboria, where fever is prevalent.  |
|                           | 21 Mymensingh „ 7, '87              | 0.08                                  | Weather—very hot and sultry. State and prospects of crops good.   |
|                           | Jamulpur „ „                        | 0.82                                  |   |
| DACC DIVISION.            | Kishoregunge „ „                    | 0.11                                  |   |
|                           | Attea „ „                           | Nil                                   |   |
|                           | Netrokona „ „                       | 4.25                                  |   |

| No                                 | District and date of return | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|------------------------------------|-----------------------------|---------------------------------------|--|
| <b>BENGAL—contd.</b>               |                             |                                       |  |
| <i>Eastern Districts—contd.</i>    |                             |                                       |  |
| CHITTAGONG DIV.                    | 22 Chittagong, Oct. 11, '87 | 2.14                                  | Weather—hot. Prospects of standing crops fair. Transplantation of <i>amun</i> nearly over. Prices stationary. Public health good.  |
|                                    | 23 Noakholly „ 7, „         | 0.07                                  | Weather—sultry and close. Prospects of <i>amun</i> crop fair. A few heavy showers needed. New <i>aus</i> 27 to 28 seers per rupee. Public health fair.   |
|                                    | 24 Tipperah „ 6, „          | Nil                                   | Weather—abnormally dry and very hot. In a large portion of the district the crops are perishing for want of moisture. There is no water in the fields. Where the Megna inundates the lands, as in the south and extreme west of the district, the crops are flourishing, but they are very bad elsewhere. [Daily Weather Report shows rainfall at Comilla 2.50 on the 9th].                          |
|                                    | Brahmanbariah „ „           | Nil                                   |  |
|                                    | Chandpur „ „                | 0.13                                  |  |
|                                    | Chittagong Hill „ 4, „      | 0.07                                  | Weather—hot with foggy mornings. Gathering of <i>jum</i> paddy still continues. Cotton doing well and beginning to pod. Lands are being ploughed for mustard. Paddy in low lands progressing. Rain wanted.   |
|                                    | 25 Hill Tipperah „ 5, „     | Nil                                   | Weather—days hot, mornings cool. <i>Amun</i> paddy doing well. Prospects of <i>jum</i> crops fair. Public health good.   |
| <b>BEHAR.</b>                      |                             |                                       |  |
| PATNA DIV.                         | 26 Patna Oct. 8, '87        | Nil                                   | Weather—hot. Sowing of <i>rubbi</i> crops is being pushed on. Rain badly wanted for paddy crop. <i>Rahar</i> , cotton and sugarcane continue to look well. Public health good.   |
|                                    | 27 Gaya „ 7, „              | Nil                                   | Weather—dry and hot. Paddy suffering much for want of rain. Prospects of <i>rubbi</i> crop will become gloomy if it does not rain within the next three or four days. A few cases of fever reported.   |
|                                    | 28 Shahabad „ 8, „          | Nil                                   | Weather—hot for the season. State of paddy crop continues satisfactory, but more rain urgently wanted both for this crop and for sowing of <i>rubbi</i> , which has commenced. Some fever and cholera reported from Buxar and Sasserani, otherwise public health good. Prices stationary.  |
|                                    | 29 Darbhanga „ 8, „         | Nil                                   | Weather—mornings cool and days hot. Prospects of rice continue favourable, though rain is urgently needed to secure a good crop. Lands are being prepared for <i>rubbi</i> sowings. Price of rice averages 19 seers per rupee. Public health generally good.   |
|                                    | Mozufferpur „ 8, „          | Nil                                   | Weather—very close, hot and rainless. <i>Rubbi</i> lands are being ploughed. Rice crop is still in good condition, but rain is much wanted. Public health good.  |
| BHAGLPORE DIV.                     | 31 Saran „ 8, „             | Nil                                   | Weather—westerly wind; sultry, rather hot and oppressive for this season of the year. Rain very badly wanted for <i>aghani</i> . Much anxiety is felt as <i>hathia</i> is slipping off. Prices rising. Public health good.   |
|                                    | 32 Champaran „ 8, „         | Nil                                   | Weather—hot. Early morning cloudy. <i>Bhadai</i> crops are being harvested; yield is good. Rain very much needed for rice crop throughout the district. Prospects good as yet. Sowing of <i>rubbi</i> commenced in the Bettiah sub-division. Public health fair.   |
|                                    | 33 Monghyr „ 8, „           | Nil                                   | Weather—hot during the day, cool in the morning. Rain very much wanted for rice crop. <i>Rubbi</i> sowings busily going on. Public health generally good. Prices stationary.   |
|                                    | 34 Bhagulpur „ 8, „         | Nil                                   | Weather—sultry and oppressive. Rain urgently wanted for late rice which has already suffered on high lands. <i>Kurthi</i> doing well. Preparation for <i>rubbi</i> sowings forward. Public health much better.   |
|                                    | 35 Purneah „ 8, „           | Nil                                   | Weather—clear and hot for the time of year. <i>Aghani</i> rice doing well. <i>Kurthi</i> sown. Lands are being prepared for mustard and tobacco. Millets maturing.   |
|                                    | 36 Maldah „ 8, „            | Nil                                   | Weather—very hot and fine. No rain except in the extreme north-west on two days. All crops suffering for want of rain, but will still be good if moderate showers soon fall. There are now signs of rain, and a little has fallen to-day (8th) in the middle of the district. Common rice selling at an average of 21 seers per rupee. Fever prevalent.  |
|                                    | 37 Southal Pergha „ 8, „    | Nil                                   | Weather—growing hotter. Thunder and lightning on the 7th, but no rain. State of crops good up to date, but prospects critical. Rain urgently wanted. Some loss has already taken place on higher lands in west and north.  |
| <b>ORISSA.</b>                     |                             |                                       |  |
| ORISSA DIV.                        | 38 Cuttack Oct. 7, '87      | Nil                                   | Weather—hot, mornings cool. Clouds appearing. Very slight rain fell on 6th in some places in the interior. <i>Laghu sarad</i> coming into ear. High land <i>sarad</i> suffering for want of rain, and will be greatly injured if the drought continues. Prices of food-grains rising. Common rice sells at 16 seers per rupee in town. Public health generally good.                                 |
|                                    | 39 Pooree „ 6, „            | Nil                                   | Weather—very hot with light west wind and almost cloudless skies. The continued absence of rain seriously endangers the <i>sarad</i> crop, especially in parts where irrigation is impossible. Common rice 21 seers 14 chittacks per rupee in the Sudder sub-division and 20 seers 4 chittacks in the Khoorda sub-division. Cholera has re-appeared in the town and in the interior of the district. |
|                                    | 40 Balasore „ 7, „          | Nil                                   | Weather—hot. Prospects of crops generally good, but more rain is wanted. Harvesting of <i>beati</i> paddy is going on and weeding of <i>sarad</i> is approaching completion. Public health good, except a few cases of fever.  |
| <b>CHOTA NAGPORE.</b>              |                             |                                       |  |
| <i>South-West Frontier Agency.</i> |                             |                                       |  |
|                                    | 41 Basarionah, Oct. 7, '87  | Nil                                   | Weather—bright, clear and rainless, and unusually warm. Paddy on uplands has suffered seriously for want of rain, and damage to low land rice also apprehended. <i>Bhadai</i> has generally yielded fairly. <i>Rubbi</i> promising so far. General health good.  |
|                                    | 42 Lohardugga „ 8, „        | Nil                                   | Weather—hot and cloudy. No rain during the week. It is urgently wanted for standing crops throughout the district. Prices fluctuating. Cholera abating, but fever prevalent in Palamow.  |
|                                    | 43 Singbhoom „ 7, „         | Nil                                   | Weather—signs of early cold weather. Hot during the day. Want of rain is being seriously felt in all parts of district and complaints are general. A timely fall would do immense good. Outturn will not be more than 8 annas if drought continues. <i>Gora dhan</i> being harvested. General health good. Price of rice has risen.  |
|                                    | 44 Manbhoom „ 8, „          | 2.24                                  | Weather—hot. Heavy rain on 7th did much good to paddy. More rain still required in all parts of district. High land paddy prospects not good. Public health fair.  |

## PRICES-CURRENT (retail) of Food-g

| Number.            | DISTRICTS.    | WHEAT.          |                        |                                       | BARLEY.         |                        |                                       | RICE, BEST SORT. |                        |                      | KANGHI OR KARUN.<br>ITALIAN MILLET.<br>(Setaria italica.) |                        |                                       | GRAM, CHANA,<br>CHHOLA, KADALA,<br>OR SUNAGA.<br>(Cicer arietinum.) |        |        |
|--------------------|---------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|------------------|------------------------|----------------------|---|------------------------|---------------------------------------|---|--------|--------|
|                    |               | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return.  | Next preceding return. | Corresponding return | Present return.   | Next preceding return. | Corresponding return<br>of last year. |   |        |        |
|                    |               |                 |                        |                                       |                 |                        |                                       |                  |                        |                      |   |                        |                                       |   |        |        |
| BENGAL.            |               |                 |                        |                                       |                 |                        |                                       |                  |                        |                      |   |                        |                                       |   |        |        |
| Western Districts. |               |                 |                        |                                       |                 |                        |                                       |                  |                        |                      |   |                        |                                       |   |        |        |
|                    |               | S. Ch.          | N. Ch.                 | S. Ch.                                | S. Ch.          | S. Ch.                 | S. Ch.                                | S. Ch.           | S. Ch.                 | S. Ch.               | S. Ch.  | S. Ch.                 | S. Ch.                                | S. Ch.  | S. Ch. | S. Ch. |
| 1                  | Burdwan       | 15 0            | 15 0                   | 14 8                                  | No sale         |                        |                                       | 17 4             | 17 4                   | 16                   |   |                        |                                       | 26 0  | 26 0   | 21 0   |
| 2                  | Bankura       | 15 0            | 15 0                   | 13 12                                 | 20 0            | 20 0                   | 25 0                                  | 18 0             | 18 0                   | 21                   |   |                        |                                       | 19 8  | 19 8   | 18 12  |
| 3                  | Deobhoom      | 16 8            | 16 8                   | 20 0                                  | ...             | ...                    | ...                                   | 16 8             | 17 4                   | 16                   |   |                        |                                       | 26 4  | 24 0   | 23 8   |
| 4                  | Midnapore     | 15 0            | 15 0                   | 18 0                                  | ...             | ...                    | ...                                   | 19 0             | 18 8                   | 15                   |   |                        |                                       | 18 0  | 18 0   | 17 0   |
| 5                  | Hoochly       | 14 0            | 14 0                   | 15 0                                  | ...             | ...                    | ...                                   | 0 0              | 10 0                   | 10                   |   |                        |                                       | 21 0  | 21 0   | 19 0   |
|                    | Howrah        | Not available.  |                        |                                       | ...             | ...                    | ...                                   | 13 0             | 13 6                   | 12                   |   |                        |                                       | 21 8  | 22 0   | 20 0   |
| Central Districts. |               |                 |                        |                                       |                 |                        |                                       |                  |                        |                      |   |                        |                                       |   |        |        |
|                    | Calcutta      | 14 4            | 14 4                   | 15 0                                  | 19 14           | 20 0                   | 21 0                                  | 8 13             | 8 12                   | 9 1                  | 15 8  | 15 8                   | 18 4                                  | 20 0  | 19 14  | 19 0   |
| 6                  | 24-Pergunnahs | 14 0            | 14 0                   | 13 5                                  | 26 8            | 26 8                   | 20 0                                  | 8 0              | 8 8                    | 8                    | 20 0  | 20 0                   | ...                                   | 20 0  | 22 8   | 20 0   |
| 7                  | Nadua         | 16 6            | 16 6                   | 15 14                                 | 36 0            | 36 0                   | 26 54                                 | 16 0             | 16 0                   | 15                   | ...   | ...                    | ...                                   | 29 0  | 29 0   | 22 14  |
| 8                  | Khoolna       | ...             | ...                    | ...                                   | ...             | ...                    | ...                                   | 19 0             | 17 0                   | 15                   | ...   | ...                    | ...                                   | 16 0  | 16 0   | 16 0   |
| 9                  | Jessore       | 14 8            | 15 0                   | 16 0                                  | ...             | ...                    | ...                                   | 16 4             | 16 0                   | 13                   | ...   | ...                    | ...                                   | 23 8  | 23 0   | 21 0   |
| 10                 | Moorshedabad  | 16 12           | 16 0                   | 17 0                                  | ...             | ...                    | ...                                   | 13 4             | 16 0                   | 13                   | ...   | ...                    | ...                                   | 20 0  | 22 0   | 26 10  |
| 11                 | Dinapore      | 14 8            | 14 8                   | 15 4                                  | 24 0            | 22 8                   | 20 8                                  | 16 0             | 16 0                   | 18                   | ...   | ...                    | ...                                   | 22 0  | 22 0   | 22 0   |
| 12                 | Rajahmabye    | 17 4            | 18 0                   | 20 0                                  | 46 0            | 45 0                   | 32 0                                  | 16 8             | 16 8                   | 16                   | ...   | ...                    | ...                                   | 28 2  | 28 8   | 22 0   |
| 13                 | Kungpore      | 18 12           | 13 12                  | 16 0                                  | ...             | ...                    | ...                                   | 14 8             | 14 8                   | 15                   | ...   | ...                    | ...                                   | 20 0  | 20 0   | 18 0   |
| 14                 | Bugra         | 15 0            | 15 0                   | 16 8                                  | ...             | ...                    | ...                                   | 15 0             | 16 0                   | 13 8                 | ...   | ...                    | ...                                   | 20 4  | 19 8   | 16 8   |
| 15                 | Pubna         | 18 0            | 18 0                   | 19 8                                  | ...             | ...                    | ...                                   | 8 0              | 8 0                    | 8 0                  | ...   | ...                    | ...                                   | 27 0  | 26 8   | 20 0   |
| 16                 | Darjeeling    | 9 8             | ...                    | 9 0                                   | 11 0            | 13 0                   | 10 0                                  | 5 0              | 5 0                    | 5 0                  | ...   | ...                    | ...                                   | 11 0  | 11 0   | 11 0   |
| 17                 | Jalpigore     | 12 8            | 13 0                   | 12 8                                  | 20 0            | 20 0                   | 20 0                                  | 13 0             | 13 0                   | 13 0                 | ...   | ...                    | ...                                   | 18 0  | 20 0   | 15 5   |
| Eastern Districts. |               |                 |                        |                                       |                 |                        |                                       |                  |                        |                      |   |                        |                                       |   |        |        |
| 18                 | Dacca         | 16 0            | 14 8                   | 14 0                                  | 26 0            | 26 0                   | 26 0                                  | 15 12            | 17 0                   | 13 0                 | ...   | ...                    | ...                                   | 21 5  | 19 0   | 16 0   |
| 19                 | Furzedpore    | 14 0            | 14 0                   | 21 0                                  | 24 0            | 24 0                   | 25 0                                  | 19 0             | 19 0                   | 16 0                 | ...   | ...                    | ...                                   | 22 0  | 22 0   | 19 8   |
| 20                 | Backergunge   | ...             | ...                    | ...                                   | ...             | ...                    | ...                                   | 17 0             | 17 0                   | 14 0                 | ...   | ...                    | ...                                   | 18 0  | 18 0   | 16 0   |
| 21                 | Mymensingh    | 13 0            | 13 0                   | 13 4                                  | ...             | ...                    | ...                                   | 18 4             | 12 8                   | 12 4                 | ...   | ...                    | ...                                   | 20 0  | 18 0   | 16 0   |

- A In sub-divisions retail prices of salt per rupee were:—Culna 12 seers, Outwa 13 seers, &  
 B At Bishenpore retail price of salt 12 seers per rupee.  
 C At Rampore Haut retail price of salt 12½ seers per rupee.  
 D In Tumlook sub-division retail price of salt 11 seers per rupee.  
 E In sub-divisions retail prices of salt per rupee were:—Baraset and Banirhat 13 seers  
 Barrackpore 12½ seers and Dum-dum 12½ seers.  
 F In sub-divisions retail prices of salt per rupee were:—Khowsta 13½ seers, Maherpore and Chumunaga 12 seers, and Ranaghat 10½  
 G In sub-divisions retail prices of salt per rupee were:—Jhenida and Narail 12 seers, Magura 10½ seers, and Mongong 13 seers.  
 H In sub-divisions retail prices of salt per rupee were:—Labagha 13 seers, and Jungipore and Kandi 12½ seers.



*Districts of Bengal during the Fortnight ending the 30th September 1887.*

|  |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |  |  |  |  |  |  |  |  | DISTRICTS.         |
|--|------------------------|---------------------------------------|---|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|---|--|--|--|--|--|--|--|--|--------------------|
| INDIAN CORN OR<br>MAIZE<br>(Zea Mays.) |                        |                                       | ARHAR OR THUS.<br>CADJAN PEA.<br>(Cajanus indicus.) |                        |                                       | FIRWOOD.        |                        |                                       | SALT.           |                        |                                       | SALT.           |                        |                                       |   |  |  |  |  |  |  |  |  |                    |
| Present return.                        | Next preceding return. | Corresponding return<br>of last year. | Present return.                                     | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. |   |  |  |  |  |  |  |  |  |                    |
|  |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       | BENGAL.                                       |  |  |  |  |  |  |  |  | Western Districts. |
|  |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |  |  |  |  |  |  |  |  |                    |
| No sale                                |                        |                                       | 80 0  | 30 0                   | 26 0                                  | 120 0           | 120 0                  | 120 0                                 | A<br>13 12      | 13 12                  | 13 0                                  | 2 13 3          | 2 13 3                 | .....                                 | Burdwan                                       |  |  |  |  |  |  |  |  |                    |
| 36 8                                   | 30 0                   | 37 0                                  | 30 0  | 20 0                   | 2 0                                   | 280 0           | 280 0                  | 240 0                                 | B<br>12 0       | 12 0                   | 11 8                                  | 3 3 0           | 3 3 0                  | 3 6 0                                 | Bankoora                                      |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 15 0  | 13 8                   | 15 0                                  | 160 0           | 160 0                  | 160 0                                 | C<br>12 12      | 12 12                  | 12 12                                 | 3 0 0           | 3 0 0                  | 3 0 0                                 | Beerbhoom.                                    |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 13 0  | 13 0                   | 11 0                                  | 120 0           | 120 0                  | 155 0                                 | D<br>13 0       | 13 0                   | 12 8                                  | 3 0 0           | 3 1 0                  | 3 0 3                                 | Midnapore.                                    |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 13 0  | 13 0                   | 13 0                                  | 120 0           | 120 0                  | 120 0                                 | 13 0            | 13 8                   | 13 0                                  | 2 14 0          | 2 14 0                 | 3 1 0                                 | Hooghly.                                      |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 14 4  | 14 4                   | 15 0                                  | 100 0           | 100 0                  | 90 0                                  | 12 13           | 12 13                  | 12 0                                  | 2 14 0          | 2 14 0                 | 3 2 0                                 | Howrah.                                       |  |  |  |  |  |  |  |  |                    |
|  |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       | Central District.                             |  |  |  |  |  |  |  |  |                    |
|  |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |  |  |  |  |  |  |  |  |                    |
| 17 8                                   | 17 8                   | 24 0                                  | 18 0  | 18 0                   | 18 0                                  | 80 0            | 80 0                   | 80 0                                  | 13 0            | 13 0                   | 13 0                                  | 3 0 0           | 3 0 0                  | 3 0 0                                 | Calcutta.                                     |  |  |  |  |  |  |  |  |                    |
| 21 0                                   | 26 8                   | 28 0                                  | 18 0  | 19 0                   | 21 4                                  | 100 0           | 80 0                   | 80 0                                  | K<br>12 4       | 12 8                   | 12 5                                  | 2 15 0          | 2 15 6                 | 3 0 0                                 | 24-Pergunnahs.                                |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 20 0  | 20 0                   | 20 0                                  | ...             | ...                    | ...                                   | F<br>11 10 4    | 11 10 4                | 11 10 4                               | 3 0 0           | 3 0 0                  | 3 4 0                                 | Nuddea.                                       |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | ...   | ...                    | ...                                   | 160 0           | 160 0                  | 160 0                                 | 10 8            | 10 8                   | 10 8                                  | 3 12 0          | 3 12 0                 | 3 12 0                                | Khoolna.                                      |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 20 0  | 20 0                   | 20 0                                  | 100 0           | 100 0                  | 120 0                                 | G<br>10 12      | 10 12                  | 10 12                                 | 3 2 0           | 3 2 0                  | 3 4 0                                 | Jessore.                                      |  |  |  |  |  |  |  |  |                    |
| ...                                    | 40 0                   | 20 0                                  | 20 0  | 20 0                   | 19 0                                  | 190 0           | 190 0                  | 120 0                                 | H<br>12 0       | 12 0                   | ...                                   | ...             | 3 5 0                  | 3 4 0                                 | Moorshedabad.                                 |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | ...   | 11 0                   | ...                                   | 160 0           | 160 0                  | 160 0                                 | 12 8            | 12 8                   | 11 8                                  | 3 2 0           | 3 2 0                  | 3 6 0                                 | Dinapore.                                     |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 16 6  | 16 8                   | 17 0                                  | 240 0           | 240 0                  | 240 0                                 | I<br>12 0       | 12 0                   | 12 0                                  | 3 1 4           | 3 1 3                  | 3 0 0                                 | Rajahmhye.                                    |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 8 10  | 8 10                   | 10 6                                  | 120 0           | 120 0                  | 120 0                                 | J<br>10 5       | 10 5                   | 11 0                                  | 3 8 0           | 3 8 0                  | 3 10 0                                | Burghpore.                                    |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | ...   | ...                    | ...                                   | 90 0            | 90 0                   | 90 0                                  | 10 8            | 12 0                   | ...                                   | 3 5 4           | 3 2 8                  | ...                                   | Bogra.  |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 19 0  | 18 12                  | 20 0                                  | 200 0           | 200 0                  | 200 0                                 | K<br>12 0       | 12 0                   | 11 4                                  | 3 5 0           | 3 5 0                  | 3 6 0                                 | Pubna.  |  |  |  |  |  |  |  |  |                    |
| 25 0                                   | 24 0                   | 24 0                                  | 8 0   | 8 0                    | 8 0                                   | 120 0           | 120 0                  | 122 0                                 | L<br>9 0        | 9 0                    | 9 0                                   | 4 4 0           | 4 4 0                  | 4 4 0                                 | Darjeeling.                                   |  |  |  |  |  |  |  |  |                    |
| 20 0                                   | ...                    | ...                                   | 11 0  | 11 0                   | ...                                   | 128 0           | 120 0                  | 128 0                                 | M<br>11 0       | 11 0                   | 11 8                                  | 3 6 0           | 3 4 0                  | 3 8 0                                 | Julpigoree.                                   |  |  |  |  |  |  |  |  |                    |
|  |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       | Eastern Districts.                            |  |  |  |  |  |  |  |  |                    |
|  |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 16 0  | 16 8                   | ...                                   | 120 0           | 120 0                  | 120 0                                 | N<br>12 8       | 12 8                   | 10 8                                  | 3 3 0           | 3 3 0                  | 3 8 0                                 | Dacca.  |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 20 0  | 20 0                   | 16 0                                  | 160 0           | 160 0                  | 120 0                                 | O<br>12 0       | 12 0                   | ...                                   | 3 1 0           | 3 1 0                  | .....                                 | Furcedpore.                                   |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 13 0  | 13 0                   | 13 0                                  | 120 0           | 120 0                  | 120 0                                 | P<br>12 8       | 13 0                   | 11 8                                  | 3 2 0           | 3 0 0                  | 3 6 0                                 | Backergunge.                                  |  |  |  |  |  |  |  |  |                    |
| ...                                    | ...                    | ...                                   | 20 0  | 13 8                   | ...                                   | ...             | ...                    | ...                                   | Q<br>12 4       | 12 0                   | 11 0                                  | 3 4 0           | 3 4 0                  | 3 9 0                                 | Myensingh.                                    |  |  |  |  |  |  |  |  |                    |

I In Nattore and Nowgong sub-divisions retail price of salt 13 seers per rupee.

J In Kurigram sub-division retail price of salt 11½ seers per rupee.

K At Baraungunge retail price of salt 1½ seers per rupee.

L At Silliguri retail price of salt 11 seers per rupee.

M At Fallacotta in Ahipore sub-division retail price of salt 10 seers per rupee.

N In sub-divisions retail prices of salt per rupee were:—Manickgunge 11 seers, Moonsheegunge 10½ seers and Naraingunge 12½ seers.

O In sub-divisions retail prices of salt per rupee were:—Goswando 1½ seers and Madaripore 1½ seers.

P In sub-divisions retail prices of salt per rupee were:—Patuakhali 9½ seers, Perospore 11 seers and Bhola 10½ seers.

Q In sub-divisions retail prices of salt per rupee were:—Kishoregunge 12½ seers, Attea 12 seers, Jamalpore 10½ seers, Shyapore 10 seers, and Netrokona 10 seers.

## PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

| Number.                                      |   | DISTRICTS. | QUANTITIES PER RUPEE IN |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |  |  |
|--|---|------------|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|---------------------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--|--|
|  |   |            | WHEAT                   |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLU.<br>(Sorghum Vulgare.) |                        |                                    |                 |                        |                                    |  |  |
|  |   |            | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                       | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |  |  |
|  |   |            |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |  |  |
| Eastern Districts—continued.                 |   |            |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |  |  |
| 22   | Chittagong ...                            | 10 0       | 10 0                    | 16 0                   | ...                                | ...             | ...                    | 18 0                               | 13 0             | 8 8                    | 19 0                               | 19 0            | 16 0                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 23   | Noakholly ...                             | ...        | ...                     | ...                    | ...                                | ...             | ...                    | 19 0                               | 18 0             | 14 8                   | 21 0                               | 20 0            | 16 8                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 24   | Tipperah ...                              | 13 5       | 11 12                   | 11 7                   | ...                                | ...             | ...                    | 16 5                               | 17 13            | 13 5                   | 24 13                              | 25 4            | 14 13                  | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 25   | Chittagong Hill Tracts, Hill Tipperah ... | 12 0       | 12 0                    | 12 0                   | ...                                | ...             | ...                    | 13 5                               | 12 4             | 8 11                   | 14 8                               | 14 8            | 10 0                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| BEHAR.                                       |   |            |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |  |  |
| 26   | Patna ..                                  | 19 0       | 19 0                    | 21 12                  | 28 0                               | 28 0            | 34 0                   | 11 8                               | 11 8             | 11 8                   | 21 8                               | 21 8            | 20 8                   | 26 0                               | 26 0                                  | 26 0                   | ...                                | ...             | ...                    |                                    |  |  |
| 27   | Gya ...                                   | 16 0       | 16 0                    | 18 0                   | 35 0                               | 34 0            | 27 0                   | 9 0                                | 9 8              | 10 0                   | 17 8                               | 18 8            | 16 0                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 28   | Shahabad ...                              | 16 0       | 16 0                    | 17 8                   | 33 0                               | 28 0            | 27 0                   | 9 0                                | 9 0              | 9 0                    | 16 0                               | 16 0            | 18 0                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 29   | Darbhanga ..                              | 17 9       | 18 10                   | 17 0                   | 38 7                               | 33 0            | 23 0                   | 14 4                               | 14 4             | 12 8                   | 17 9                               | 17 8            | 16 8                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 30   | Monsieffore ...                           | 22 0       | 21 0                    | 20 0                   | 35 0                               | 30 0            | 30 0                   | 12 0                               | 12 0             | 10 0                   | 22 0                               | 20 0            | 18 0                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 31   | Baras ...                                 | 18 0       | 18 0                    | 18 0                   | 30 0                               | 29 0            | 28 0                   | 9 0                                | 8 8              | 8 0                    | 21 0                               | 21 0            | 20 0                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 32   | Chumpara ...                              | 23 0       | 22 0                    | 20 0                   | 36 0                               | 36 0            | 24 0                   | 8 0                                | 8 0              | 10 0                   | 18 0                               | 17 0            | 16 0                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 33   | Monghyr ...                               | 21 0       | 22 0                    | 19 10                  | 31 8                               | 33 9            | 35 10                  | 13 2                               | 13 14            | 13 2                   | 15 12                              | 16 13           | 16 12                  | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 34   | Bhagalpore ...                            | 20 3       | 20 3                    | 18 15                  | 31 9                               | 37 14           | 31 9                   | 17 0                               | 16 6             | 14 8                   | 20 3                               | 18 15           | 17 10                  | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 35   | Purneah ..                                | 16 0       | 16 0                    | 16 0                   | 35 0                               | 32 0            | ...                    | 16 0                               | 16 0             | 16 0                   | 30 0                               | 17 0            | 20 0                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 36   | Maldah ..                                 | 18 0       | 18 0                    | 18 0                   | ...                                | ...             | ...                    | 14 0                               | 13 0             | 14 0                   | 24 0                               | 23 0            | 21 8                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 37   | Southal Perah.                            | 16 0       | 14 0                    | 13 0                   | ...                                | ...             | ...                    | 16 0                               | 16 0             | 16 0                   | 25 0                               | 25 0            | 25 0                   | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| ORISSA.                                      |   |            |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |  |  |
| 38   | Cuttack ...                               | 17 1       | 17 1                    | 17 1                   | ...                                | ...             | ...                    | 10 8                               | 10 8             | 10 8                   | 18 6                               | 18 6            | 15 12                  | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 39   | Pooree ..                                 | 13 8       | 11 13                   | 17 1                   | ...                                | ...             | ...                    | 11 13                              | 11 2             | 18 2                   | 21 0                               | 21 0            | 15 14                  | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| 40   | Balasore ...                              | 12 0       | 16 0                    | 16 0                   | 18 0                               | 18 0            | 13 0                   | 15 0                               | 18 0             | 25 0                   | 25 0                               | 24 0            | ...                    | ...                                | ...                                   | ...                    | ...                                | ...             | ...                    |                                    |  |  |
| CHOTA NAGPORE South-Western Frontier Agency. |   |            |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |  |  |
| 41   | Hazareibagh ...                           | 15 0       | 16 0                    | 16 0                   | 25 0                               | 20 0            | 18 0                   | 9 0                                | 10 0             | 10 0                   | 18 0                               | 18 0            | 21 0                   | Not procurable.                    |                                       |                        |                                    |                 |                        |                                    |  |  |
| 42   | Lohardugga ...                            | 20 0       | 20 0                    | 24 0                   | 22 0                               | 24 0            | 18 0                   | 18 0                               | 16 0             | 16 0                   | 22 0 (old)                         | 24 0 (old)      | 21 0 (new)             | ...                                |                                       |                        |                                    |                 |                        |                                    |  |  |
| 43   | Singbhoom ...                             | 20 0       | 20 0                    | 24 0                   | 33 0                               | 32 0            | 24 0                   | 20 0                               | 20 0             | 28 0                   | 24 0 (new)                         | 24 0 (new)      | 24 0                   | ...                                |                                       |                        |                                    |                 |                        |                                    |  |  |
| 44   | Manbhoom ...                              | 16 0       | 16 0                    | 17 0                   | ...                                | 32 0            | ...                    | 16 0                               | 18 0             | 16 8                   | 25 0                               | 28 0            | 27 0                   | ...                                |                                       |                        |                                    |                 |                        |                                    |  |  |

B At Panchgatchia Hat in Fenny sub-division retail price of salt 9 seers per rupee.

S In Chandpore sub-division retail price of salt 11½ seers per rupee.

T In sub-divisions retail prices of salt per rupee were:—Buxar 12½ seers, Bhabua 11 seers, and Samseram 12 seers.

U In sub-divisions retail prices of salt per rupee were:—Madhubani 11 seers and Tajpore 12 seers.

V At Setaurhise retail price of salt 11 seers per rupee.

W At Battiah retail price of salt 11½ seers per rupee.

X In sub-divisions retail prices of salt per rupee were:—Baguserai 11 seers and Jamui 11½ seers.

Y In sub-divisions retail prices of salt per rupee were:—Banka and Sopole 11 seers, and Mudihepurah 12 seers.

Published for general information.

CALCUTTA,  
The 11th October 1887.

*for the Fortnight ending 30th September 1887—(concluded.)*

| TRES OF 80 TOLAHS.                                 |   |
|--|---|
| LYEA OR CUMBU.<br><i>canistum typho-<br/>idum.</i> | MAVUA OR RAGI.<br><i>(Eleusine Corocana.)</i> |
| Next preceding return.                             | Present return.                               |
| Corresponding return<br>of last year.              | Next preceding return.                        |
|  | Corresponding return<br>of last year.         |

|                                       |           |       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEKRS. |  | DISTRICTS. |
|---------------------------------------|-----------|-------|---|--|------------|
| MUR.<br>LA.<br>(PUS.)                 | FIREWOOD. | SALT. | SALT.   |  |            |
| Corresponding return<br>of last year. |           |       | Present return.                               |  |            |
| Present return.                       |           |       | Next preceding return.                        |  |            |
| Next preceding return.                |           |       | Corresponding return<br>of last year.         |  |            |
| Corresponding return<br>of last year. |           |       |   |  |            |
| Present return.                       |           |       |   |  |            |
| Next preceding return.                |           |       |   |  |            |
| Corresponding return<br>of last year. |           |       |   |  |            |

***Eastern Districts—continued.***

| Ch. | S.  | Ch. | S.  | Ch. | S.  | Ch. | S. | Ch. |
|-----|-----|-----|-----|-----|-----|-----|----|-----|
| 20  | 000 | 10  | 000 | 000 | 000 | 000 |    |     |
| 10  | 000 | 000 | 000 | 000 | 000 | 000 |    |     |
| 00  | 000 | 00  | 000 | 000 | 000 | 000 |    |     |
| 100 | 000 | 00  | 000 | 000 | 000 | 000 |    |     |
| 00  | 000 |     | 000 | 000 | 000 | 000 |    |     |

| S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | Rs. A. P. | Rs. A. P. | Rs. A. P.               |  |
|--------|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|-------------------------|--|
| 12 0   | 75     | 75     | 75     | 8 8    | 8 0    | 12 0   | 4 8 0  | 4 8 0     | 3 2 0     | Chittagong.             |  |
| ...    | ...    | ...    | ...    | 10 0   | 9 0    | 9 0    | 3 8 0  | 3 12 0    | 4 4 0     | Noakhali.               |  |
| 9 10   | ...    | ...    | ...    | 12 0   | 12 0   | 11 0   | 3 4 0  | .....     | 3 9 0     | Lipparah.               |  |
| ...    | 320    | 0 320  | 0 320  | 8 0    | 8 0    | 8 0    | 4 8 0  | 4 8 0     | 4 8 0     | Chittagong Hill Tracts. |  |
| 16 0   | ...    | ...    | ...    | 11 0   | 11 0   | 11 0   | 3 4 0  | 3 4 0     | 3 4 0     | Hill Tipperah.          |  |

**BEHAR.**

|      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|
| 0    | 16   | 0    | 16   | 0    | 26   | 0    | 26   | 0    | 36   | 0    |
| 36   | 46   | 56   | 66   | 76   | 86   | 96   | 106  | 116  | 126  | 136  |
| 146  | 156  | 166  | 176  | 186  | 196  | 206  | 216  | 226  | 236  | 246  |
| 256  | 266  | 276  | 286  | 296  | 306  | 316  | 326  | 336  | 346  | 356  |
| 366  | 376  | 386  | 396  | 406  | 416  | 426  | 436  | 446  | 456  | 466  |
| 476  | 486  | 496  | 506  | 516  | 526  | 536  | 546  | 556  | 566  | 576  |
| 586  | 596  | 606  | 616  | 626  | 636  | 646  | 656  | 666  | 676  | 686  |
| 696  | 706  | 716  | 726  | 736  | 746  | 756  | 766  | 776  | 786  | 796  |
| 806  | 816  | 826  | 836  | 846  | 856  | 866  | 876  | 886  | 896  | 906  |
| 916  | 926  | 936  | 946  | 956  | 966  | 976  | 986  | 996  | 1006 | 1016 |
| 1026 | 1036 | 1046 | 1056 | 1066 | 1076 | 1086 | 1096 | 1106 | 1116 | 1126 |
| 1136 | 1146 | 1156 | 1166 | 1176 | 1186 | 1196 | 1206 | 1216 | 1226 | 1236 |
| 1246 | 1256 | 1266 | 1276 | 1286 | 1296 | 1306 | 1316 | 1326 | 1336 | 1346 |
| 1356 | 1366 | 1376 | 1386 | 1396 | 1406 | 1416 | 1426 | 1436 | 1446 | 1456 |
| 1466 | 1476 | 1486 | 1496 | 1506 | 1516 | 1526 | 1536 | 1546 | 1556 | 1566 |
| 1576 | 1586 | 1596 | 1606 | 1616 | 1626 | 1636 | 1646 | 1656 | 1666 | 1676 |
| 1686 | 1696 | 1706 | 1716 | 1726 | 1736 | 1746 | 1756 | 1766 | 1776 | 1786 |
| 1796 | 1806 | 1816 | 1826 | 1836 | 1846 | 1856 | 1866 | 1876 | 1886 | 1896 |
| 1906 | 1916 | 1926 | 1936 | 1946 | 1956 | 1966 | 1976 | 1986 | 1996 | 2006 |
| 2016 | 2026 | 2036 | 2046 | 2056 | 2066 | 2076 | 2086 | 2096 | 2106 | 2116 |
| 2126 | 2136 | 2146 | 2156 | 2166 | 2176 | 2186 | 2196 | 2206 | 2216 | 2226 |
| 2236 | 2246 | 2256 | 2266 | 2276 | 2286 | 2296 | 2306 | 2316 | 2326 | 2336 |
| 2346 | 2356 | 2366 | 2376 | 2386 | 2396 | 2406 | 2416 | 2426 | 2436 | 2446 |
| 2456 | 2466 | 2476 | 2486 | 2496 | 2506 | 2516 | 2526 | 2536 | 2546 | 2556 |
| 2566 | 2576 | 2586 | 2596 | 2606 | 2616 | 2626 | 2636 | 2646 | 2656 | 2666 |
| 2676 | 2686 | 2696 | 2706 | 2716 | 2726 | 2736 | 2746 | 2756 | 2766 | 2776 |
| 2786 | 2796 | 2806 | 2816 | 2826 | 2836 | 2846 | 2856 | 2866 | 2876 | 2886 |
| 2896 | 2906 | 2916 | 2926 | 2936 | 2946 | 2956 | 2966 | 2976 | 2986 | 2996 |
| 3006 | 3016 | 3026 | 3036 | 3046 | 3056 | 3066 | 3076 | 3086 | 3096 | 3106 |
| 3116 | 3126 | 3136 | 3146 | 3156 | 3166 | 3176 | 3186 | 3196 | 3206 | 3216 |
| 3226 | 3236 | 3246 | 3256 | 3266 | 3276 | 3286 | 3296 | 3306 | 3316 | 3326 |
| 3336 | 3346 | 3356 | 3366 | 3376 | 3386 | 3396 | 3406 | 3416 | 3426 | 3436 |
| 3446 | 3456 | 3466 | 3476 | 3486 | 3496 | 3506 | 3516 | 3526 | 3536 | 3546 |
| 3556 | 3566 | 3576 | 3586 | 3596 | 3606 | 3616 | 3626 | 3636 | 3646 | 3656 |
| 3666 | 3676 | 3686 | 3696 | 3706 | 3716 | 3726 | 3736 | 3746 | 3756 | 3766 |
| 3776 | 3786 | 3796 | 3806 | 3816 | 3826 | 3836 | 3846 | 3856 | 3866 | 3876 |
| 3886 | 3896 | 3906 | 3916 | 3926 | 3936 | 3946 | 3956 | 3966 | 3976 | 3986 |
| 3996 | 4006 | 4016 | 4026 | 4036 | 4046 | 4056 | 4066 | 4076 | 4086 | 4096 |
| 4106 | 4116 | 4126 | 4136 | 4146 | 4156 | 4166 | 4176 | 4186 | 4196 | 4206 |
| 4216 | 4226 | 4236 | 4246 | 4256 |      |      |      |      |      |      |

|     |     |     |   |     |    |     |   |     |    |    |    |    |    |       |    |   |   |    |   |   |    |           |                |
|-----|-----|-----|---|-----|----|-----|---|-----|----|----|----|----|----|-------|----|---|---|----|---|---|----|-----------|----------------|
| 28  | 0   | 120 | 0 | 120 | 0  | 110 | 0 | 11  | 12 | 11 | 12 | 11 | 8  | 3     | 1  | 6 | 3 | 1  | 6 | 3 | 1  | 6         | Patna.         |
| 23  | 0   | 160 | 0 | 160 | 0  | 160 | 0 | 11  | 0  | 11 | 0  | 11 | 0  | 3     | 5  | 0 | 3 | 5  | 0 | 3 | 5  | 0         | Gya.           |
| 15  | 0   | 0   | 0 | 120 | 0  | 160 | 0 | ... | T  | 12 | 8  | 13 | 0  | ..... | 3  | 3 | 0 | 3  | 5 | 0 |    | Shahabad. |                |
| 21  | 0   | 176 | 0 | 176 | 0  | 160 | 0 | 12  | 0  | 12 | 0  | 11 | 8  | 3     | 0  | 0 | 3 | 0  | 0 | 3 | 4  | 0         | Durbhanga.     |
| 21  | 0   | 120 | 0 | 120 | 0  | 140 | 0 | 12  | 0  | 12 | 0  | 12 | 0  | 3     | 4  | 0 | 3 | 4  | 0 | 3 | 4  | 0         | Muzafferpore.  |
| 26  | 0   | 16  | 0 | 16  | 0  | 140 | 0 | 12  | 0  | 12 | 0  | 10 | 13 | 3     | 2  | 0 | 3 | 2  | 0 | 3 | 3  | 6         | Sarni.         |
| 24  | 0   | 160 | 0 | 160 | 0  | ... | 0 | 12  | 0  | 12 | 0  | 11 | 0  | 3     | 4  | 0 | 3 | 4  | 0 | 3 | 7  | 0         | Chumpanan.     |
| 24  | 2   | 126 | 0 | 126 | 0  | 126 | 0 | 12  | 9  | 13 | 9  | 12 | 9  | 2     | 14 | 6 | 2 | 14 | 0 | 3 | 2  | 0         | Monghyr.       |
| 21  | 7   | 151 | 8 | 151 | 14 | 87  | 0 | 12  | 10 | 12 | 10 | 13 | 0  | 3     | 0  | 0 | 3 | 3  | 3 | 3 | 2  | 0         | Baagpur.       |
| 18  | 0   | 100 | 0 | 100 | 0  | 126 | 0 | 10  | 8  | 10 | 8  | 10 | 8  | 3     | 8  | 0 | 3 | 10 | 0 | 3 | 10 | 0         | Furneah.       |
| ... | 120 | 120 | 0 | 120 | 0  | 120 | 0 | 12  | 0  | 12 | 0  | 11 | 0  | 3     | 4  | 0 | 3 | 4  | 0 | 3 | 6  | 0         | Maldah.        |
| 31  | 0   | 200 | 0 | 200 | 0  | 200 | 0 | 11  | 8  | 11 | 8  | 11 | 8  | 3     | 3  | 3 | 3 | 3  | 3 | 3 | 3  | 0         | Sonthal Perga. |

**ORISA.**

|    |     |    |     |     |     |
|----|-----|----|-----|-----|-----|
| 00 | 000 | 00 | 000 | 000 | 000 |
| 00 | 000 | 00 | 000 | 000 | 000 |
| 00 | 000 | 00 | 000 | 000 | 000 |

|   |       |     |   |     |   |    |   |    |   |    |   |    |   |      |   |      |   |      |   |            |
|---|-------|-----|---|-----|---|----|---|----|---|----|---|----|---|------|---|------|---|------|---|------------|
| 1 | ...   | 80  | 0 | 8   | 0 | 8  | 0 | 14 | 0 | 14 | 0 | 14 | 0 | 2 12 | 0 | 2 12 | 0 | 2 12 | 0 | Cuttack.   |
| 1 | 15 12 | 70  | 0 | 70  | 0 | 8  | 0 | 13 | 2 | 14 | 7 | 14 | 7 | 2 12 | 0 | 2 10 | 0 | 2 10 | 0 | Poore.     |
| 1 | 13 0  | 100 | 0 | 100 | 0 | 80 | 0 | 10 | 8 | 10 | 8 | 10 | 8 | 3 4  | 0 | 3 4  | 0 | 3 8  | 0 | Balaasore. |

CHOTA NAGPUR.

**South-Western Bronzler Agency.**

| Not procurable. |     | 40  | 0    | 34  | 0  | 38  | 0  |
|-----------------|-----|-----|------|-----|----|-----|----|
| 20              | 000 | 20  | 50   | 0   | 36 | 0   | 40 |
|                 |     |     | (new |     |    |     |    |
| 10              | 000 | 10  | 000  | 000 |    | 000 |    |
| 10              | 000 | 000 | 000  | 100 |    | 000 |    |

| 73 |     |     |     |    |     |    |    |    |    |    |    |    |    |    |   |   |    |   |   |   |   |              |           |
|----|-----|-----|-----|----|-----|----|----|----|----|----|----|----|----|----|---|---|----|---|---|---|---|--------------|-----------|
| 0  | 21  | 0   | 320 | 0  | 320 | 0  | 10 | 0  | 10 | 0  | 9  | 0  | 3  | 8  | 0 | 3 | 8  | 0 | 4 | 4 | 0 | Mazarranaga. |           |
| 0  | 10  | 0   | 120 | 0  | 120 | 0  | 10 | 0  | 10 | 0  | 9  | 0  | 3  | 12 | 0 | 3 | 12 | 0 | 4 | 4 | 0 | Loharanga.   |           |
| 0  | 31  | 0   | 32  | 0  | 320 | 0  | 30 | 0  | 9  | 0  | 9  | 0  | 9  | 0  | 4 | 0 | 0  | 4 | 0 | 0 | 4 | 0            | Singhwa.  |
| 74 |     |     |     |    |     |    |    |    |    |    |    |    |    |    |   |   |    |   |   |   |   |              |           |
| 0  | ... | 200 | 0   | 30 | 0   | 30 | 0  | 10 | 10 | 10 | 10 | 10 | 10 | 3  | 6 | 0 | 3  | 6 | 0 | 3 | 6 | 0            | Manthoam. |

bangunge 0 seers and at Raneegunge in Arrarah sub-division 10 seers per rupee  
 of salt per rupee were:—Doughur 18 seers, Godda 11 seers, and Pakour and Rajmehal 12 seers.  
 of salt 9½ seers per rupee.  
 sub-division retail price of salt 12 seers per rupee.  
 of salt 18 seers per rupee.

**P. NOLAN,**  
**Secy. to the Govt. of Bengal.**

**PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt in the**

| Number. | MARKS.          | WHEAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    |
|---------|-----------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|         |                 | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|         |                 | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.         | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |
| 1       | Calcutta ...    | 2 10 3          | 2 10 3                 | 2 8 6                              | 1 8 0           | 1 8 6                  | 1 12 6                             | 3 12 0           | 3 12 0                 | 3 6 3                              | 2 1 6           | 2 1 6                  | 2 0 6                              |
| 2       | Serajgunge ...  | 1 12 0          | 1 14 0                 | 2 5 0                              | ...             | ...                    | ...                                | 3 10 0           | 3 10 0                 | 3 12 0                             | 2 0 0           | 1 14 0                 | 1 12 6                             |
| 3       | Dacca ...       | 2 6 0           | 2 7 0                  | 2 9 0                              | 1 8 0           | 1 8 0                  | 1 8 0                              | 2 9 0            | 2 6 0                  | 3 0 0                              | 1 12 0          | 2 0 0                  | 2 10 6                             |
| 4       | Neraingunge ... | ...             | ...                    | ...                                | ...             | ...                    | ...                                | 2 5 0            | ...                    | 2 9 0                              | ...             | ...                    | 2 5 0                              |
| 5       | Chittagong ...  | 3 7 0           | 3 7 0                  | 3 6 0                              | ...             | ...                    | ...                                | 3 0 0            | 3 0 0                  | 4 6 0                              | 2 2 0           | 2 2 0                  | 2 6 0                              |
| 6       | Patna ...       | 2 0 0           | 2 0 0                  | 1 12 0                             | 1 5 3           | 1 5 3                  | 1 2 6                              | 3 0 0            | 3 0 0                  | 3 0 0                              | 1 14 0          | 1 14 0                 | 1 14 6                             |
| 7       | Balasore ...    | 3 4 0           | 3 0 0                  | 2 8 0                              | 3 0 0           | 3 0 0                  | 3 0 0                              | 2 8 0            | 2 8 0                  | 3 0 0                              | 1 7 0           | 1 7 0                  | 1 20 6                             |
| 8       | Pooree ...      | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | 1 14 0          | 1 14 0                 | 2 3 4                              |
| 9       | Cuttack ...     | 2 2 0           | 2 2 0                  | 2 2 0                              | ...             | ...                    | ...                                | 3 10 0           | 3 10 0                 | 3 10 0                             | 2 2 0           | 2 2 0                  | 2 5 0                              |

**CALCUTTA,**

**The 11th October 1887.**

*mentioned Marts of Bengal during the fortnight ending 30th September 1887.*

## PRICES PER MAUND.

| WAR OR (HOLUR.<br><i>orgnum Vulgare.</i> ) |                        |                                    | BAJRA OR CUMBU.<br>( <i>Pennisetum typhoides.</i> ) |                        |                                    |
|--|------------------------|------------------------------------|---|------------------------|------------------------------------|
| Present return.                            | Next preceding return. | Corresponding return of last year. | Present return.                                     | Next preceding return. | Corresponding return of last year. |
| R. A. P.                                   | R. A. P.               | R. A. P.                           | R. A. P.  | R. A. P.               | R. A. P.                           |
| 14 0 1                                     | 14 0 2                 | 0 0 2                              | 2 8 0   | 3 8 0                  | 3 0 0                              |
| ...  | ...                    | ...                                | ...   | ...                    | ...                                |
| ...  | ...                    | ...                                | ...   | ...                    | ...                                |
| ...  | ...                    | ...                                | ...   | ...                    | ...                                |
| ...  | ...                    | ...                                | ...   | ...                    | ...                                |
| 1 6 0                                      | 1 6 0                  | 1 6 0                              | 1 6 0   | 1 6 0                  | 1 6 0                              |
| ...  | ...                    | ...                                | ...   | ...                    | ...                                |
| ...  | ...                    | ...                                | ...   | ...                    | ...                                |
| ...  | ...                    | ...                                | ...   | ...                    | ...                                |

1838a

| ARAB OR THUR<br>CASSIA PEA.<br>( <i>Cajanus indicus.</i> ) |                        |                                    | FIRWOOD.        |                        |                                    | SALT.           |                        |                                    | MARTS.      |
|--|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-------------|
| Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |             |
| R. A. P.   | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |             |
| 0 3 0  | 0 3 0                  | 0 3 0                              | 0 6 9           | 0 6 9                  | 0 6 9                              | 3 0 0           | 3 0 0                  | 3 0 0                              | Calcutta.   |
| ...  | ...                    | ...                                | ...             | ...                    | ...                                | 2 10 0          | 2 10 0                 | 3 4 0                              | Serajunge.  |
| 2 8 0  | 2 0 0                  | ...                                | 0 5 0           | 0 5 0                  | 0 5 0                              | 3 3 0           | 3 3 0                  | 3 8 0                              | Dacca.      |
| 2 5 0  | ...                    | 1 15 0                             | 0 8 0           | ...                    | 0 8 0                              | 3 0 0           | ...                    | 3 4 0                              | Narainjunge |
| 4 4 0  | 3 8 0                  | 3 0 0                              | 0 8 0           | 0 8 0                  | 0 8 0                              | 4 8 0           | 4 8 0                  | 3 3 0                              | Chittagong. |
| 1 7 0  | 1 7 0                  | 1 6 0                              | 0 5 0           | 0 5 0                  | 0 5 3                              | 3 1 6           | 3 1 6                  | 3 1 6                              | Patna.      |
| 3 0 0  | 3 0 0                  | 3 0 0                              | 0 4 6           | 0 4 6                  | 0 7 0                              | 3 4 0           | 3 4 0                  | 3 8 0                              | Balasore.   |
| ...  | ...                    | ...                                | ...             | ...                    | ...                                | 2 12 0          | 2 10 0                 | 2 10 0                             | Pooras.     |
| 2 0 0  | 2 2 0                  | ...                                | 0 8 0           | 0 8 0                  | 0 8 0                              | 2 12 0          | 2 12 0                 | 12 0                               | Cuttack.    |

published for general information.

P. NOLAN,  
Secy. to the Govt. of Bengal.

## STATEMENT SHOWING THE STOCKS OF RICE IN AND AROUND CALCUTTA.

STOCK IN HAND AS COMPILED OF—

| NAMES OF PLACES.                                     | 1st week of Oct. 1884.         | 1st week of Nov. 1884.       | 1st week of Dec. 1884.       | 1st week of Jan. 1885.         | 1st week of Feb. 1885.           | 1st week of Mar. 1885.            | 1st week of April 1885.         | 1st week of May 1885.         | 1st week of June 1885.         | 1st week of July 1885.         | 1st week of August 1885.       | 1st week of Sept. 1885.       | 1st week of Oct. 1885.            |
|--|--------------------------------|------------------------------|------------------------------|--------------------------------|----------------------------------|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|-----------------------------------|
| Balarbhatta  | Mds. 5,00,000                  | Mds. 3,81,000                | Mds. 3,11,000                | Mds. 2,80,000                  | Mds. 4,12,500                    | Mds. 4,73,000                     | Mds. 14,01,000                  | Mds. 12,67,000                | Mds. 10,38,700                 | Mds. 7,61,000                  | Mds. 6,72,000                  | Mds. 5,51,000                 | Mds. 5,13,000                     |
| Ootendhara   | " " " "                        | " " " "                      | " " " "                      | " " " "                        | " " " "                          | " " " "                           | " " " "                         | " " " "                       | " " " "                        | " " " "                        | " " " "                        | " " " "                       | " " " "                           |
| Choutpore, Golaures, Coochpore, Hathkole, and Calpa. | " " " "                        | " " " "                      | " " " "                      | " " " "                        | " " " "                          | " " " "                           | " " " "                         | " " " "                       | " " " "                        | " " " "                        | " " " "                        | " " " "                       | " " " "                           |
| Pachurachatta, Pocha, and Jorhapan.                  | " " " "                        | " " " "                      | " " " "                      | " " " "                        | " " " "                          | " " " "                           | " " " "                         | " " " "                       | " " " "                        | " " " "                        | " " " "                        | " " " "                       | " " " "                           |
| Tallypore, Chittah, Kidderpore, and Moohurpore.      | " " " "                        | " " " "                      | " " " "                      | " " " "                        | " " " "                          | " " " "                           | " " " "                         | " " " "                       | " " " "                        | " " " "                        | " " " "                        | " " " "                       | " " " "                           |
| 21 Minor Bazzars (estimated) ..                      | " " " "                        | " " " "                      | " " " "                      | " " " "                        | " " " "                          | " " " "                           | " " " "                         | " " " "                       | " " " "                        | " " " "                        | " " " "                        | " " " "                       | " " " "                           |
| Other retail shops, 3,120 in number (estimated).     | " " " "                        | " " " "                      | " " " "                      | " " " "                        | " " " "                          | " " " "                           | " " " "                         | " " " "                       | " " " "                        | " " " "                        | " " " "                        | " " " "                       | " " " "                           |
| Boddybhatta, Nishabur, Chudhrem, and Chagdar.        | " " " "                        | " " " "                      | " " " "                      | " " " "                        | " " " "                          | " " " "                           | " " " "                         | " " " "                       | " " " "                        | " " " "                        | " " " "                        | " " " "                       | " " " "                           |
| Total ..   | 19,42,000                      | 17,02,014                    | 15,38,000                    | 17,37,380                      | 18,02,639                        | 17,55,745                         | 20,01,723                       | 20,40,648                     | 20,30,475                      | 20,30,130                      | 19,77,340                      | 17,95,302                     | 18,36,889                         |
| On Railway stations on both sides of the river.      | 6,028 (on 2nd Oct. 1884.)      | 11,004 (on 4th Nov. 84.)     | 7,216 (on 4th Dec. 84.)      | 51,020 (on 4th Jan. 85.)       | 16,293 (on 5th Feb. 1885.)       | 17,495 (on 11th Mar. 1885.)       | 9,883 (on 4th April 1885.)      | 12,014 (on 4th May 1885.)     | 9,464 (on 4th June 85.)        | 6,186 (on 4th July 85.)        | 4,244 (on 4th Aug. 85.)        | 18,800 (on 3rd Sept. 85.)     | 6,728 (On 10th October 85.)       |
| On bank .. (by Port Commissioners' returns.)         | 22,144 (1st to 3rd Oct. 1884.) | 25,219 (1st to 3rd Nov. 84.) | 30,273 (1st to 3rd Dec. 84.) | 75,383 (2nd to 4th Jan. 1885.) | 91,461 (1st to 3rd Feb. 1885.)   | 78,906 (1st to 3rd Mar. 1885.)    | 51,857 (1st to 3rd April 1885.) | 18,510 (1st to 3rd May 1885.) | 18,532 (1st to 3rd June 1885.) | 21,270 (1st to 3rd July 1885.) | 79,890 (1st to 3rd Aug. 1885.) | 50,919 (1st to 3rd Sept. 85.) | 45,465 (4th to 6th October 1885.) |
| (By Canal returns.)                                  | 4,919 (1st to 3rd October 84.) | 24,231 (1st to 3rd Nov. 84.) | 21,111 (1st to 3rd Dec. 84.) | 76,953 (2nd to 4th Jan. 1885.) | 1,51,101 (1st to 3rd Feb. 1885.) | 1,77,080 (1st to 3rd March 1885.) | 81,575 (1st to 3rd April 1885.) | 34,235 (1st to 3rd May 1885.) | 17,539 (1st to 3rd June 1885.) | 24,701 (1st to 3rd July 1885.) | 23,344 (1st to 3rd Aug. 1885.) | 53,107 (1st to 3rd Sept. 85.) | 52,239 (1st to 3rd October 1885.) |
| Grand Total of Stocks ..                             | 10,76,641                      | 17,64,018                    | 16,97,507                    | 19,16,045                      | 21,42,559                        | 20,30,019                         | 20,47,587                       | 27,17,307                     | 23,75,350                      | 20,38,267                      | 20,89,908                      | 19,31,318                     | 19,80,507                         |
| Probable stock available for exportation by sea.     | 94 lakhs                       | 73 lakhs                     | 84 lakhs                     | 84 lakhs                       | 11 lakhs                         | 94 lakhs                          | 20 lakhs                        | 164 lakhs                     | 134 lakhs                      | 104 lakhs                      | 104 lakhs                      | 84 lakhs                      | 84 lakhs                          |

STATISTICAL DEPARTMENT.

The 10th October 1887.

P. NOLAN,  
Secretary to the Govt. of Bengal

**Abstract of the results of Meteorological Observations taken at the Alipore  
Observatory in the month of September 1887.**

|   | Inches.   | Date.              | Hour. |
|---|-----------|--------------------|-------|
| The mean pressure of the month  | 29.674    |                    |       |
| The average pressure of September from 24 years' registers  | 29.682    |                    |       |
| The highest pressure in the month   | 29.861    | 30th               | 10h   |
| The lowest pressure in the month  | 29.431    | 11th               | 16h   |
| The range of pressure   | 0.430     |                    |       |
|   | Hours.    |                    |       |
| The total number of hours of bright sunshine during the month   | 120.1     |                    |       |
| The maximum possible number of hours of sunshine  | 367.0     |                    |       |
|   | °         |                    |       |
| The mean temperature of the month   | 82.4      |                    |       |
| The average temperature of September from 24 years' registers   | 83.3      |                    |       |
| The highest temperature in the month  | 91.3      | 9th                |       |
| The lowest temperature in the month   | 76.6      | 24th               |       |
| The range of temperature during the month   | 14.7      |                    |       |
| The mean daily range of temperature   | 9.0       |                    |       |
| The greatest range of temperature in one day  | 11.8      | 29th               |       |
|   | Per cent. |                    |       |
| The mean humidity of the month  | 86        |                    |       |
| The average humidity of September from 24 years' registers  | 85        |                    |       |
|   | Inches.   |                    |       |
| The mean vapour tension of the month  | 0.956     |                    |       |
| The average vapour tension of September from 9 years' registers   | 0.987     |                    |       |
| The mean cloud proportion of the month  | 7.27      |                    |       |
| The average cloud proportion of September from 10 years' registers  | 7.30      |                    |       |
|   | Inches.   |                    |       |
| The total rainfall of the month   | 9.54      |                    |       |
| The total rainfall indicated by a Beckley's self-registering rain-gauge (mouth of the gauge about 52 feet above the ground) | 9.22      |                    |       |
| The average fall of September from 48 years' registers  | 10.18     |                    |       |
| The greatest fall in 24 hours   | 1.55      | 23rd               |       |
|   | Days.     |                    |       |
| The number of rainy days in the month   | 21        |                    |       |
| The average number of rainy days in September from 24 years' registers  | 21        |                    |       |
|   | °         |                    |       |
| The mean maximum equilibrium temperature of solar radiation during the month  | 143.4     |                    |       |
| The mean difference of sun and air temperatures   | 56.1      |                    |       |
| The greatest sun temperature  | 153.6     | 6th                |       |
| The greatest excess of sun over air temperature   | 66.5      | 16th               |       |
| The mean temperature of the nocturnal radiation thermometer on woollen cloth  | 75.4      |                    |       |
| The mean depression of the nocturnal radiation thermometer below the minimum air temperature at 4 feet above the ground     | 2.8       |                    |       |
| The greatest depression of the nocturnal radiation thermometer below the minimum air temperature                            | 5.6       | 30th               |       |
|   | Miles.    |                    |       |
| The mean movement of the wind per day   | 95.2      |                    |       |
| The greatest movement of the wind in one day  | 171.0     | 16th               |       |
| The greatest movement of the wind in one hour   | 14.0      | 14th 10 to 11 A.M. |       |

The number of hours with winds from each of the 8 points—

N. 69, NE. 22, E. 33, SE. 162, S. 151, SW. 120, W. 89, NW. 37, Calm 37.

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park-street Observatory): The barometer is about 3 feet higher at Alipore, and, other things being equal, reads therefore .003 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently equal, and, finally, the thermometer which furnished the record of temperature at the Surveyor-General's Office during the years and upwards is found to read 0.6 higher than the Kew standard thermometer, which is the standard of reference at the present Observatory.

A. PEDLER,

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 10th October 1887.

for Offg. Meteorological Reporter to the Govt. of India.

## Meteorological Report of the Province of Bengal.

| METEOROLOGICAL DIVISION. | DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                            |                     |                      |                           |                     |          |                           |                                   |                                 |                                     |      |
|--------------------------|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|----------------------------|---------------------|----------------------|---------------------------|---------------------|----------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|------|
|                          |                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                      |                     | TEMPERATURE.         |                           |                     |          |                           |                                   |                                 |                                     |      |
|                          |                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction.      | Mean wind velocity. | Highest during week. | Date.                     | Lowest during week. | Date.    | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. |      |
|                          |                        |                         |                                 |                            |                      |                            |                     |                      |                           |                     |          |                           |                                   |                                 |                                     |      |
| UNION.                   | Pooree                 | Gopalpore               | 29'823                          | 29'872                     | +0'028               | Northerly                  | 98'0                | 93'7                 | 5th Oct.                  | 76'8                | 4th Oct. | 83'0                      | 78'4                              | 85'7                            | +3'1                                |      |
|                          | False Point            | 29'848                  | 29'869                          | +0'008                     |                      | 130'0                      | 93'5                | 3rd                  |                           | 75'1                | 3rd, 4th | 82'7                      | 76'0                              | 84'4                            | +1'4                                |      |
|                          | Cuttack                | Cuttack                 | 29'789                          | 29'870                     | +0'017               | North-Westerly.            | 24'0                | 94'9                 | 3rd                       |                     | 74'8     | 4th, 5th                  | 83'8                              | 76'5                            | 85'2                                | +1'1 |
|                          | Balasore               | Balasore                | 29'811                          | 29'869                     | +0'015               | Calm                       | 73'2                | 93'4                 | 1st, 2nd                  |                     | 73'3     | 4th                       | 82'5                              | 74'4                            | 83'5                                | +1'1 |
|                          | South-West Midnapore   | Saugor Island           | 29'841                          | 29'867                     | +0'004               | NNW                        | 154'0               | 90'7                 | 1st, 3rd, 4th Oct.        |                     | 78'0     | 6th                       | 80'1                              | 70'4                            | 84'7                                | +1'5 |
|                          | South 24-Pergunnahs    | Midnapore               | 29'733                          | 29'883                     | +0'015               | N                          | 53'6                | 93'3                 | 1st, 2nd, 7th Oct.        |                     | 73'3     | 1st, 3rd                  | 82'4                              | 74'8                            | 83'6                                | +1'5 |
|                          | 24-Pergunnahs          | Calcutta                | 29'836                          | 29'857                     | -0'009               | WSW                        | 58'0                | 91'0                 | 7th                       |                     | 76'0     | 3rd, 4th                  | 89'9                              | 77'2                            | 83'6                                | +1'1 |
|                          | Howrah                 | Burdwan                 | 29'763                          | 29'864                     | +0'001               | North-Westerly             | 24'0                | 92'6                 | 7th                       |                     | 75'4     | 1st, 3rd                  | 82'1                              | 76'7                            | 84'4                                | +0'7 |
|                          | Hooghly                | Bankoora                | 29'540                          | —                          | —                    | Calm                       | 74'0                | 93'6                 | 3rd & 17th Oct.           |                     | 72'6     | 1st                       | 83'2                              | 74'2                            | 83'7                                | —    |
|                          | Burdwan                | Ransegunge              | 29'536                          | 29'842                     | +0'027               | ENE                        | 63'0                | 94'5                 | 3rd, 5th, & 7th Oct.      |                     | 72'9     | 1st, 2nd, 4th Oct.        | 86'8                              | 74'2                            | 84'0                                | +1'8 |
|                          | Bankoora               | Berhampore              | 29'890                          | 29'867                     | +0'010               | WNW                        | 30'7                | 92'2                 | 7th                       |                     | 76'8     | 3rd                       | 90'9                              | 78'3                            | 84'6                                | +0'8 |
|                          | Berhampore             | Krishnagur              | 29'803                          | 29'869                     | —                    | NW                         | 42'4                | 92'3                 | 7th                       |                     | 73'8     | 3rd                       | 91'3                              | 75'0                            | 83'4                                | —    |
|                          | West Burdwan           | Jessore                 | 29'831                          | 29'864                     | +0'007               | Variable                   | 31'2                | 93'3                 | 1st, 2nd                  |                     | 77'4     | 1st-3rd                   | 92'3                              | 78'2                            | 85'3                                | +1'5 |
|                          | Moorshedabad           | Chittagong              | 29'777                          | 29'860                     | -0'014               | Variable                   | 38'0                | 91'2                 | 5th                       |                     | 72'0     | 7th                       | 89'7                              | 75'1                            | 82'5                                | +0'8 |
|                          | Nuddea                 | Chittagong Hill Tracts  | Demagiri                        | —                          | —                    | Observations not received. |                     |                      |                           |                     |          |                           |                                   |                                 |                                     |      |
|                          | Jessore                | Backergunge             | 29'843                          | 29'855                     | +0'002               | Variable                   | 61'2                | 92'3                 | 6th                       |                     | 74'9     | 7th                       | 91'0                              | 77'6                            | 84'3                                | +2'3 |
|                          | Khoolna                | Noakholly               | 19'751                          | 29'844                     | —                    | Calm                       | 1'6                 | 90'5                 | 7th                       |                     | 73'8     | 7th                       | 88'7                              | 75'3                            | 83'0                                | —    |
|                          | Chittagong             | Furzedpore              | 29'827                          | 29'868                     | -0'008               | Variable                   | 35                  | 91'5                 | 7th                       |                     | 70'4     | 2nd, 4th                  | 89'0                              | 77'2                            | 83'4                                | +1'8 |
|                          | Chittagong Hill Tracts | Dacca                   | 29'824                          | 29'846                     | +0'004               | Southerly                  | 34'0                | 93'1                 | 7th                       |                     | 76'2     | 4th                       | 91'6                              | 78'3                            | 84'9                                | +0'3 |
|                          | Backergunge            | Commillah               | 29'775                          | 29'810                     | +0'034               | Variable                   | 105'8               | 93'3                 | 7th                       |                     | 73'8     | 2nd, 3rd                  | 91'5                              | 74'6                            | 83'1                                | +1'0 |
|                          | Noakholly              | Mymensingh              | 29'803                          | 29'861                     | +0'010               | Variable                   | 80'3                | 91'3                 | 6th                       |                     | 74'1     | 5th Oct.                  | 89'8                              | 76'2                            | 82'9                                | +0'6 |
|                          | Furzedpore             | Bogra                   | 29'768                          | 29'831                     | —                    | Calm                       | 27'0                | 92'3                 | 6th                       |                     | 74'8     | 1st-2nd                   | 90'0                              | 76'1                            | 83'1                                | —    |
|                          | Dacca                  | Pubna                   | 29'608                          | 29'854                     | -0'007               | Variable                   | 23'7                | 92'6                 | 7th                       |                     | 74'7     | 4th                       | 91'1                              | 76'7                            | 83'9                                | +1'8 |
|                          | Commillah              | Rajshahye               | 29'805                          | 29'875                     | +0'039               | N                          | 13'6                | 91'3                 | 2nd, 3rd, 6th, 7th, Oct.  |                     | 72'6     | 3rd                       | 90'9                              | 74'5                            | 82'7                                | +0'9 |
|                          | Mymensingh             | Maldah                  | 29'697                          | —                          | —                    | Calm                       | 75'1                | 91'4                 | 2nd and 7th Oct.          |                     | 73'5     | 3rd                       | 90'8                              | 75'5                            | 83'2                                | —    |
|                          | Bogra                  | Dinapore                | 29'718                          | 29'838                     | -0'026               | Variable                   | 35'7                | 93'1                 | 7th                       |                     | 74'1     | 1st                       | 91'1                              | 76'4                            | 83'8                                | +1'2 |
|                          | Pubna                  | Rangpore                | 29'710                          | 29'834                     | -0'058               | E                          | 46'4                | 93'3                 | 7th                       |                     | 73'7     | 1st                       | 91'2                              | 77'1                            | 84'2                                | +2'0 |
|                          | Rajshahye              | Julpigoree              | 29'675                          | 29'863                     | -0'028               | SE                         | ?                   | 91'0                 | 7th                       |                     | 71'8     | 4th, 5th                  | 88'8                              | 73'2                            | 81'0                                | +1'2 |
|                          | Maldah                 | Cooch Behar             | 23'052                          | —                          | +0'014               | NE                         | 40'8                | 66'6                 | 5th                       |                     | 51'6     | 5th, 8th                  | 64'1                              | 53'2                            | 59'7                                | +1'5 |
|                          | Dinapore               | Purneah                 | 29'755                          | 29'850                     | +0'020               | Calm                       | 8'3                 | 91'2                 | 7th                       |                     | 73'6     | 1st                       | 89'5                              | 75'2                            | 82'4                                | -0'4 |
|                          | Rangpore               | North Bhagulpore        | —                               | —                          | —                    | Observations suspended.    |                     |                      |                           |                     |          |                           |                                   |                                 |                                     |      |
|                          | Julpigoree             | Mozufferpore            | 29'763                          | 29'871                     | -0'023               | ESE                        | 38                  | 90'4                 | 1st Oct.                  |                     | 75'5     | 1st                       | 89'9                              | 77'4                            | 83'6                                | +1'3 |
|                          | Cooch Behar            | Durbhunga               | 29'625                          | 29'852                     | +0'003               | ESE                        | 88'7                | 92'7                 | 7th                       |                     | 70'8     | 2nd, 3rd                  | 91'5                              | 72'8                            | 82'2                                | +2'0 |
|                          | North Bhagulpore       | Chumpran                | 29'636                          | 29'861                     | +0'006               | Variable                   | 2'4                 | 93'0                 | 7th                       |                     | 72'7     | 3rd to 5th Oct.           | 91'9                              | 73'4                            | 82'6                                | +1'2 |
|                          | Mozufferpore           | Chupra                  | 29'557                          | 29'910                     | +0'043               | W                          | 130'0               | 89'4                 | 4th, 6th Oct.             |                     | 73'0     | 3rd                       | 88'4                              | 76'1                            | 82'8                                | +1'7 |
|                          | Durbhunga              | Shahabad                | 29'625                          | 29'867                     | +0'015               | W                          | 112'0               | 92'9                 | 5th, 6th, 7th Oct.        |                     | 71'3     | 4th                       | 92'6                              | 73'7                            | 83'1                                | +1'4 |
|                          | Chumpran               | Arrah                   | 29'650                          | 29'818                     | +0'010               | Westerly                   | 41'9                | 92'9                 | 3rd, 4th, 5th, & 7th Oct. |                     | 71'2     | 4th                       | 92'5                              | 72'3                            | 82'4                                | +0'9 |
|                          | Chupra                 | Sya                     | 29'463                          | 29'835                     | -0'005               | Variable                   | 72                  | 93'4                 | 6th, 7th Oct.             |                     | 69'8     | 4th                       | 92'8                              | 72'8                            | 83'2                                | +0'1 |
|                          | Dehree                 | Benkipore               | 29'084                          | 29'867                     | +0'021               | Variable                   | 27                  | 91'4                 | 5th                       |                     | 73'7     | 3rd, 4th                  | 92'5                              | 75'1                            | 83'8                                | +0'5 |
|                          | Shahabad               | Bhagulpore              | 29'703                          | 29'865                     | +0'020               | NW                         | 47'4                | 91'4                 | 7th                       |                     | 73'0     | 1st                       | 90'5                              | 74'7                            | 82'6                                | +1'1 |
|                          | Arrah                  | Dumka                   | 29'360                          | —                          | —                    | Calm                       | 0'9                 | 92'4                 | 7th                       |                     | 71'6     | 3rd                       | 91'3                              | 73'2                            | 82'3                                | —    |
|                          | Bhagulpore             | Hazaribagh              | 27'882                          | 29'874                     | +0'033               | North-Westerly.            | 185                 | 90'5                 | 1st                       |                     | 67'7     | 4th                       | 88'1                              | 70'3                            | 79'2                                | +1'5 |
|                          | Dumka                  | Ranchoe                 | 27'751                          | 29'862                     | +0'021               | Northerly                  | 120'6               | 86'5                 | 6th                       |                     | 65'4     | 2nd, 6th                  | 85'9                              | 66'9                            | 76'4                                | +0'3 |
|                          | Hazaribagh             | Chyabassa               | 29'106                          | —                          | —                    | SSW                        | 22'2                | 91'9                 | 4th                       |                     | 69'4     | 1st & 4th                 | 91'0                              | 71'2                            | 81'1                                | —    |
|                          | Ranchoe                | Sibsagar                | 29'565                          | 29'899                     | -0'009               | NE                         | 41                  | 89'6                 | 5th                       |                     | 72'5     | 6th                       | 87'0                              | 73'9                            | 80'9                                | +0'3 |
|                          | Chyabassa              | Dhubri                  | 29'751                          | 29'868                     | +0'023               | Calm                       | 117                 | 90'7                 | 6th                       |                     | 74'8     | 2nd-4th                   | 80'3                              | 75'4                            | 82'4                                | +2'3 |
|                          | Sibsagar               | Silchar                 | 29'766                          | 29'872                     | -0'024               | Variable                   | 51'0                | 96'6                 | 5th, 7th Oct.             |                     | 73'8     | 1st, 2nd                  | 83'0                              | 75'1                            | 84'1                                | +1'8 |

Section.—Summary.—The normal means of air pressure and temperature are the arithmetical averages of the observations of the instruments.



for the week ending Friday, the 7th October 1887.

| No. | Average cloud amount at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | DISTRICT OBSERVATIONS. |              |                     |              |            |                    |              |            |                               |                              | Representative station. | DISTRICT.                     |  |  |
|-----|---------------------------------|---|--|------------------------|--------------|---------------------|--------------|------------|--------------------|--------------|------------|-------------------------------|------------------------------|-------------------------|-------------------------------|--|--|
|     |                                 |   |  | RAINFALL.              |              |                     |              |            |                    |              |            |                               |                              |                         |                               |  |  |
|     |                                 |   |  | OF WEEK.               |              | Since 1st of month. |              |            | Since May 15th.    |              |            |                               |                              |                         |                               |  |  |
|     |                                 |   |  | Mean for district.     | Normal mean. | Mean for district.  | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. | Average number of rainy days. | Normal number of rainy days. |                         |                               |  |  |
| 60  | 87                              | Nil                                       | —                                      | —                      | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Gopalpore ...           | Pooree ...                    |  |  |
| 61  | 23                              | Nil                                       | 0.01                                   | 1.80                   | 0.01         | 1.80                | —1.79        | 35.36      | 46.90              | —11.54       | 0.2        | 2.8                           | 2.8                          | False Point ...         | Cuttack ...                   |  |  |
| 62  | 3.0                             | Nil                                       | Nil                                    | 1.44                   | Nil          | 1.44                | —1.44        | 40.72      | 40.26              | —5.54        | 0.0        | 2.2                           | 2.2                          | Cuttack ...             | Balasore ...                  |  |  |
| 63  | 1.1                             | Nil                                       | 0.23                                   | 1.73                   | 0.23         | 1.73                | —1.51        | 38.76      | 48.79              | —10.03       | 0.3        | 2.2                           | 2.2                          | Balasore ...            | South-West Midnapore ...      |  |  |
| 64  | 4.7                             | 0.15                                      | 0.18                                   | 1.84                   | 0.18         | 1.84                | —1.36        | 49.84      | 54.90              | —5.06        | 0.7        | 2.2                           | 2.2                          | Saugor Island ...       | South 24-Pergunnahs ...       |  |  |
| 65  | 0.9                             | 0.28                                      | 0.10                                   | 0.89                   | 0.10         | 0.89                | —0.79        | 48.27      | 47.06              | +1.21        | 0.7        | 1.7                           | 1.7                          | Midnapore ...           | Midnapore ...                 |  |  |
| 66  | 2.4                             | Nil                                       | 0.58                                   | 0.89                   | 0.89         | 0.89                | —0.41        | 148.07     | 47.95              | +0.12        | 0.9        | 2.5                           | 2.5                          | Calcutta ...            | 24-Pergunnahs ...             |  |  |
| 67  | 1.1                             | Nil                                       | 0.02                                   | 0.93                   | 0.02         | 0.93                | —0.91        | 42.07      | 42.72              | +0.25        | 0.7        | 1.7                           | 1.7                          | Burdwan ...             | Howrah ...                    |  |  |
| 68  | 0.4                             | Nil                                       | Nil                                    | 1.23                   | Nil          | 1.23                | —1.23        | 48.05      | 48.55              | —0.50        | 0.0        | 2.5                           | 2.5                          | Bankoora ...            | Hooghly ...                   |  |  |
| 69  | 1.7                             | Nil                                       | Nil                                    | 0.93                   | Nil          | 0.93                | —0.93        | 44.96      | 49.12              | —4.16        | 0.0        | 2.1                           | 2.1                          | Raneegunge ...          | Burdwan ...                   |  |  |
| 70  | 4.3                             | 2.12                                      | 0.35                                   | 1.05                   | 0.35         | 1.05                | —0.70        | 55.51      | 45.73              | +9.78        | 0.2        | 2.3                           | 2.3                          | Berhampore ...          | Bankoora ...                  |  |  |
| 71  | 3.4                             | 0.31                                      | 0.18                                   | 1.09                   | 0.18         | 1.09                | —0.91        | 30.21      | 45.49              | —0.18        | 0.4        | 1.7                           | 1.7                          | Krishnagur ...          | Beerbhoom ...                 |  |  |
| 72  | 3.4                             | Nil                                       | 0.49                                   | 0.97                   | 0.49         | 0.97                | —0.48        | 30.82      | 49.37              | —12.55       | 0.0        | 1.9                           | 1.9                          | Jessore ...             | West Burdwan ...              |  |  |
| 73  | 4.0                             | 1.37                                      | 0.88                                   | 2.26                   | 0.88         | 2.26                | —1.38        | 83.29      | 107.28             | —23.99       | 1.5        | 2.7                           | 2.7                          | Chittagong ...          | Jessore ...                   |  |  |
| 74  | 2.6                             | 0.40                                      | 0.41                                   | 1.78                   | 0.41         | 1.78                | —1.37        | 51.01      | 72.20              | —21.19       | 1.0        | 3.0                           | 3.0                          | Domagiri ...            | Khoolna ...                   |  |  |
| 75  | 1.3                             | 0.29                                      | 2.33                                   | 2.33                   | 2.33         | 2.33                | —1.37        | 51.01      | 72.20              | —21.19       | 1.0        | 3.0                           | 3.0                          | Barrisal ...            | Chittagong Hill Tracts ...    |  |  |
| 76  | 1.6                             | Nil                                       | 0.31                                   | 1.04                   | 0.31         | 1.04                | —0.73        | 31.45      | 52.04              | —20.59       | 1.0        | 2.1                           | 2.1                          | Noakholly ...           | Backergunge ...               |  |  |
| 77  | 2.9                             | Nil                                       | 0.04                                   | 1.23                   | 0.04         | 1.23                | —1.19        | 34.86      | 50.88              | —22.52       | 0.3        | 2.1                           | 2.1                          | Furzedpore ...          | Noakholly ...                 |  |  |
| 78  | 3.1                             | Nil                                       | 1.85                                   | 1.85                   | 1.85         | 1.85                | —1.41        | 55.45      | 66.35              | —7.40        | 0.2        | 2.1                           | 2.1                          | Dacca ...               | Furzedpore ...                |  |  |
| 79  | 3.0                             | 0.01                                      | 0.01                                   | 1.42                   | 0.01         | 1.42                | —1.41        | 55.45      | 66.35              | —7.40        | 0.2        | 2.1                           | 2.1                          | Commillah ...           | Dacca ...                     |  |  |
| 80  | 1.1                             | Nil                                       | Nil                                    | 1.27                   | Nil          | 1.27                | —1.27        | 56.18      | 63.07              | +3.11        | 0.0        | 1.9                           | 1.9                          | Mymensingh ...          | Commillah ...                 |  |  |
| 81  | 1.3                             | 0.00                                      | 0.07                                   | 0.98                   | 0.07         | 0.98                | —0.91        | 30.85      | 40.46              | —9.61        | 1.0        | 1.5                           | 1.5                          | Bogra ...               | Mymensingh ...                |  |  |
| 82  | 2.3                             | 0.06                                      | Nil                                    | 1.06                   | Nil          | 1.06                | —1.06        | 45.36      | 40.88              | —4.03        | 0.0        | 2.1                           | 2.1                          | Serajpore ...           | Bogra ...                     |  |  |
| 83  | 0.9                             | Nil                                       | Nil                                    | 1.00                   | Nil          | 1.00                | —1.00        | 44.01      | 51.33              | —7.32        | 0.0        | 1.9                           | 1.9                          | Rampore Beaulah ...     | Pubna ...                     |  |  |
| 84  | 1.4                             | Nil                                       | 1.57                                   | Nil                    | 1.57         | 1.57                | —1.37        | 64.63      | 63.36              | +11.27       | 0.0        | 2.1                           | 2.1                          | Maldah ...              | Rajshahye ...                 |  |  |
| 85  | 0                               | Nil                                       | Nil                                    | 1.92                   | Nil          | 1.92                | —1.92        | 76.84      | 69.61              | +7.23        | 0.0        | 2.0                           | 2.0                          | Dinagore ...            | Maldah ...                    |  |  |
| 86  | 1.1                             | Nil                                       | Nil                                    | 3.07                   | Nil          | 3.07                | —3.07        | 115.06     | 106.79             | +8.27        | 0.0        | 2.7                           | 2.7                          | Rangpore ...            | Dinagore ...                  |  |  |
| 87  | 5.1                             | 0.08                                      | 0.24                                   | 2.82                   | 0.24         | 2.82                | —2.58        | 112.37     | 116.15             | —3.78        | 1.3        | 3.1                           | 3.1                          | Julpigoree ...          | Rangpore ...                  |  |  |
| 88  | 1.9                             | Nil                                       | Nil                                    | 1.32                   | Nil          | 1.32                | —1.32        | 61.24      | 55.05              | +6.19        | 0.0        | 1.0                           | 1.0                          | Cooch Behar ...         | Julpigoree ...                |  |  |
| 89  | 1.1                             | Nil                                       | Nil                                    | 1.32                   | Nil          | 1.32                | —1.32        | 49.32      | 40.40              | +1.92        | 0.0        | 1.4                           | 1.4                          | Darjeeling ...          | Cooch Behar ...               |  |  |
| 90  | 1.4                             | Nil                                       | Nil                                    | 1.05                   | Nil          | 1.05                | —1.05        | 46.34      | 41.3               | +4.61        | 0.0        | 1.4                           | 1.4                          | Purneah ...             | Darjeeling Hill Districts ... |  |  |
| 91  | 0.3                             | Nil                                       | Nil                                    | 1.15                   | Nil          | 1.15                | —1.15        | 33.42      | 38.51              | —5.09        | 0.0        | 1.4                           | 1.4                          | Mozufferpore ...        | Purneah ...                   |  |  |
| 92  | 0.1                             | Nil                                       | Nil                                    | 1.11                   | Nil          | 1.11                | —1.11        | 40.56      | 40.20              | +0.36        | 0.0        | 1.5                           | 1.5                          | Durbhunga ...           | Mozufferpore ...              |  |  |
| 93  | 0.9                             | Nil                                       | 0.12                                   | 1.40                   | 0.12         | 1.40                | —1.28        | 40.94      | 47.46              | +3.48        | 0.2        | 1.9                           | 1.9                          | Motihari ...            | Durbhunga ...                 |  |  |
| 94  | 1.0                             | Nil                                       | 0.06                                   | 1.37                   | 0.06         | 1.37                | —1.31        | 44.02      | 47.55              | —3.53        | 0.2        | 2.1                           | 2.1                          | Chupra ...              | Chumbarun ...                 |  |  |
| 95  | 3.4                             | Nil                                       | 0.51                                   | 1.11                   | 0.51         | 1.11                | —0.80        | 42.08      | 44.24              | —1.26        | 0.5        | 1.9                           | 1.9                          | Dehra ...               | Sarun ...                     |  |  |
| 96  | 0.7                             | Nil                                       | 0.55                                   | 0.55                   | 0.55         | 0.55                | —0.55        | 40.30      | 47.78              | +1.52        | 0.0        | 1.6                           | 1.6                          | Buxar ...               | Shahabad ...                  |  |  |
| 97  | 0.6                             | Nil                                       | Nil                                    | 1.55                   | Nil          | 1.55                | —1.55        | 32.55      | 37.38              | —4.83        | 0.0        | 1.4                           | 1.4                          | Arrah ...               | Gya ...                       |  |  |
| 98  | 0                               | Nil                                       | Nil                                    | 1.08                   | Nil          | 1.08                | —1.08        | 35.28      | 38.84              | —3.56        | 0.0        | 1.4                           | 1.4                          | Gya ...                 | Patna ...                     |  |  |
| 99  | 0.1                             | Nil                                       | Nil                                    | 1.15                   | Nil          | 1.15                | —1.15        | 33.42      | 38.51              | —5.09        | 0.0        | 1.4                           | 1.4                          | Bankipore ...           | South Bhagulpore ...          |  |  |
| 100 | 0.1                             | Nil                                       | Nil                                    | 1.11                   | Nil          | 1.11                | —1.11        | 40.56      | 40.20              | +0.36        | 0.0        | 1.5                           | 1.5                          | Bhagulpore ...          | Monghyr ...                   |  |  |
| 101 | 0.9                             | Nil                                       | 0.12                                   | 1.40                   | 0.12         | 1.40                | —1.28        | 40.94      | 47.46              | +3.48        | 0.2        | 1.9                           | 1.9                          | Doomka ...              | South 24-Pergunnahs ...       |  |  |
| 102 | 1.0                             | Nil                                       | 0.06                                   | 1.37                   | 0.06         | 1.37                | —1.31        | 44.02      | 47.55              | —3.53        | 0.2        | 2.1                           | 2.1                          | Hazaribagh ...          | Hazaribagh ...                |  |  |
| 103 | 3.4                             | Nil                                       | 0.51                                   | 1.11                   | 0.51         | 1.11                | —0.80        | 42.08      | 44.24              | —1.26        | 0.5        | 1.9                           | 1.9                          | Ranchee ...             | Lohardugga ...                |  |  |
| 104 | 0.7                             | Nil                                       | 0.55                                   | 0.55                   | 0.55         | 0.55                | —0.55        | 40.30      | 47.78              | +1.52        | 0.0        | 1.6                           | 1.6                          | Manbhoom ...            | Manbhoom ...                  |  |  |
| 105 | 0.6                             | Nil                                       | Nil                                    | 1.08                   | Nil          | 1.08                | —1.08        | 35.28      | 38.84              | —3.56        | 0.0        | 1.4                           | 1.4                          | Chybeasana ...          | Singbhoom ...                 |  |  |
| 106 | 0.1                             | Nil                                       | Nil                                    | 1.15                   | Nil          | 1.15                | —1.15        | 33.42      | 38.51              | —5.09        | 0.0        | 1.4                           | 1.4                          | Silbagar ...            | Singbhoom ...                 |  |  |
| 107 | 0.1                             | Nil                                       | Nil                                    | 1.11                   | Nil          | 1.11                | —1.11        | 40.56      | 40.20              | +0.36        | 0.0        | 1.5                           | 1.5                          | Dhubri ...              | Assam ...                     |  |  |
| 108 | 0.1                             | Nil                                       | Nil                                    | 1.11                   | Nil          | 1.11                | —1.11        | 40.56      | 40.20              | +0.36        | 0.0        | 1.5                           | 1.5                          | Silchar ...             | Assam ...                     |  |  |





## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 7th of October 1887—continued.

| Meteorological Division. | District.         | Station.          | RAINFALL.    |              |              |              |              |              |              | TOTAL.                |                   | Total rainfall since 1st of month. | Average total rainfall from 1st of month. | Total rainfall since 1st May 1887. | Average rainfall from 1st May to date. |
|--------------------------|-------------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------------|-------------------|------------------------------------|---|------------------------------------|--|
|                          |                   |                   | 1st October. | 2nd October. | 3rd October. | 4th October. | 5th October. | 6th October. | 7th October. | Number of rainy days. | of rainfall week. |                                    |   |                                    |  |
| NORTH BENGAL—continued.  | Murshidabad.      | Gopalgunge ...    | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 8.06                                      | 30.36                              | 41.40                                  |
|                          |                   | Sowai ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.83                                      | 32.04                              | 41.27                                  |
| NORTH BENGAL             | Shahabad ...      | Chaurah ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.61                                      | 32.27                              | 37.79                                  |
|                          |                   | Buxar ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.48                                      | 32.92                              | 33.90                                  |
|                          |                   | Dumree ...        | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 35.24                              | ?                                      |
|                          |                   | Bhuthoah ...      | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.55                                      | 35.3                               | 37.56                                  |
|                          |                   | Sameram ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.33                                      | 31.01                              | 38.16                                  |
|                          |                   | Arrah ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.24                                      | 34.46                              | 37.27                                  |
|                          |                   | Mohania ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | ?                                  | ?                                      |
|                          | G. B.             | Aurungabad ...    | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.50                                      | 28.23                              | 30.83                                  |
|                          |                   | Gya ...           | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 0.70                                      | 41.40                              | 30.72                                  |
|                          |                   | Nowadah ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 0.84                                      | 33.45                              | 37.24                                  |
|                          |                   | Channahad ...     | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.26                                      | 30.07                              | 37.44                                  |
|                          |                   | Arwal ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 34.58                              | ?                                      |
|                          |                   | Dowdnagar ...     | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 25.11                              | ?                                      |
|                          |                   | Sherrghati ...    | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 34.88                              | ?                                      |
|                          |                   | Rajauli ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 27.23                              | ?                                      |
|                          |                   | Pakri Barawan ... | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 30.82                              | ?                                      |
|                          | Patna ...         | Patna ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.33                                      | 31.16                              | 30.40                                  |
|                          |                   | Dinapur ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.34                                      | 34.73                              | 38.80                                  |
|                          |                   | Belmar ...        | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 0.82                                      | 33.34                              | 38.72                                  |
|                          |                   | Barra ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.05                                      | 31.41                              | 36.44                                  |
|                          |                   | Bickram ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 30.05                              | ?                                      |
|                          |                   | Hilsa ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 30.16                              | ?                                      |
|                          | Monohyr ...       | Begoonai ...      | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.08                                      | 40.35                              | 30.47                                  |
|                          |                   | Monohyr ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.15                                      | 43.00                              | 43.01                                  |
|                          |                   | Jamui ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.04                                      | 36.02                              | 40.79                                  |
|                          |                   | Gogri ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 42.03                              | ?                                      |
|                          |                   | Sheikpura ...     | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 26.13                              | ?                                      |
|                          | South Bhagulpore. | Bhagulpore ...    | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.21                                      | 39.67                              | 39.57                                  |
|                          |                   | Baika ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 0.89                                      | 30.40                              | 40.60                                  |
|                          |                   | Kolyung ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 42.10                              | ?                                      |
|                          | South Pergunnahs. | Rajmahal ...      | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 0.85                                      | ?                                  | 40.02                                  |
|                          |                   | Godas ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 0.91                                      | 47.79                              | 41.98                                  |
|                          |                   | Pakour ...        | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.18                                      | 71.36                              | 40.70                                  |
|                          |                   | Nya Dooka ...     | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.60                                      | 44.87                              | 50.46                                  |
|                          |                   | Deognur ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 0.95                                      | 44.11                              | 45.96                                  |
|                          |                   | Jumara ...        | ...          | ...          | ...          | ...          | ...          | ...          | ...          | 0.74                  | 1                 | 0.74                               | 1.51                                      | 37.31                              | 47.11                                  |
|                          |                   | Sinra ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | ?                                  | ?                                      |
|                          |                   | Nanhat ...        | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 36.81                              | ?                                      |
| S. NAG.                  | Hazaribagh ...    | Pachaura ...      | ...          | ...          | ...          | ...          | ...          | ...          | ...          | 0.30                  | 1                 | 0.30                               | 0.31                                      | 40.37                              | 44.03                                  |
|                          |                   | (Girdi) ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.22                                      | 42.94                              | 41.07                                  |
|                          |                   | Hazaribagh ...    | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.32                                      | 43.47                              | 43.47                                  |
|                          |                   | Sonagur ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.20                                      | 45.05                              | 45.05                                  |
|                          |                   | Manu Hill ...     | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 2.19                                      | 56.90                              | 59.4                                   |
|                          |                   | Joomrah Hills ... | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 37.11                              | ?                                      |
|                          |                   | Barhi ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 46.90                              | ?                                      |
|                          |                   | Chitra ...        | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 70.96                              | ?                                      |
|                          |                   | Karagcha ...      | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | ?                                  | ?                                      |
|                          |                   | Manghar ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | ?                                  | ?                                      |
|                          | Lohardugga.       | Lohardugga ...    | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | ?                                  | ?                                      |
|                          |                   | Bauchi ...        | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 0.82                                      | 52.28                              | ?                                      |
|                          |                   | Pranow ...        | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 1.37                                      | 54.80                              | 48.33                                  |
|                          |                   | Billi ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 46.07                              | 40.13                                  |
|                          |                   | Balumat ...       | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 41.00                              | ?                                      |
|                          |                   | Huseabad ...      | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | ?                                  | ?                                      |
|                          |                   | Gurwah ...        | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 33.74                              | ?                                      |
|                          |                   | ...               | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 48.90                              | ?                                      |
|                          | Singbhum ...      | Chyannah ...      | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | 0.05                                      | 40.30                              | 47.82                                  |
|                          |                   | Chakradhar ...    | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 50.31                              | ?                                      |
|                          |                   | Chatsilla ...     | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | ?                                  | ?                                      |
|                          |                   | Dhanagura ...     | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 52.00                              | ?                                      |
|                          | Manbhum ...       | Paruh ...         | ...          | ...          | ...          | ...          | ...          | ...          | ...          | 1                     | 0.07              | 0.07                               | ?   | 36.00                              | ?                                      |
|                          |                   | Goudoure ...      | ...          | ...          | ...          | ...          | ...          | ...          | ...          | 2.04                  | 1                 | 2.04                               | 0.81                                      | 43.20                              | 45.05                                  |
|                          |                   | Kaphunath ...     | ...          | ...          | ...          | ...          | ...          | ...          | ...          | 0.01                  | 1                 | 0.01                               | 1.43                                      | 27.73                              | 42.57                                  |
|                          |                   | Barraboom ...     | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 31.78                              | ?                                      |
|                          |                   | Jhalda ...        | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | 38.05                              | ?                                      |
|                          |                   | Chas ...          | ...          | ...          | ...          | ...          | ...          | ...          | ...          | Nil                   | Nil               | Nil                                | ?   | ?                                  | ?                                      |

station.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns is, the corresponding space in the total rainfall column is left blank.

CALCUTTA, the 11th October 1887.

**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS  
TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE  
7TH OF OCTOBER 1887.**

At the close of the previous week the meteorological conditions over the province were distinctly those which mark the close of the rainy season in Bengal, and the commencement of the transition conditions which obtain up to the time of the setting in of the north-east monsoon or the cold-weather conditions. Dry north-westerly winds were blowing over the greater part of the province, and in fact the only districts in which southerly and south-easterly winds still continued to blow were at the extreme easterly stations of East and North Bengal and in Assam. Humidity had become very low at the western stations, and cloud proportion had also become small generally over the whole province. Northerly and north-westerly winds were also blowing over a considerable part of the northern half of the Bay, though in the south a fairly strong south-west monsoon current still prevailed. These conditions continued practically unaltered during the first four or five days of the present week, though at the eastern and northern stations wind directions changed somewhat, and became in many cases north-easterly. On the 5th and 6th winds became lighter and more variable in direction than they had hitherto been, and on the 7th a certain number of stations showed southerly winds, and there was evidence of a considerable amount of interaction taking place over the province, which caused conditions to become more favourable for rainfall. For the greater part of the week the whole province has been practically rainless, except for a few local showers of little or no importance; but on the 7th rainfall was fairly general in the 24-Pergunnahs and Khoolna districts in South-West Bengal, while showers were more numerous over a considerable part of the remainder of the province. These disturbed conditions in South Bengal were probably induced by the formation of a small cyclonic storm in the south of the Bay, slight indications of which were shown on the 7th by a fairly complete cyclonic circulation over the centre and south of the Bay and by the strengthening of the winds at Galle and Diamond Island. This storm afterwards developed slightly and crossed the coast close to Madras on Sunday morning, the 9th instant, giving heavy rain to the west coast stations.

*Pressure.*—The changes of pressure during the week have been of comparatively little importance and have been of the normal oscillatory character. On October 1st pressure rose in all districts, on the 2nd and 3rd there was a slight fall, on the 4th the changes were small and variable, on the 5th there was a further fall, on the 6th again the changes were small and variable, and on the 7th there was rather a rapid rise. For the whole week the mean pressure has not varied very largely from the normal, and taking those stations only into consideration from which observations have been received for several years, and which therefore yield reliable averages, the mean pressure of the province for the week has been only 0·008 inch in excess of the normal. The extreme variations are from a mean excess pressure of 0·038 inch at Hazaribagh to a defect of 0·011 inch at Chittagong. In Assam Dhubri has shown a slight excess pressure (0·023 inch) and Silchar an almost corresponding defect, while at Sibsaur pressure has been very nearly normal. For the whole of Assam pressure has been in defect of the normal by 0·003 inch.

*Temperature.*—Owing to the meteorological conditions above described, and to the fact that rainfall has been almost absent for the week, temperature has been rather largely in excess of the normal over the whole province. The excess temperature is in no district smaller than one degree, and the largest excess is 1·6° in North Bengal. For the whole of Bengal the temperature has been in excess of the normal by 1·2°. In Assam also temperature has been in excess by 1·4°.

*Rainfall.*—It has already been noticed that until quite the close of the week rainfall was practically almost absent. In some districts indeed rainfall has been entirely absent throughout the week, and thus the whole of Behar, North Bengal and Orissa have received so little rain, that the average falls for each district do not amount to more than a few hundredths of an inch. In South-West Bengal the fall throughout the week has only averaged 0·30 inch, which is about a quarter of the normal amount for the period, but the rainfall has been practically confined to the following districts:—Midnapore, 24-Pergunnahs, Howrah, Hooghly, Nuddea, Khoolna, Jessore and Moorshedabad. In East Bengal the fall has also averaged 0·30 inch, which is about a sixth of the normal quantity, and the falls have been received principally in the following districts:—Dacca, Backergunge, Furreedpur and Chittagong. The Tipperah district has again been practically rainless throughout the week except at Chandpur, but a report received by telegram on the 10th says that on this day 2·50 inches of rain were received at Comilla. Chutia Nagpur has received during the week an average amount of 0·25 inch, which is about one-fifth of the normal fall, but this rainfall has been mainly confined to the Manbhoom district.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 7th of October 1887:—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.            |       |                        |       |       |  |          |      |                            |                                     | RAINFALL.  |                        |                |                         |       |       |  |
|------------------------------|-------------------------|-------|------------------------|-------|-------|--|----------|------|----------------------------|-------------------------------------|------------|------------------------|----------------|-------------------------|-------|-------|--|
|                              | Averages for week       |       |                        |       |       | Range mean of week above<br>or normal mean of week | Of week. |      | Rainy days.                |                                     |            | Since 1st of<br>month. |                | Since 15th<br>May 1887. |       |       |  |
|                              | Of highest of each day. |       | Of lowest of each day. |       |       |  |          |      | Average number in<br>week. | Normal average num-<br>ber in week. | Variation. | Average.               | Normal average |                         |       |       |  |
|                              | Of m.                   |       | Of m.                  |       |       |  |          |      |                            |                                     |            |                        |                |                         |       |       |  |
| Orissa ... ..                | 94°9                    | 72°8  | 93°0                   | 70°3  | 84°7  | +1°0   | 0°09     | 1°65 | -1°56                      | 0°1                                 | 2°4        | -2°3                   | 0°00           | 1°01                    | 33°21 | 47°44 |  |
| South-West Bengal            | 94°5                    | 72°0  | 91°8                   | 70°5  | 84°2  | +1°2   | 0°30     | 1°05 | -0°75                      | 0°5                                 | 2°1        | -1°6                   | 0°30           |                         | 43°02 | 47°36 |  |
| East Bengal ...              | 93°3                    | 72°0  | 90°2                   | 70°3  | 83°3  | +1°1   | 0°30     | 1°00 | -1°30                      | 0°8                                 | 2°6        | -1°8                   | 0°30           | 1°00                    | 40°26 | 70°00 |  |
| North Bengal ...             | 93°3                    | 71°8  | 90°6                   | 75°6  | 83°1  | +1°6   | 0°01     | 1°75 | -1°74                      | 0°1                                 | 2°1        | -2°0                   | 0°01           | 1°75                    | 70°40 | 66°35 |  |
| North Behar ...              | 93°0                    | 70°8  | 90°7                   | 74°7  | 82°7  | +1°0   | Nil      | 1°53 | -1°53                      | 0°0                                 | 1°5        | -1°5                   | Nil            | 1°53                    | 47°34 | 46°07 |  |
| South Behar ...              | 93°4                    | 69°8  | 91°5                   | 74°1  | 82°8  | +1°0   | 0°03     | 1°20 | -1°17                      | 0°1                                 | 1°6        | -1°5                   | 0°03           | 1°20                    | 39°44 | 41°00 |  |
| Central Naxbar ...           | 90°5*                   | 61°4* | 87°0*                  | 68°6* | 77°8* | +1°1*  | 0°25     | 1°20 | -0°95                      | 0°3                                 | 2°0        |                        | 0°1            | 1°20                    | 43°02 | 46°25 |  |
| Assam ... ..                 | 96°6                    | 72°5  | 90°1                   | 74°8  | 82°5  | +1°4   |          |      |                            |                                     |            |                        |                |                         |       |       |  |

\* Chyobassa not included.

METEOROLOGICAL OFFICE, BENGAL;

The 11th October 1887.

A. PEDLER,

Offg. Meteorological Reporter to the Govt. of Bengal.

Results of the Meteorological Observations taken at the Alipore Observatory from  
2nd to 8th October 1887.

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 29° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain.   | WEATHER.                                 |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|--|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |         |  |
| 1887.  |       | O               |                                     | Inches                               | O            | O        | O      | O        | O              | Inches          | O          | %         |                       |                 | Inches. |  |
| Oct.   | 2nd   | 145.2           | 10.2                                | 29.799                               | 82.7         | 90.4     | 13.2   | 77.2     | 77.2           | 0.860           | 74.7       | 78        | WSW, WNW and NW.      | 85              | Nil     | Chiefly clear, $\Delta$ .                |
| "      | 3rd   | 146.2           | 9.8                                 | .757                                 | 82.4         | 89.8     | 13.9   | 76.9     | 77.3           | .872            | 75.1       | 80        | NW, NNW and Calm      | 56              | "       | Chiefly clear, $\Delta$ .                |
| "      | 4th   | 147.5           | 9.3                                 | .754                                 | 83.2         | 89.5     | 13.6   | 75.9     | 78.1           | .894            | 75.8       | 80        | NW by W and Calm      | 46              | "       | Partially cloudy, $\Delta$ .             |
| "      | 5th   | 148.9           | 0.8                                 | .745                                 | 82.7         | 88.3     | 10.9   | 77.4     | 78.8           | .935            | 77.2       | 84        | NNW and N by E...     | 38              | "       | Chiefly cloudy, $\Delta$ .               |
| "      | 6th   | 153.5           | 10.3                                | .757                                 | 83.9         | 91.0     | 12.9   | 78.1     | 79.2           | .933            | 77.2       | 80        | E, SW by S & Calm     | 60              | "       | Partially cloudy, o, t, $\Delta$ .       |
| "      | 7th   | 150.7           | 3.2                                 | .837                                 | 78.4         | 87.5     | 8.6    | 78.9     | 76.8           | .903            | 76.2       | 93        | SW by S & Variable    | 52              | 1.35    | Chiefly cloudy o, g, d, p, t, $\Delta$ . |
| "      | 8th   | 144.7           | 7.2                                 | .901                                 | 80.6         | 87.8     | 13.6   | 74.2     | 76.9           | .876            | 75.2       | 84        | NNW and Variable      | 44              | Nil     | Partially cloudy, t, $\Delta$ .          |

|  |     |     |     |         |                  |
|--|-----|-----|-----|---------|------------------|
| The mean pressure of the seven days  | ... | ... | ... | Inches. | 29.793           |
| The average pressure of the corresponding period for 24 years, S. G.'s Office          | ... | ... | ... | ...     | 29.762           |
| The total number of hours of bright sunshine   | ... | ... | ... | Hours.  | 51.1             |
| The maximum possible number of hours of sunshine                                       | ... | ... | ... | ...     | 82.7             |
|  |     |     |     | O       |                  |
| The mean temperature of the seven days   | ... | ... | ... | ...     | 82.0             |
| The average temperature of the corresponding period for 24 years, S. G.'s Office       | ... | ... | ... | ...     | 83.2             |
| The extreme variation of temperature   | ... | ... | ... | ...     | 16.8             |
| The maximum temperature  | ... | ... | ... | ...     | 91.0             |
|  |     |     |     | Miles.  | 10               |
| The highest velocity of the wind in one hour   | ... | ... | ... | ...     | 10               |
|  |     |     |     | lbs.    |                  |
| The highest pressure of wind on one square foot  | ... | ... | ... | ...     | Not measureable. |
|  |     |     |     | %.      |                  |
| The mean relative humidity   | ... | ... | ... | ...     | 83               |
| The average relative humidity of the corresponding period for 24 years, S. G.'s Office | ... | ... | ... | ...     | 82               |
|  |     |     |     | Inches. |                  |
| The total fall of rain from 2nd to 8th October 1887                                    | ... | ... | ... | ...     | 1.35             |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | ...     | 1.78             |
| The total fall from 1st January to 8th October 1887                                    | ... | ... | ... | ...     | 56.61            |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | ...     | 60.75            |

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 8h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

The month of the rain-gauge is one foot above the ground.  
o overcast, g gloomy, d drizzling rain, t thunder, p passing temporary showers, < lightning,  $\Delta$  dew, = fog.

A. PEDLER,

for Off. Meteorological Reporter to the Govt. of India.

Abstract of the results of the Thermometric Observations taken at the Meteorological Office, Chowringhee, in the month of September 1887.

|   |     |     | ⊖       | Date. |
|---|-----|-----|---------|-------|
| The mean temperature during the month                         | ... | ... | 82.1    |       |
| The highest temperature during the month                      | ... | ... | 93.0    | 9th   |
| The lowest temperature during the month                       | ... | ... | 75.8    | 24th  |
| The range of temperature during the month                     | ... | ... | 17.2    |       |
| The mean daily range of temperature during the month          | ... | ... | 10.7    |       |
| The greatest range of temperature in one day during the month | ... | ... | 15.2    | 29th  |
|   |     |     | %       |       |
| The mean humidity during the month                            | ... | ... | 88      |       |
|   |     |     | Inches. |       |
| The mean vapour tension during the month                      | ... | ... | .961    |       |
| The total rainfall of the month                               | ... | ... | 8.79    |       |
| The greatest fall in 24 hours                                 | ... | ... | 2.02    | 23rd  |
| The number of rainy days in the month                         | ... | ... | 21 days |       |

A. PEDLER,

*for Offg. Meteorological Reporter to the Govt. of India.*

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 10th October 1887.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 2nd to 8th October 1887.

| MONTH.  | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|---------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|         |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.   |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| October | 2nd   | 84.1         | 92.0     | 15.4   | 76.6     | 77.5           | .856            | 74.5       | 74        | —       |
| "       | 3rd   | 83.9         | 92.4     | 15.7   | 76.7     | 76.9           | .831            | 73.7       | 72        | —       |
| "       | 4th   | 83.6         | 92.0     | 15.8   | 76.2     | 77.9           | .880            | 74.4       | 76        | —       |
| "       | 5th   | 83.0         | 90.0     | 12.8   | 77.2     | 78.7           | .924            | 76.8       | 82        | —       |
| "       | 6th   | 85.7         | 94.0     | 15.7   | 78.3     | 79.6           | .930            | 77.0       | 76        | —       |
| "       | 7th   | 80.0         | 89.0     | 9.7    | 79.3     | 77.6           | .915            | 76.6       | 89        | 1.30    |
| "       | 8th   | 80.8         | 91.0     | 16.8   | 74.2     | 79.7           | 1.001           | 79.3       | 95        | 0.14    |

|  |     |     |         |
|--|-----|-----|---------|
|  |     |     | °       |
| The mean temperature of the seven days | ... | ... | 83.0    |
| The extreme variation of temperature   | ... | ... | 19.8    |
| The maximum temperature                | ... | ... | 94.0    |
|  |     |     | %       |
| The mean relative humidity             | ... | ... | 81      |
|  |     |     | Inches. |

The total fall of rain from 2nd to 8th October 1887

... 1.44

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA;  
The 10th October 1887.

A. PEDLER,

*for Offg. Meteorological Reporter to the Govt. of India.*



MEMORANDUM.

THE birth and death returns of the principal Municipalities in Bengal afford the following results for the week ending 10th September 1887 :—

1. That births and deaths were registered in these Municipalities in the proportions per 1,000 of population of 19 and 26.1, respectively, as opposed to 17.1 and 25.1 per 1,000 in the preceding week ending 3rd September, indicating a sensible improvement in the registration of both the events.

2. That the highest proportions of births and deaths were returned from the following Municipalities :—

| <i>Births.</i> |     |     |                  | <i>Deaths.</i>      |     |     |                  |
|----------------|-----|-----|------------------|---------------------|-----|-----|------------------|
|                |     |     | Ratio per mille. |                     |     |     | Ratio per mille. |
| Arrah          | ... | ... | 39.5             | Gya                 | ... | ... | 62.8             |
| Durbhanga      | ... | ... | 37.0             | Arrah               | ... | ... | 52.6             |
| Bhagulpore     | ... | ... | 36.4             | Serampore           | ... | ... | 39.2             |
| Darjiling      | ... | ... | 32.6             | Purneah             | ... | ... | 38.1             |
|                |     |     |                  | Bhagulpore          | ... | ... | 34.5             |
|                |     |     |                  | Beauleah            | ... | ... | 34.2             |
|                |     |     |                  | Monghyr             | ... | ... | 33.4             |
|                |     |     |                  | Suburbs of Calcutta | ... | ... | 31.2             |
|                |     |     |                  | Puri                | ... | ... | 29.4             |

3. That, as compared with the outcome of the preceding week, fever alone exhibited noticeable enhancement of mortality, the fatal results from the other diseases exhibiting only fractional differences, and small-pox presenting no death, *vide* figures given below :—

|                  |     |     |     | Ratio per mille during the weeks ending— |                     |
|------------------|-----|-----|-----|--|---------------------|
|                  |     |     |     | 10th September 1887.                     | 3rd September 1887. |
| Cholera          | ... | ... | ... | 3.1                                      | 2.6                 |
| Small-pox        | ... | ... | ... | ...                                      | .1                  |
| Fever            | ... | ... | ... | 11.0                                     | 9.7                 |
| Bowel-complaints | ... | ... | ... | 4.5                                      | 4.8                 |
| Injury           | ... | ... | ... | .6                                       | .3                  |
| Other causes     | ... | ... | ... | 6.9                                      | 7.6                 |

4. That the following Municipalities suffered pre-eminently from the diseases specified in the above table, excepting small-pox, from which, as before stated, no death was reported to have occurred, and injury, the casualties from which were nowhere above normal :—

| <i>Cholera.</i>     |                  | <i>Fever.</i> |                  | <i>Bowel-Complaints.</i> |                  | <i>Other Causes.</i> |                  |
|---------------------|------------------|---------------|------------------|--------------------------|------------------|----------------------|------------------|
|                     | Ratio per mille. |               | Ratio per mille. |                          | Ratio per mille. |                      | Ratio per mille. |
| Arrah               | 27.5             | Purneah       | 31.1             | Puri                     | 16.8             | Gya                  | 21.2             |
| Gya                 | 10.2             | Beauleah      | 26.3             | Gya                      | 11.6             | Bhagulpore           | 11.8             |
| Burdwan             | 7.6              |               |                  |                          |                  |                      |                  |
| Chupra              | 3.9              |               |                  |                          |                  |                      |                  |
| Patna               | 2.9              |               |                  |                          |                  |                      |                  |
| Suburbs of Calcutta | 2.7              |               |                  |                          |                  |                      |                  |

5. That the death-rates in relation to *Sex*, *Class* and *Age*, stood as follows :—

| <i>According to Sex.</i>                        |     |                  | <i>According to Class.</i> |     |                  | <i>According to Age.</i> |  |                  |
|---|-----|------------------|----------------------------|-----|------------------|--------------------------|--|------------------|
|   |     | Ratio per mille. |                            |     | Ratio per mille. |                          |  | Ratio per mille. |
| Males   | ... | 25.6             | Christians                 | ... | 17.4             | Under 1 year             |  | 197.2            |
| Females   | ... | 26.7             | Hindus                     | ... | 28.6             | 1 and under 5 years      |  | 37.9             |
| Ratio of male deaths to every 100 female deaths | 108 |                  | Mahomedans                 | ... | 20.6             | 5 " " 10 "               |  | 17.1             |
|   |     |                  | Budhists                   | ... | 24.2             | 10 " " 15 "              |  | 13.1             |
|   |     |                  |                            |     |                  | 15 " " 20 "              |  | 15.7             |
|   |     |                  |                            |     |                  | 20 " " 30 "              |  | 14.4             |
|   |     |                  |                            |     |                  | 30 " " 40 "              |  | 13.4             |
|   |     |                  |                            |     |                  | 40 " " 50 "              |  | 18.5             |
|   |     |                  |                            |     |                  | 50 " " 60 "              |  | 35.0             |
|   |     |                  |                            |     |                  | 60 years and upwards     |  | 72.4             |

R. LIDDERDALE, M.D., *Deputy Surgeon-General,*

*Sanitary Commissioner for Bengal.*

The 26th September 1887.

[illegible]

| NAMES OF MUNICIPALITIES. |  | DEATHS AMONG— |             | RATIO PER 1,000 OF POPULATION PER ANNUM. |                |             |         |             |            |                |               |                      |                       | DEATHS.                |                        |                        |                        |                        |                        |                        |               |                      |                       | RATIO PER 1,000 OF POPULATION PER ANNUM. |                        |                        |                        |                        |                        |                        |  |  |  | Age. |  |  |  |  |  |  |  |  |  | MORTALITY ACCORDING TO— |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|                          |  | Hindus.       | Mahomedans. | Buddhists.                               | Other classes. | Christians. | Hindus. | Mahomedans. | Buddhists. | Other classes. | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and up-wards. | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years.                   | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and up-wards. |  |  |  |      |  |  |  |  |  |  |  |  |  |                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                          |  |               |             |  |                |             |         |             |            |                |               |                      |                       |                        |                        |                        |                        |                        |                        |                        |               |                      |                       |  |                        |                        |                        |                        |                        |                        |  |  |  |      |  |  |  |  |  |  |  |  |  |                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TRIOTS.                  |  |               |             |  |                |             |         |             |            |                |               |                      |                       |                        |                        |                        |                        |                        |                        |                        |               |                      |                       |  |                        |                        |                        |                        |                        |                        |  |  |  |      |  |  |  |  |  |  |  |  |  |                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

The undersigned is the District Surgeon, General.

## MEMORANDUM.

THE returns of the principal Municipalities in Bengal (excluding Howrah, from which no return was received up to date) for the week ending 17th September 1887, disclose the following results:—

1. That births and deaths were recorded in these Municipalities at the rates, respectively, of 19·9 and 25·8 per 1,000 of population, as opposed to 19·3 and 27·3 per 1,000 in the preceding week ending 10th September, indicating a retrogression in the registration of deaths.

2. That the following Municipalities returned the highest proportions of births and deaths:—

| <i>Births.</i> |     |     |                  | <i>Deaths.</i>      |     |     |                  |
|----------------|-----|-----|------------------|---------------------|-----|-----|------------------|
|                |     |     | Ratio per mille. |                     |     |     | Ratio per mille. |
| Monghyr        | ... | ... | 44·0             | Gya                 | ... | ... | 54·0             |
| Gya            | ... | ... | 32·8             | Serampore           | ... | ... | 45·1             |
|                |     |     |                  | Monghyr             | ... | ... | 40·7             |
|                |     |     |                  | Kishnaghur          | ... | ... | 39·8             |
|                |     |     |                  | Beaulah             | ... | ... | 39·4             |
|                |     |     |                  | Suburbs of Calcutta | ... | ... | 37·2             |
|                |     |     |                  | Puri                | ... | ... | 33·6             |

3. That the principal diseases mentioned in the following table proved fatal at the rates exhibited opposite them:—

|                  |     |     |     |     |     | Ratio per mille during the weeks ending— |                  |
|------------------|-----|-----|-----|-----|-----|--|------------------|
|                  |     |     |     |     |     | 17th Sept. 1887.                         | 10th Sept. 1887. |
| Cholera          | ... | ... | ... | ... | ... | 1·8                                      | 3·2              |
| Small-pox        | ... | ... | ... | ... | ... | 1  | ...              |
| Fever            | ... | ... | ... | ... | ... | 11·4                                     | 11·6             |
| Bowel-complaints | ... | ... | ... | ... | ... | 3·9                                      | 4·6              |
| Injury           | ... | ... | ... | ... | ... | 5  | 7                |
| Other causes     | ... | ... | ... | ... | ... | 8·1                                      | 7·2              |

indicating chiefly that, in comparison with the preceding week, the severity of cholera had on the whole declined considerably, but that the mortality from the diseases classed under the head of "Other causes" had increased to some extent.

4. That while no Municipalities suffered much from small-pox or presented a large number of casualties from injury, the following returned conspicuously high death-rates from the other diseases specified in the foregoing table:—

| <i>Cholera.</i>     |                  | <i>Fever.</i> |                  | <i>Bowel-complaints.</i> |                  | <i>Other causes.</i> |                  |
|---------------------|------------------|---------------|------------------|--------------------------|------------------|----------------------|------------------|
|                     | Ratio per mille. |               | Ratio per mille. |                          | Ratio per mille. |                      | Ratio per mille. |
| Gya                 | 7·5              | Kishnaghur    | 32·2             | Serampore                | 17·7             | Gya                  | 21·8             |
| Chupra              | 4·9              | Beaulah       | 26·3             | Puri                     | 10·5             | Puri                 | 14·7             |
| Monghyr             | 4·5              | Monghyr       | 21·7             |                          |                  | Suburbs of Calcutta  | 13·8             |
| Suburbs of Calcutta | 2·7              | Gya           | 20·5             |                          |                  |                      |                  |
|                     |                  | Hughli        | 20·1             |                          |                  |                      |                  |

5. That the mortality of the week classified under the heads of *Sex*, *Class* and *Age*, stood as follows:—

| <i>According to Sex.</i>                        |     |                  | <i>According to Class.</i> |                  | <i>According to Age.</i> |     |                  |
|---|-----|------------------|----------------------------|------------------|--------------------------|-----|------------------|
|   |     | Ratio per mille. |                            | Ratio per mille. |                          |     | Ratio per mille. |
| Males   | ... | 27·8             | Christians                 | 31·0             | Under 1 year             | ... | 211·6            |
| Females   | ... | 23·7             | Hindus                     | 27·7             | 1 and under 5 years      | ... | 35·4             |
| Ratio of male deaths to every 100 female deaths | 130 |                  | Mahomedans                 | 21·7             | 5 " 10 "                 | ... | 11·7             |
|   |     |                  |                            |                  | 10 " 15 "                | ... | 12·0             |
|   |     |                  |                            |                  | 15 " 20 "                | ... | 13·5             |
|   |     |                  |                            |                  | 20 " 30 "                | ... | 16·8             |
|   |     |                  |                            |                  | 30 " 40 "                | ... | 18·4             |
|   |     |                  |                            |                  | 40 " 50 "                | ... | 18·5             |
|   |     |                  |                            |                  | 50 " 60 "                | ... | 24·9             |
|   |     |                  |                            |                  | 60 years and upwards     | ... | 65·7             |

R. LIDDERDALE, M.D., Deputy Surgeon-General,

The 11th October 1887.

Sanitary Commissioner for Bengal.

[illegible]

| MORTALITY ACCORDING TO— |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| Class.                  |  | Age.                                     |  |  |  |  |  |  |  |  |  |  |
| DEATHS AMONG—           |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
| DEATHS.                 |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |
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OFFICE OF SANITARY COMMISSIONER FOR BENGAL, R. LIDDERDALE, M.D., Deputy Surgeon-General.

**PUBLIC WORKS DEPARTMENT, BENGAL.**

**IRRIGATION BRANCH.**

IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1887-88.

**Areas leased for Irrigation up to end of July 1887.**

| DISTRICT.  | CANAL.   | Esti-<br>mated<br>full dis-<br>charge. | Average<br>discharge<br>in month. | Discharge<br>utilised. | Approx-<br>imate area<br>of land<br>irrigated<br>during<br>the year<br>up to the<br>end of the<br>month. | Approx-<br>imate area<br>of land<br>irrigated<br>under<br>the year<br>up to the<br>same date<br>last year. | DETAILS OF AREAS LEASED.     |                           |                |                |                 |         |                 |                 |                           |                  | RAINFALL,<br>1887-88.     |                  | RAINFALL,<br>1886-87. |       |       |
|------------|--|--|-----------------------------------|------------------------|--|--|------------------------------|---------------------------|----------------|----------------|-----------------|---------|-----------------|-----------------|---------------------------|------------------|---------------------------|------------------|-----------------------|-------|-------|
|            |  |  |                                   |                        |  |  | Five<br>years,<br>all crops. | Five<br>years,<br>Kharif. | ANNUAL LEASES. |                |                 |         |                 | Grand<br>total. | Up to<br>end of<br>month. | During<br>month. | Up to<br>end of<br>month. | During<br>month. |                       |       |       |
|            |  |  |                                   |                        |  |  |                              |                           | Kharif.        | Babi.<br>cane. | Sugar-<br>cane. | Bhadol. | Hot<br>weather. |                 |                           |                  |                           |                  | Total.                |       |       |
| CUTTACK.   | Talanda, 1st<br>Reach.                               | 1,342                                  | 243                               | 41-44                  | 4,189  | 4,161  | Acres.                       | 3,976                     | Acres.         | 55             | Acres.          | 62      | Acres.          | .....           | Acres.                    | 107              | 4,063                     | 14-04            | 30-81                 | 11-41 | 27-06 |
|            | Talanda, 2nd<br>Reach.                               | 566                                    | 65                                | 15-35                  | 17,377   | 16,399   | .....                        | 18,010                    | .....          | 9              | .....           | 8       | .....           | .....           | .....                     | 17               | 18,027                    | 18-35            | 31-75                 | 10-50 | 20-45 |
|            | Machkong   | 776                                    | 268                               | 139-49                 | 32,507   | 29,393   | .....                        | 36,080                    | .....          | 434            | .....           | 19      | .....           | .....           | .....                     | 473              | 39,559                    | 15-45            | 7-95                  | 15-45 | 31-60 |
|            | Kendrapara   | 1,269                                  | 569                               | 470-00                 | 273  | 345  | .....                        | 711                       | .....          | 9              | .....           | 0       | .....           | .....           | .....                     | 9                | 730                       | 8-83             | 18-32                 | 11-06 | 27-33 |
|            | Gobri  | 373-28                                 | 27-25                             | 10-16                  | 3,874  | 1,893  | .....                        | 8,230                     | .....          | 14             | .....           | .....   | .....           | .....           | .....                     | 14               | 8,244                     | 16-10            | 35-20                 | ..... | ..... |
|            | Pattamondoo  | 1,042                                  | 216-25                            | 185-53                 | 12,053   | 12,517   | .....                        | 14,333                    | .....          | 34             | .....           | .....   | .....           | .....           | .....                     | .....            | 14,323                    | 12-90            | 25-40                 | 6-90  | 18-93 |
|            | High Range I. Level.                                 | 675                                    | 292-11                            | 212-33                 | 362  | 363  | .....                        | 385                       | .....          | .....          | .....           | .....   | .....           | .....           | .....                     | 34               | 419                       | .....            | .....                 | ..... | ..... |
|            | High Range II. Level.                                | 727-16                                 | 6-33                              | 6-33                   | 5,835  | 4,949  | .....                        | 6,417                     | .....          | .....          | .....           | .....   | .....           | .....           | .....                     | 51               | 6,408                     | 15-07            | 33-56                 | 5-99  | 23-31 |
|            | High Range III. Level.                               | 727-16                                 | 111-23                            | 111-23                 | 76,435   | 68,981   | .....                        | 91,138                    | .....          | 20             | .....           | 555     | .....           | .....           | .....                     | .....            | 91,543                    | .....            | .....                 | ..... | ..... |
|            | Total  | .....                                  | .....                             | .....                  | .....  | .....  | .....                        | 75,944                    | .....          | 16             | .....           | 2,438   | .....           | .....           | .....                     | 705              | 78,515                    | .....            | .....                 | ..... | ..... |
| MIDNAPORE. | Midnapore  | 1,411                                  | 629                               | 484                    | 51,803   | 51,066   | .....                        | 55,457                    | .....          | .....          | .....           | .....   | .....           | .....           | .....                     | .....            | 55,487                    | 17-74            | 31-22                 | 7-98  | 32-53 |
|            | Panchikora   | 522                                    | 36                                | 25                     | 3,038  | 3,575  | .....                        | 4,708                     | .....          | .....          | .....           | .....   | .....           | .....           | .....                     | .....            | 4,706                     | 20-41            | 37-35                 | 12-03 | 24-49 |
|            | Tidal Reaches  | .....                                  | .....                             | .....                  | 59   | 76   | .....                        | 540                       | .....          | .....          | .....           | .....   | .....           | .....           | .....                     | .....            | 640                       | .....            | .....                 | ..... | ..... |
|            | Ranges I and II.                                     | .....                                  | .....                             | .....                  | .....  | .....  | .....                        | 60,733                    | .....          | .....          | .....           | .....   | .....           | .....           | .....                     | .....            | 60,733                    | .....            | .....                 | ..... | ..... |
|            | Total  | .....                                  | .....                             | .....                  | 51,933   | 55,015   | .....                        | 68,414                    | .....          | .....          | .....           | .....   | .....           | .....           | .....                     | .....            | 68,414                    | .....            | .....                 | ..... | ..... |
|            | Total of the corresponding period of last year.      | .....                                  | .....                             | .....                  | .....  | .....  | .....                        | 14,415                    | .....          | .....          | .....           | .....   | .....           | .....           | .....                     | .....            | 16,238                    | .....            | .....                 | ..... | ..... |
|            | Shahabad   | 4,342                                  | 2,410                             | 156                    | 12,598   | 12,667   | .....                        | 14,415                    | .....          | 1,106          | .....           | 935     | .....           | 432             | .....                     | 1,823            | 16,238                    | 6-73             | 16-03                 | 14-50 | 22-72 |
|            | Buxar  | 1,226                                  | 585                               | 585                    | 38,052   | 38,273   | .....                        | 5,115                     | .....          | 1,253          | .....           | 1,253   | .....           | 1,844           | .....                     | 8,359            | 4,834                     | 6-36             | 23-01                 | 15-73 | 23-00 |
|            | Arnuh  | 1,660                                  | 1,283                             | 1,153                  | 72,951   | 85,493   | .....                        | 10,321                    | .....          | 1,497          | .....           | 1,497   | .....           | 6,503           | .....                     | 19,121           | 102,524                   | .....            | .....                 | ..... | ..... |
|            | Eastern Main   | .....                                  | .....                             | .....                  | 537  | 566  | .....                        | 3,583                     | .....          | 417            | .....           | 417     | .....           | .....           | .....                     | 43               | 508                       | .....            | .....                 | ..... | ..... |
| GYZE.      | Gyz  | 1,468                                  | 908                               | 789                    | 31,259   | 31,355   | .....                        | 20,335                    | .....          | 20,335         | .....           | 20,335  | .....           | .....           | .....                     | 15               | 34,713                    | .....            | .....                 | ..... | ..... |
|            | Total  | .....                                  | .....                             | .....                  | 156,776  | 135,382  | .....                        | 166,126                   | .....          | 24,696         | .....           | 5,655   | .....           | .....           | .....                     | 33,822           | 203,017                   | .....            | .....                 | ..... | ..... |
|            | Total of the corresponding period of last year.      | .....                                  | .....                             | .....                  | .....  | .....  | .....                        | 143,094                   | .....          | 24,696         | .....           | 5,655   | .....           | .....           | .....                     | 39,224           | 138,203                   | .....            | .....                 | ..... | ..... |
|            | Grand Total  | .....                                  | .....                             | .....                  | 298,213  | 260,368  | .....                        | 151,871                   | .....          | 563            | .....           | 4,073   | .....           | 79              | .....                     | 34,327           | 355,593                   | .....            | .....                 | ..... | ..... |
|            | Grand total of the corresponding period of last year | .....                                  | .....                             | .....                  | .....  | .....  | .....                        | 144,358                   | .....          | 24,711         | .....           | 5,773   | .....           | 245             | .....                     | 41,795           | 339,137                   | .....            | .....                 | ..... | ..... |

**A. D. MCARTHUR, Major, R.E.,  
Under-Secretary to the Govt. of Bengal.**

**The 11th October 1887.**

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

ORISSA COAST CANAL.

LENGTH OF CANAL OPEN, 91 MILES.

Statement showing Quantities of Goods carried during the month of August 1887.

| Number of<br>boats or<br>rafts. | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |              |                      |         | PRIVATE.             |         | REMARKS. |
|---------------------------------|--------------------------------------|-------------------------------|--------------|----------------------|---------|----------------------|---------|----------|
|                                 |                                      | Quantity—Tons.                |              |                      | Value.  | Quantity.            | Value.  |          |
|                                 |                                      | Up.                           | Down.        | Total.               | Rupees. | Tons.                | Rupees. |          |
| 179                             | 1. Grain ...                         | 1,805                         | 29           | 1,834                | 55,808  | 1,834                | 55,808  |          |
| .....                           | 2. Cotton ...                        | .....                         | .....        | .....                | .....   | .....                | .....   |          |
| 3                               | 3. Oilseeds ...                      | 3                             | .....        | 3                    | 217     | 3                    | 217     |          |
| 21                              | 4. Salt ...                          | 18                            | 158          | 176                  | 12,550  | 176                  | 12,550  |          |
| 2                               | 5. Piece-goods ...                   | .....                         | 7            | 7                    | 4,100   | 7                    | 4,100   |          |
| .....                           | 6. Metal ...                         | .....                         | .....        | .....                | .....   | .....                | .....   |          |
| 7                               | 7. Building materials ...            | .....                         | 35           | 35                   | 220     | 35                   | 220     |          |
| 338                             | 8. Miscellaneous ...                 | 34                            | 232          | 266                  | 26,227  | 266                  | 26,227  |          |
| 3                               | 9. Fuel ...                          | 32                            | 5            | 37                   | 375     | 26                   | 225     |          |
| 1 raft                          | 10. Timber ...                       | 30 c. ft.                     | .....        | 30 c. ft.            | 28      | 30 c. ft.            | 28      |          |
| .....                           | 11. Bamboos ...                      | .....                         | .....        | .....                | .....   | .....                | .....   |          |
| 553 &<br>1 raft.                | 12. Total ...                        | 1,892 &<br>30 c. ft.          | 466<br>..... | 2,358 &<br>30 c. ft. | 99,525  | 2,347 &<br>30 c. ft. | 99,375  |          |
| 494                             | 13. Total of same<br>month last year | 1,539                         | 331          | 1,870                | 92,206  | 1,827                | 91,381  |          |

|  | Up.       | Down.    | Total      |  | Rs. A. P.  |
|--|-----------|----------|------------|--|------------|
| 4. Total number of boats plying cargo ... No.        | 296       | 257      | 553        | Total tollage of month—<br>24+25+26 ...                    | 2,532 15   |
| 5. Total number of boats plying passenger ... No.    | 66        | 63       | 129        | Total tollage of same<br>month last year ...               | 1,877 10 6 |
| 6. Total registered tonnage, cargo ...               | 3,829     | 1,887    | 5,716      | Memorandum of Tollage.                                     |            |
| 7. Total registered tonnage, passenger ...           | 497       | 478      | 975        |  |            |
| 8. Ton mileage ...                                   | 90,839    | 51,985   | 142,824    |  |            |
| 9. Estimated value of cargo Rs.                      | 56,162    | 43,335   | 99,497     | 1. Balance not recovered<br>on the 1st of the<br>month ... | 737 13     |
| 10. Number of passengers ...                         | 298       | 399      | 697        | 2. Tollage per month ...                                   | 2,532 15   |
| 11. Rafts, bamboos... c. ft.                         | .....     | .....    | .....      | 3. Total ...   | 3,270 13   |
| 12. Do., timber ... „                                | 30        | .....    | 30         | 4. Amount paid into<br>treasury during the<br>month ...    | 2,269 1    |
| 13. Estimated value of rafts Rs.                     | 28        | .....    | 28         | 5. Balance due at the end<br>of the month ...              | 1,001 11   |
| 14. Tollage on boats „                               | 1,413-9-0 | 760-4-6  | 2,173-13-6 |  |            |
| 15. Compounded tollage on<br>boats Rs.               | 175-6-9   | 181-15-0 | 357-5-9    |  |            |
| 16. Tollage on rafts „                               | 1-12-0    | .....    | 1-12-0     |  |            |
| 17. Total tollage on boats per<br>ton-mile ... Pie   | .....     | .....    | 2-9        |  |            |
| 18. Total tollage on rafts per<br>100 cubic feet Rs. | .....     | .....    | 5-13-4     |  |            |

CALCUTTA,  
The 11th October 1887. }

A. D. McARTHUR, Major, R.E.,  
Under-Secretary to the Government of Bengal.



CIRCULAR AND EASTERN CANALS.

*Approximate return of traffic for the week ending Saturday, the 8th October 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>8TH OCTOBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>9TH OCTOBER 1886. |                     |          |
|--------------------|--|---------------------|----------|--|---------------------|----------|
|                    | Number of<br>boats.                            | Weight of<br>cargo. | Tollage. | Number of<br>boats.                            | Weight of<br>cargo. | Tollage. |
|                    | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... | 911  | 1,34,005            | 2,302    | 323  | 57,655              | 1,021    |
| Jute ...           | 231  | 1,00,375            | 1,784    | 141  | 64,180              | 1,141    |
| Firewood ...       | 169  | 79,300              | 1,205    | 159  | 1,45,410            | 1,177    |
| Other articles ... | 953  | 1,92,515            | 2,861    | 762  | 2,34,455            | 2,508    |
| Total ...          | 2,264  | 5,06,195            | 8,152    | 1,385  | 5,01,700            | 5,850    |

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 1st October 1887, on 1,510 miles open.

|   | COACHING TRAFFIC.     |                          | MERCHANDISE AND MINERAL TRAFFIC. |                        | Other earnings (estimated). | Total earnings.        | TRAFFIC TRAIN-MILES RUN. |              |           |
|---|-----------------------|--------------------------|----------------------------------|------------------------|-----------------------------|------------------------|--------------------------|--------------|-----------|
|   | Number of passengers. | Coaching receipts.       | Weight carried.                  | Receipts.              |                             |                        | Coaching.                | Merchandise. | Total.    |
| Total traffic for the week ...                              | 213,405*              | Rs. A. P. 2,23,950 13 0* | Mds. s. 14,77,387 20             | Rs. A. P. 3,27,114 5 0 | Rs. A. P. 15,478 14 0       | Rs. A. P. 5,06,544 0 0 | 62,718½                  | 65,554       | 128,272½  |
| Or per mile of railway ...                                  | .....                 | 147 6 11                 | .....                            | 215 5 7                | 10 3 1                      | 372 15 7               | .....                    | .....        | .....     |
| For previous 12 weeks of half-year ...                      | 2,068,681             | 20,09,100 8 0            | 2,63,18,205 20                   | 55,81,715 10 2         | 2,08,993 15 9               | 87,89,810 1 11         | 798,785½                 | 886,304½     | 1,785,090 |
| Total for 13 weeks ...                                      | 2,282,086             | 22,23,051 5 0            | 2,77,95,593 0                    | 56,08,830 15 2         | 2,24,472 13 9               | 88,06,354 1 11         | 861,503½                 | 1,051,858½   | 1,913,362 |
| COMPARISON.   |                       |                          |                                  |                        |                             |                        |                          |              |           |
| Total for corresponding week of previous year ...           | 205,914½              | 2,06,173 12 3            | 21,51,010 10                     | 5,40,171 13 8          | 17,434 9 7                  | 8,53,780 3 1           | 73,409                   | 89,846       | 163,255   |
| Per mile of railway corresponding week of previous year ... | .....                 | 195 7 11                 | .....                            | 350 8 9                | 11 8 2                      | 563 8 10               | .....                    | .....        | .....     |
| Total to corresponding date of previous year ...            | 3,108,903             | 32,92,437 10 0           | 2,91,52,440 10                   | 60,08,396 15 0         | 2,34,594 4 10               | 1,04,35,428 14 4       | 906,200                  | 1,234,610    | 2,140,810 |

\* The decrease in coaching traffic is principally due to pilgrims having returned from Gya during the corresponding period of 1886.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |              |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |              |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|--------------|------------------|--|--------------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts.    | Per mile worked. | Mean mileage worked.                       | Receipts.    | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 1,510                                      | Rs. 8,53,780 | 564              | 1,510                                      | Rs. 5,06,544 | 373              | 1,515   | Rs. 2,32,10,011 | 15,326           | 1,510   | Rs. 2,17,13,901 | 14,396           | .....                   | 18,06,116               |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 1st October 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |                      | MERCHANDISE AND MINERAL TRAFFIC. |                     | Other earnings (estimated). | Total earnings.      | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|----------------------|----------------------------------|---------------------|-----------------------------|----------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts.   | Weight carried.                  | Receipts.           |                             |                      | Coaching.                | Merchandise. | Total. |
| Total traffic for the week ...                              | 8,002                 | Rs. A. P. 93,316 8 0 | Mds. s. 19,823 0                 | Rs. A. P. 1,516 9 0 | Rs. A. P. 31 0 0            | Rs. A. P. 4,863 15 0 | 1,987                    | 537          | 2,524  |
| Or per mile of railway ...                                  | 140                   | 57 15 8              | 310 30                           | 26 8 3              | 0 8 8                       | 80 0 7               | .....                    | .....        | .....  |
| For previous 12 weeks of half-year ...                      | 183,153               | 98,084 11 0          | 4,40,965 0                       | 29,343 12 0         | 369 4 0                     | 1,27,797 11 0        | 21,723½                  | 9,383½       | 31,076 |
| Total for 13 weeks ...                                      | 191,155               | 1,01,401 1 0         | 4,60,785 0                       | 30,860 5 0          | 400 4 0                     | 1,32,661 10 0        | 23,679½                  | 19,804½      | 35,470 |
| COMPARISON.   |                       |                      |                                  |                     |                             |                      |                          |              |        |
| Total for corresponding week of previous year ...           | 28,115½               | 17,986 13 2          | 35,340 10                        | 2,630 4 0           | 60 2 6                      | 20,677 3 8           | 2,134                    | 573          | 2,697  |
| Per mile of railway corresponding week of previous year ... | 491½                  | 314 7 3              | 618 0                            | 45 13 9             | 1 0 10                      | 901 7 10             | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 222,704½              | 1,28,806 3 6         | 5,64,911 30                      | 34,140 1 0          | 641 10 3                    | 1,63,377 14 9        | 24,699                   | 10,134       | 34,733 |

\* The decrease in coaching traffic is principally due to pilgrims having returned from Gya during the corresponding period of 1886.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |            |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|------------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts.  | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 57½  | Rs. 20,677 | 361              | 57½  | Rs. 4,864 | 85               | 57½   | Rs. 2,90,065    | 5,071            | 57½   | Rs. 2,51,921    | 4,404            | .....                   | 38,144                  |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

*Approximate Return of Traffic for week ended 1st October 1887, on 12 miles open.*

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                    | Other earnings (estimated). | Total earnings.   | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|--------------------|----------------------------------|--------------------|-----------------------------|-------------------|--------------------------|--------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.          |                             |                   | Coaching                 | Merchandise. | Total  |
| Total traffic for the week ...                                 | 2,373                 | Rs. A. P. 302 12 0 | MDS. S. 7,437 20                 | Rs. A. P. 181 15 0 | Rs. A. P. 6 8 0             | Rs. A. P. 564 3 0 | 414½                     | 78           | 493½   |
| Or per mile of railway ...                                     | .....                 | 32 11 8            | .....                            | 13 11 11           | 0 8 8                       | 47 0 3            | .....                    | .....        | .....  |
| For previous 12 weeks of half-year ...                         | 35,913                | 6,136 10 0         | 1,02,554 10                      | 2,382 14 0         | 106 7 0                     | 8,605 15 0        | 4,772                    | 1,291        | 6,063  |
| Total for 13 weeks ...   | 38,286                | 6,529 6 0          | 1,09,991 30                      | 2,527 13 0         | 112 15 0                    | 9,170 2 0         | 5,186½                   | 1,370        | 6,556½ |
| COMPARISON.  |                       |                    |                                  |                    |                             |                   |                          |              |        |
| Total for corresponding week of previous year ...              | 2,931½                | 520 10 4           | 6,845 30                         | 194 4 0            | 8 6 3                       | 723 4 7           | 405                      | 83           | 488    |
| Or per mile of railway corresponding week of previous year ... | .....                 | 43 6 3             | .....                            | 16 3 0             | 0 11 2                      | 60 4 5            | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...               | 35,543                | 5,905 0 5          | 1,25,300 10                      | 2,563 4 0          | 103 15 3                    | 8,632 3 8         | 5,296                    | 1,595        | 6,891  |

*Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
| 13   | Rs. 723   | Rs. 60           | 12   | Rs. 564   | Rs. 47           | 12  | Rs. 25,994      | Rs. 2,159        | 12  | Rs. 23,770      | Rs. 1,981        | Rs. ....                | Rs. 2,134               |

## SINDIA STATE RAILWAY.

*Approximate Return of Traffic for week ended 1st October 1887, on 74½ miles open.*

|  | COACHING TRAFFIC.     |                      | MERCHANDISE AND MINERAL TRAFFIC. |                     | Other earnings (estimated). | Total earnings.     | TRAFFIC TRAIN-MILES RUN. |              |         |
|--|-----------------------|----------------------|----------------------------------|---------------------|-----------------------------|---------------------|--------------------------|--------------|---------|
|  | Number of passengers. | Receipts.            | Weight carried.                  | Receipts.           |                             |                     | Coaching                 | Merchandise. | Total   |
| Total traffic for the week ...                                 | 5,608                 | Rs. A. P. 3,605 11 0 | MDS. S. 73,807 0                 | Rs. A. P. 3,703 7 0 | Rs. A. P. 107 0 0           | Rs. A. P. 7,476 2 0 | 630                      | 1,088½       | 2,387½  |
| Or per mile of railway ...                                     | .....                 | 40 0 1               | .....                            | 40 8 2              | 1 6 11                      | 99 15 2             | .....                    | .....        | .....   |
| For previous 12 weeks of half-year ...                         | 59,610                | 45,737 14 0          | 11,28,937 10                     | 42,956 14 0         | 975 8 0                     | 89,670 4 0          | 8,518                    | 17,960½      | 26,478½ |
| Total for 13 weeks ...   | 65,338                | 49,403 9 0           | 12,02,744 10                     | 46,640 5 0          | 1,082 8 0                   | 97,148 6 0          | 9,217                    | 19,640       | 28,900  |
| COMPARISON.  |                       |                      |                                  |                     |                             |                     |                          |              |         |
| Total for corresponding week of previous year ...              | 4,397                 | 3,279 8 11           | 1,11,838 30                      | 4,310 14 0          | 61 13 6                     | 7,652 4 5           | 639                      | 1,310        | 1,949   |
| Or per mile of railway corresponding week of previous year ... | .....                 | 43 13 6              | .....                            | 57 10 1             | 0 13 3                      | 102 4 10            | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...               | 64,382½               | 47,123 7 10          | 10,00,999 30                     | 39,833 13 0         | 1,219 3 9                   | 85,176 8 7          | 9,361                    | 13,746       | 23,016  |

*Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
| 74½  | Rs. 7,652 | Rs. 102          | 74½  | Rs. 7,476 | Rs. 100          | 74½   | Rs. 1,91,531    | Rs. 2,427        | 74½   | Rs. 2,11,117    | Rs. 2,823        | Rs. 20,596              | .....                   |

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 1st October 1887, on 22½ miles open.*

|  | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|-------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Receipts.   | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                 | 16,785                | 4,588 11 0  | 3,281 0                          | 121 15 0  | 5 12 0                      | 4,716 6 0       | 942                      | 26           | 968    |
| Or per mile of railway ...                                     | .....                 | 206 8 9     | .....                            | 5 7 8     | 0 4 2                       | 211 15 7        | .....                    | .....        | .....  |
| For previous 12 weeks of half-year ...                         | 198,107               | 53,411 4 0  | 47,915 20                        | 1,655 3 0 | 57 2 0                      | 55,153 9 0      | 11,431½                  | 646½         | 12,078 |
| Total for 13 weeks ...   | 213,892               | 58,029 15 0 | 51,190 20                        | 1,777 2 0 | 62 14 0                     | 59,869 15 0     | 12,373½                  | 673½         | 13,046 |
| COMPARISON.  |                       |             |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...              | 14,792½               | 3,892 2 7   | 3,375 0                          | 123 2 0   | 7 3 6                       | 4,021 8 1       | 944                      | 24           | 968    |
| Per mile of railway, corresponding period of previous year ... | .....                 | 174 14 10   | .....                            | 6 7 10    | 0 5 2                       | 180 11 10       | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...               | 208,082               | 51,153 4 7  | 39,868 0                         | 1,453 8 0 | 69 13 0                     | 52,676 9 7      | 12,808                   | 282          | 13,090 |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
| 22½  | Rs. 4,022 | Rs. 181          | 22½  | Rs. 4,716 | Rs. 212          | 22½   | Rs. 1,25,410    | Rs. 5,636        | 22½   | Rs. 1,36,942    | Rs. 6,155        | Rs. 11,532              | Rs. ....                |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 1st October 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 1,919                 | 803 4 6            | 12,128 10                        | 620 0 0    | 17 0 6                      | 1,440 4 6       | 413                      | 175          | 588    |
| Or per mile of railway ...                                  | .....                 | 19 2 0             | .....                            | 14 12 2    | 0 6 6                       | 34 4 8          | .....                    | .....        | .....  |
| For previous 12 weeks of half-year ...                      | 26,664                | 11,214 10 3        | 98,337 10                        | 6,337 6 0  | 270 4 0                     | 18,432 4 3      | 4,020                    | 3,204        | 7,224  |
| Total for 13 weeks ...                                      | 27,583                | 12,027 14 9        | 1,11,065 20                      | 7,557 6 0  | 287 4 0                     | 19,872 8 0      | 4,433                    | 3,379        | 7,812  |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 3,020½                | 1,308 7 8          | 29,061 0                         | 2,632 1 0  | 47 9 0                      | 3,988 1 8       | 184                      | 484          | 672    |
| Per mile of railway corresponding week of previous year ... | .....                 | 31 2 6             | .....                            | 62 10 8    | 1 2 1                       | 94 15 3         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 33,690                | 14,240 1 0         | 1,39,888 20                      | 14,927 0 0 | 318 0 9                     | 20,515 1 9      | 4,243                    | 3,697        | 7,940  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
| 42   | Rs. 3,988 | Rs. 95           | 42   | Rs. 1,410 | Rs. 34           | 42  | Rs. 55,628      | Rs. 1,324        | 42  | Rs. 67,064      | Rs. 1,611        | Rs. 12,036              | Rs. ....                |

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 17th September 1887 on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|---|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |   |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.     | Rs. A. P.   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ..                                 | 99,732                | 53,040 0 0         | 5,75,082 0                       | 1,45,040 0 0  | 13,550 0 0  | 2,11,630 0 0    | 20,058                   | 24,300       | 44,418  |
| Or per mile of railway ...                                    | 155                   | 82 0 0             | 893 0                            | 225 0 0       | 2 0 0†  | 309 0 0         | .....                    | .....        | .....   |
| For previous 10 weeks of half-year ...                        | 1,100,400             | 4,98,530 0 0       | 60,95,087 0                      | 10,33,420 0 0 | 1,58,870 0 0                                      | 10,90,820 0 0   | 201,972                  | 221,869      | 423,841 |
| Total for 11 weeks ...  | 1,200,221             | 5,51,570 0 0       | 66,70,769 0                      | 11,78,440 0 0 | 1,72,420 0 0                                      | 10,02,450 0 0   | 222,030                  | 246,229      | 468,259 |
| COMPARISON.   |                       |                    |                                  |               |   |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 141,520*              | 47,385 0 0         | 4,55,505 0                       | 94,299 0 0    | 9,540 0 0   | 1,51,270 0 0    | 17,892                   | 18,906       | 36,896  |
| Per mile of railway corresponding period of previous year ... | 224                   | 76 0 0             | 752 0                            | 156 0 0       | .....   | 234 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 1,284,429             | 5,21,457 0 0       | 62,46,745 0                      | 9,84,761 0 0  | 1,10,610 0 0                                      | 13,16,831 0 0   | 198,009                  | 218,442      | 417,351 |

\* Steam-boat earnings, Rs. 12,600 have been excluded from the calculation.

† Includes 43,680 monthly tickets.

NOTE.—Dacca and Assam-Bihar approximate returns of traffic are also published separately.

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 18TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 18TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 17TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 606   | 1,51,270  | 250              | 645   | 2,11,630  | 328              | 606  | 31,60,272       | 239              | 645  | 36,98,973*      | 229              | 2,37,801                | .....                   |

\* Audited up to 30th June 1887.

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 17th September 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 21,390                | 7,580 0 0          | 50,560 0                         | 3,350 0 0  | 90 0 0                      | 11,020 0 0      | 3,501                    | 1,019        | 5,420  |
| Or per mile of railway ...                                    | 171                   | 69 0 0             | 404 0                            | 27 0 0     | 1 0 0                       | 88 0 0          | .....                    | .....        | .....  |
| For previous 10 weeks of half-year ...                        | 242,234               | 77,760 0 0         | 4,40,550 0                       | 25,510 0 0 | 1,380 0 0                   | 1,05,650 0 0    | 36,048                   | 18,957       | 55,005 |
| Total for 11 weeks ...  | 263,604               | 85,340 0 0         | 4,91,110 0                       | 26,860 0 0 | 1,470 0 0                   | 1,16,970 0 0    | 39,549                   | 20,876       | 60,425 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 27,104*               | 7,210 0 0          | 55,285 0                         | 3,180 0 0  | 20 0 0                      | 10,119 0 0      | 1,014                    | 1,196        | 5,210  |
| Per mile of railway corresponding period of previous year ... | 217                   | 58 0 0             | 282 0                            | 25 0 0     | .....                       | 83 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 263,848               | 83,955 0 0         | 2,08,038 0                       | 15,979 0 0 | 274 0 0                     | 1,00,208 0 0    | 45,181                   | 16,850       | 62,031 |

\* Includes 6,600 monthly tickets.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 18TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 18TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 17TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125   | 10,419    | 83               | 125   | 11,020    | 88               | 125  | 2,75,706        | 92               | 125  | 2,81,705*       | 94               | 5,030                   | .....                   |

\* Audited up to week ending 30th June 1887.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 17th September 1887, on 86 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 11,832                | 4,300 0 0          | 13,008 0                         | 1,340 0 0  | 120 0 0                     | 5,760 0 0       | 2,181                    | 783          | 2,964  |
| Or per mile of railway ...                                    | 137                   | 50 0 0             | 152 0                            | 16 0 0     | 1 0 0                       | 67 0 0          | .....                    | .....        | .....  |
| For previous 10 weeks of half-year ...                        | 112,184               | 36,235 0 0         | 1,30,710 0                       | 10,820 0 0 | 1,065 0 0                   | 48,120 0 0*     | 22,327                   | 10,467       | 32,794 |
| Total for 11 weeks ...  | 124,016               | 40,535 0 0         | 1,43,808 0                       | 12,100 0 0 | 1,185 0 0                   | 53,880 0 0      | 24,508                   | 11,250       | 35,758 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 9,132                 | 2,887 0 0          | 10,182 0                         | 1,136 0 0  | 767 0 0                     | 4,790 0 0       | 1,505                    | 615          | 2,120  |
| Per mile of railway corresponding period of previous year ... | 106                   | 34 0 0             | 118 0                            | 13 0 0     | .....                       | 47 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 107,337               | 33,005 0 0         | 72,355 0                         | 8,413 0 0  | 2,883 0 0                   | 44,306 0 0      | 14,901                   | 8,122        | 23,113 |

\* Audited up to week ending 18 .

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

| RECEIPTS FOR WEEK ENDING 18TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 18TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 17TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 86  | 4,700     | 56               | 86  | 5,700     | 67               | 86   | 1,10,700        | 54               | 86   | 1,18,008*       | 57               | 7,000                   | .....                   |

\* Audited up to 30th June 1887.

ASSAM-BEHAR STATE RAILWAY.

PURNEAH SECTION.

Approximate Return of Traffic for week ended 17th September 1887, on 39 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,492                 | 570 0 0            | 4,460 0                          | 250 0 0    | 10 0 0                      | 1,130 0 0       | 068                      | 410          | 1,078  |
| Or per mile of railway ...                                    | 64                    | 22 0 0             | 114 0                            | 7 0 0      | .....                       | 29 0 0          | .....                    | .....        | .....  |
| For previous 10 weeks of half-year ...                        | 33,308                | 11,510 0 0         | 1,22,506 0                       | 13,520 0 0 | 290 0 0                     | 25,120 0 0      | 6,000                    | 4,128        | 11,008 |
| Total for 11 weeks ...  | 33,799                | 12,380 0 0         | 1,27,016 0                       | 13,570 0 0 | 300 0 0                     | 26,350 0 0      | 7,028                    | 4,538        | 12,166 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Assam-Bihar State Railway.

| RECEIPTS FOR WEEK ENDING 18TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 18TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 17TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   |           | Rs.              |   | Rs.       |                  |  |                 |                  |  | Rs.             | Rs.              | Rs.                     |                         |
| .....   | .....     | .....            | 39  | 1,130     | 29               | .....  | .....           | .....            | 39   | 66,485*         | 71               | 66,485                  | .....                   |

\* Audited up to 30th June 1887.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 17th September 1887, on 27½ miles open.

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |                   |        |
|--|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|-------------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchan-<br>dise. | Total. |
|  |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |                   |        |
| Total traffic for the week ...                                   | 2,613                 | 985 14 7           | 7,993 0                          | 472 15 0  | 13 1 9                      | 1,441 15 4      | 509                      | 254               | 763    |
| Or per mile of railway ...                                       | 96                    | 36 1 0             | 293 0                            | 17 6 0    | 0 8 0                       | 52 15 0         | .....                    | .....             | .....  |
| For previous 10 weeks of half-year ... ..                        | 31,537                | 11,202 1 5         | 87,416 0                         | 5,792 1 0 | 232 14 3                    | 17,197 0 8      | 5,272                    | 3,175½            | 8,447½ |
| Total for 11 weeks ..  | 34,150                | 12,159 0 0         | 95,409 0                         | 6,235 0 0 | 246 0 0                     | 18,639 0 0      | 5,781                    | 3,429½            | 9,210½ |
| COMPARISON.  |                       |                    |                                  |           |                             |                 |                          |                   |        |
| Total for corresponding week of previous year ...                | 1,903½                | 719 0 10           | 9,542 0                          | 743 2 0   | 17 10 0                     | 1,479 12 10     | 509                      | 254               | 763    |
| Per mile of railway correspond-<br>ing week of previous year ... | 74                    | 26 0 0             | 350 0                            | 27 5 0    | 0 10 0                      | 54 5 0          | .....                    | .....             | .....  |
| Total to corresponding date of<br>previous year ... ..           | 24,984½               | 9,820 5 6          | 77,235 10                        | 5,800 9 0 | 147 9 9                     | 15,634 8 3      | 5,817                    | 3,012             | 8,829  |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 18TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 18TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 17TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 27½   | 1,440     | 54               | 27½   | 1,442     | 53               | 27½  | 30,970          | 1,467            | 27½  | 44,127          | 1,619            | 4,157                   | .....                   |

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 24th September 1887, on 27½ miles open.

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |                   |        |
|--|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|-------------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchan-<br>dise. | Total. |
|  |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |                   |        |
| Total traffic for the week ...                                   | 3,309                 | 1,261 0 0          | 16,451 0                         | 961 0 0    | 5 0 0                       | 2,227 0 0       | 509                      | 254               | 763    |
| Or per mile of railway ...                                       | 121                   | 46 4 0             | 604 0                            | 35 4 0     | 0 3 0                       | 81 11 0         | .....                    | .....             | .....  |
| For previous 11 weeks of half-year ... ..                        | 34,150                | 12,159 0 0         | 95,409 0                         | 6,235 0 0  | 246 0 0                     | 18,639 0 0      | 5,781                    | 3,429½            | 9,210½ |
| Total for 12 weeks ...   | 37,459                | 13,419 0 0         | 1,11,860 0                       | 7,196 0 0  | 251 0 0                     | 20,866 0 0      | 6,290                    | 3,684½            | 9,974½ |
| COMPARISON.  |                       |                    |                                  |            |                             |                 |                          |                   |        |
| Total for corresponding week of<br>previous year ... ..          | 2,306½                | 891 2 6            | 5,478 0                          | 537 5 0    | 37 10 9                     | 1,466 2 3       | 509                      | 254               | 763    |
| Per mile of railway correspond-<br>ing week of previous year ... | 88                    | 32 11 0            | 201 0                            | 19 12 0    | 1 6 0                       | 53 13 0         | .....                    | .....             | .....  |
| Total to corresponding date of<br>previous year ... ..           | 27,361                | 10,511 8 0         | 82,793 10                        | 6,403 14 0 | 185 4 6                     | 17,100 10 6     | 6,323                    | 3,266             | 9,589  |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 25TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 24TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 25TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 24TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 27½   | 1,406     | 54               | 27½   | 2,227     | 82               | 7½   | 41,4 6          | 1 5 1            | 7½   | 46,5            | 1,701            | 4,3 6                   | .....                   |

NALHATI STATE RAILWAY.

Approximate Return of Traffic for week ended 1st October 1887, on 27½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|-------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.   | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 503½                  | 1,392 3 6   | 8,468 30                         | 489 13 0  | 5 13 7                      | 1,827 14 1      | 500                      | 254          | 753     |
| Or per mile of railway ...                                  | 129                   | 48 14 0     | 311 0                            | 18 0 0    | 0 3 0                       | 67 1 0          | .....                    | .....        | .....   |
| For previous 12 weeks of half-year                          | 37,387½               | 13,302 12 6 | 1,11,763 10                      | 7,163 3 0 | 2½ 2 5                      | 20,717 1 11     | 6,290                    | 3,083½       | 9,973½  |
| Total for 13 weeks ...                                      | 40,891                | 14,635 0 0  | 1,20,232 0                       | 7,653 0 0 | 237 0 0                     | 22,545 0 0      | 6,790                    | 3,037½       | 10,736½ |
| COMPARISON.   |                       |             |                                  |           |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 3,273                 | 1,330 4 9   | 5,793 10                         | 439 6 0   | 15 1 0                      | 1,783 11 0      | 500                      | 254          | 753     |
| Per mile of railway corresponding week of previous year ... | 120                   | 48 13 0     | 213 0                            | 16 1 0    | 0 0 0                       | 65 7 0          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 30,634                | 11,841 12 9 | 20                               | 6,842 4 0 | 200 6                       | 18,884 6 3      | 6,635                    | 3,520        | 10,355  |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nulhati State Railway.

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         |                         |
| 27½  | 1,781     | 65               | 27½  | 1,828     | 67               | 27½   | 48,220          | 1,560            | 27½   | 48,033          | 1,763            | 4,813                   | .....                   |

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ended 17th September 1887, on 249 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching Receipts. | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week on 249 miles open ...                | 42,448½               | 13,770 11 7        | 110,098 0                        | 10,761 11 0   | 3,400 9 11                  | 27,933 0 6      | 6,982                    | 4,350        | 10,432  |
| Or per mile of railway ...                                      | 170                   | 55 5 0             | 445 0                            | 43 4 0        | 2 13 0                      | 101 0 0*        | .....                    | .....        | .....   |
| For previous 10 weeks of half-year ...                          | 397,107½              | 1,33,659 4 5       | 11,79,782 0                      | 98,737 5 0    | 34,511 6 1                  | 2,68,027 15 6   | 66,446                   | 46,566       | 113,011 |
| Total for 11 weeks ...  | 439,556               | 1,47,430 0 0       | 12,90,480 0                      | 1,08,510 0 0  | 37,912 0 0                  | 2,91,861 0 0    | 72,527                   | 50,916       | 123,443 |
| COMPARISON.   |                       |                    |                                  |               |                             |                 |                          |              |         |
| Total for corresponding week of previous year on 246 miles open | 35,759                | 11,476 7 7         | 80,334 0                         | 8,107 9 0     | 4,047 3 9                   | 23,611 4 4      | 6,900                    | 3,552        | 8,461   |
| Per mile of railway corresponding week of previous year ...     | 145                   | 46 10 0            | 323 0                            | 32 15 0       | 7 15 0                      | 87 8 0*         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...                | 367,299               | 1,18,005 1 6       | 12,08,362 0                      | 1,30,564 15 9 | 34,090 9 4                  | 2,84,630 10 9   | 56,628                   | 47,992       | 104,629 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 18TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 17TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 18TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 17TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         |                         |
| 246   | 23,631    | 96               | 249   | 27,935    | 112              | 246  | 7,30,778        | 2,971            | 248½   | 7,83,894        | 3,174            | 58,116                  | .....                   |



TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for week ending 24th September 1887, on 249 miles open.

|   | COACHING TRAFFIC.     |               | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|---------------|----------------------------------|--------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.     | Weight carried.                  | Receipts.    |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.     | MDS. S.                          | Rs. A. P.    | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week on 249 miles open ... ..             | 33,407                | 11,385 0 0    | 1,00,298 0                       | 10,905 0 0   | 3,374 0 0                   | 25,664 0 0      | 5,925                    | 4,060        | 9,985   |
| Or per mile of railway ... ..                                   | 134                   | 45 12 0       | 430 0                            | 43 13 0      | 2 11 0                      | 92 4 0*         | .....                    | .....        | .....   |
| For previous 11 weeks of half-year ... ..                       | 439,556               | 1,47,430 0 0  | 12,90,480 0                      | 1,00,519 0 0 | 37,912 0 0                  | 2,04,861 0 0    | 72,527                   | 50,916       | 123,443 |
| Total for 12 weeks ...  | 473,023               | 1,58,815 0 0  | 13,90,778 0                      | 1,20,424 0 0 | 41,286 0 0                  | 2,20,525 0 0    | 78,452                   | 54,976       | 133,428 |
| COMPARISON.   |                       |               |                                  |              |                             |                 |                          |              |         |
| Total for corresponding week of previous year on 240 miles open | 38,336½               | 13,535 11 8   | 85,811 20                        | 8,514 0 0    | 4,026 1 11                  | 26,070 6 7      | 5,312                    | 4,011        | 9,323   |
| Per mile of railway corresponding week of previous year ...     | 156                   | 55 0 0        | 349 0                            | 34 10 0      | 1 1 0                       | 90 11 0*        | .....                    | .....        | .....   |
| Total to corresponding date of previous year ... ..             | 405,614½              | 1,31,540 13 4 | 13,84,175 20                     | 1,30,079 8 9 | 38,100 11 3                 | 3,08,721 1 4    | 61,840                   | 52,003       | 113,843 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 25TH SEPTEMBER 1886. |            |                  | RECEIPTS FOR WEEK ENDING 24TH SEPTEMBER 1887. |            |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 25TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 24TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|------------|------------------|---|------------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts.  | Per mile worked. | Mean mileage worked.                          | Receipts.  | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Mean mileage worked.                                       | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 246   | Rs. 26,070 | Rs. 106          | 249   | Rs. 26,064 | Rs. 103          | 246  | Rs. 7,56,848    | Rs. 3,077        | 248½9  | Rs. 8,14,558    | Rs. 3,277        | Rs. 57,710              | Rs. ....                |

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for week ending 1st October 1887, on 249 miles open.

|   | COACHING TRAFFIC.     |               | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|---------------|----------------------------------|--------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.     | Weight carried.                  | Receipts.    |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.     | MDS. S.                          | Rs. A. P.    | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week on 249 miles open ... ..             | 28,477                | 9,650 0 0     | 95,133 0                         | 9,311 0 0    | 3,631 0 0                   | 21,892 0 0      | 5,843                    | 4,153        | 9,996   |
| Or per mile of railway ... ..                                   | 114                   | 38 6 0        | 382 0                            | 37 6 0       | 2 9 0                       | 78 5 0*         | .....                    | .....        | .....   |
| For previous 12 weeks of half-year ... ..                       | 473,023               | 1,58,815 0 0  | 13,90,778 0                      | 1,20,424 0 0 | 41,286 0 0                  | 3,20,525 0 0    | 78,148                   | 55,280       | 133,428 |
| Total for 12 weeks ...  | 501,500               | 1,68,365 0 0  | 14,04,911 0                      | 1,29,735 0 0 | 44,117 0 0                  | 3,42,417 0 0    | 83,991                   | 59,433       | 143,424 |
| COMPARISON.   |                       |               |                                  |              |                             |                 |                          |              |         |
| Total for corresponding week of previous year on 240 miles open | 36,101                | 12,765 14 3   | 1,00,035 20                      | 9,087 1 0    | 3,084 7 10                  | 24,947 7 1      | 5,008                    | 3,963        | 8,970   |
| Per mile of railway corresponding week of previous year ...     | 147                   | 51 14 0       | 407 0                            | 38 15 0      | 0 12 0                      | 89 9 0*         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ... ..             | 441,738½              | 1,44,306 11 7 | 14,84,209 0                      | 1,48,166 9 0 | 41,195 8 1                  | 3,33,668 8 5    | 66,848                   | 55,965       | 122,813 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |            |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |            |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|------------|------------------|--|------------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts.  | Per mile worked. | Mean mileage worked.                       | Receipts.  | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 246  | Rs. 24,047 | Rs. 101          | 249  | Rs. 21,872 | Rs. 88           | 246   | Rs. 7,91,795    | Rs. 3,178        | 248½01  | Rs. 8,30,450    | Rs. 3,365        | Rs. 54,655              | Rs. ....                |

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|  |  |  |  |  |  |  |           |
|--|--|--|--|--|--|--|-----------|
|  |  |  |  |  |  |  | Rs.       |
| Approximate earnings for week ending 17th September 1887 |  |  |  |  |  |  | 9,320     |
| Corresponding week last year                             |  |  |  |  |  |  | 10,708    |
| Decrease   |  |  |  |  |  |  | 1,388     |
| Receipts from 1st July to 17th September 1887            |  |  |  |  |  |  | 99,632    |
| From 1st July to 18th September 1886                     |  |  |  |  |  |  | 1,09,984  |
| Decrease   |  |  |  |  |  |  | 10,352    |
|  |  |  |  |  |  |  | Miles.    |
| Miles open, week ending 17th September 1887              |  |  |  |  |  |  | 51        |
| Corresponding week last year                             |  |  |  |  |  |  | 51        |
|  |  |  |  |  |  |  | Rs. A. P. |
| Receipts per mile open, week ending 17th September 1887  |  |  |  |  |  |  | 182 11 11 |
| Corresponding week last year                             |  |  |  |  |  |  | 209 13 10 |
| Decrease   |  |  |  |  |  |  | 27 1 11   |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 4th October 1887.

W. STEVENSON, Acting Manager.

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|  |  |  |  |  |  |  |           |
|--|--|--|--|--|--|--|-----------|
|  |  |  |  |  |  |  | Rs.       |
| Approximate earnings for week ending 24th September 1887 |  |  |  |  |  |  | 11,717    |
| Corresponding week last year                             |  |  |  |  |  |  | 9,068     |
| Increase   |  |  |  |  |  |  | 2,649     |
| Receipts from 1st July to 24th September 1887            |  |  |  |  |  |  | 1,11,349  |
| From 1st July to 25th September 1886                     |  |  |  |  |  |  | 1,19,952  |
| Decrease   |  |  |  |  |  |  | 7,703     |
|  |  |  |  |  |  |  | Miles.    |
| Miles open, week ending 24th September 1887              |  |  |  |  |  |  | 51        |
| Corresponding week last year                             |  |  |  |  |  |  | 51        |
|  |  |  |  |  |  |  | Rs. A. P. |
| Receipts per mile open, week ending 24th September 1887  |  |  |  |  |  |  | 229 11 11 |
| Corresponding week last year                             |  |  |  |  |  |  | 177 12 10 |
| Increase   |  |  |  |  |  |  | 51 15 1   |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 5th October 1887.

W. STEVENSON, Acting Manager.

No.

FROM C. H. REILY, Esq.,

*Chief Presidency Magistrate and President of the Court appointed to inquire into the circumstances connected with the loss of the S. S. "Sir John Lawrence,"*


TO THE HON'BLE COLMAN MACAULAY, C.I.E.,

*Secretary to the Government of Bengal,  
Marine Department.*

*Dated Calcutta, the 8th September 1887.*

SIR,

WE have the honour to submit the following report on the circumstances attending the loss of the steamer *Sir John Lawrence*.

The *Sir John Lawrence* was an iron screw steamer built in London, 1865, 90 horse-power. Her registered tonnage was (nett) 466·58, gross tonnage 686·14; official number 52713. At the time when she was built she had three masts, was schooner rigged, and two decks, with poop and fore-castle. She was classed at Lloyds \*  100. We have no evidence before

us of the history of the vessel till the year 1874, when we find her trading on the coasts of India. She is described at that time as a staunch vessel with everything good about her. She was still classed at Lloyds. In 1875 the vessel was the property of a Mr. Shopperd of Bombay, and in November of that year she was purchased from that gentleman by the firm of Macneill and Company. From that date till October 1881 she was employed in the coasting trade, for the larger portion of the time running between Calcutta and Chandbally. During this period in the year 1877 she was surveyed by Captain Stewart, Lloyds' Surveyor. On this occasion she retained her class. In 1879 her owners requested the Secretary of Lloyds' Register to remove her name from the books. In October 1881 Messrs. Walker and Mitchell, Surveyors, refused to grant her a certificate for various reasons. Among these, as stated to us, was the defective condition of her boilers, main deck, upper portion of the bulwarks, frames below the boiler, and several other frames round the ship. In consequence of the action of the Surveyors she was laid up, and on the 8th September 1882 an application was made to the Port Commissioners, requesting them to send their Engineer-Surveyor on board the *Sir John Lawrence*, with a view to report what repairs it would be necessary to effect before a certificate could be granted under which she could recommence running in the Chandbally trade. In accordance with this request the Port Commissioners deputed their Surveyor, Mr. Bushby, to make the necessary survey. This officer's opinion as to the condition of the vessel at that time is expressed in the letter (M). After declaring that she was in many respects not seaworthy, he stated that it would be necessary "to renew all defective frames, floors, stringers, beams in boiler and bunker space, repair and test boiler (the front combustion chamber and tubes will probably require renewal); the casing round boiler from top to bottom is worn out, and also the main funnel will require renewal. The upper plating at ends of ship, in cabin and fore-castle, require to be stripped, and defective parts renewed; the main deck is very defective, and should be lifted, and all defective beams, &c., made good." On the receipt of this report the owners of the *Sir John Lawrence* apparently decided to repair the ship.

History of  
vessel from  
1874.

Repaired  
1884.

She was docked in February 1883, and continued under repair till June 1884. During this time the repairs indicated by Mr. Bushby seem to have been taken in hand. We are told that the plates of the ship were bored in a hundred different places, the hull scaled throughout, about 200 new plates were supplied, ten per cent. of these being used for doubling over thin plates; a large number of the frames were renewed, the main deck was stripped, and a new deck laid; there was also a new awning deck, and 25 feet additional space of deck added, filling the gap between the poop and awning deck. The fore and main masts were lifted, and she was fitted with entirely new rigging. Mr. Bushby during this year paid the vessel frequent visits in his official capacity, and the repairs indicated were apparently carried out under his immediate superintendence. In proof of the extent and thoroughness of the repairs done, the owners have put in a large body of documentary evidence in support of the general assertion made on their behalf that a sum of Rs. 95,000 was spent in refitting the *Sir John Lawrence*. On the completion of her repairs she was surveyed by Mr. Bushby, and commenced to run once more in 1884 in the Chandbally trade, and so continued till the day of her loss. During this period she was surveyed at intervals of six months and docked annually, the Surveyors being Messrs. Bushby and John Mackellar; the survey held in April 1886 being done by the latter gentleman alone. The last Surveyor's declaration is dated the 25th April 1887, and is signed by Mr. Bushby. This certificate was intended to remain in force until the 21st October 1887. It describes the condition of the hull, general equipment, and ground tackle as "good" for ocean navigation. She was commanded by Mr. Peter Irvine, who held a certificate of competency as master, one officer, 24 (Native) deck crew, 3 engineers, and 12 engine-room crew. She appears to have been last docked on the 21st October 1886. Her engines are represented at 90 nominal horsepower. Her boiler was new in 1884, and was passed for pressure of 80 lbs. to the square inch. She had four boats of the aggregate capacity of 987 cubic feet, two of which were life-boats. The survey is also accompanied by a compass certificate, signed by the master and mate of the vessel. At the time of her loss she was insured in London for a sum of £5,000.

Condition  
of weather  
on 25th May  
last.

The *Sir John Lawrence* left her moorings at daylight of the morning of the 25th May, having about 80 tons of cargo, and, if the evidence of the police can be accepted, her full complement of passengers, in number 735. She was preceded that morning on her voyage by two steamers, bound for the same port—the *Tyrone* and *Curlew*. The masters of each of these vessels have been examined, and it is to their evidence we for the most part have to look for any subsequent information about the ill-fated vessel. The *Tyrone* and *Curlew* apparently steamed down the river together, and both Captains agree in their description of the state of the weather up to the moment when they anchored at Kedgerree. Captain Spence, of the *Tyrone*, states that the weather began to get very bad before his vessel reached Fisherman's Point, and that he at this comparatively early period of his voyage, about 24 miles from Calcutta, had made up his mind not to go to sea. Both vessels reached Mud Point about 10-30 a.m. It was raining heavily at this time, and the weather is described as "very dirty." Captain Moore of the *Curlew* turned his vessel round and waited for a temporary break in order to enable him to distinguish the nature of the signal flying at Mud Point. He discovered eventually that the signal was an inverted cone over a ball, and known as No. 8. According to the Government Notification this signal indicates the probable passage northward and to the westward of Saugor Island and north of False Point of a cyclonic storm of small extent and intensity. This signal leaves it optional to vessels of light trim and fast steaming to proceed to sea. After a short consultation carried on by signal and board, Captains Spence and Moore decided to go no further down the river than Kedgerree. Both Captains assert that even if they had not been able to discover the signal at Mud Point, the appearance of the weather and the indications of the barometer were such as to convince them of the absolute necessity of going no further down the river than the safe anchorage of Kedgerree. After these vessels had been at anchor about two hours, the *Sir John Lawrence* passed them half a mile off. No signals were exchanged. The *Sir John Lawrence* did not stay her course, but under steam and with her sails set, proceeded out to sea. Captain Spence describes the ship as being in

Evidence of  
Masters of S.  
S. "Tyrone"  
and  
"Curlew."

light trim when she passed him. If we accept a remark made by Mr. Pedler, that the *Sir John Lawrence* was seen from the signal station by the telegraph-master off Saugor Island, this apparently was the last view obtained of the vessel on that day. Taking the time stated by Captains Spence and Moore as fairly accurate, it is more than probable that the *Sir John Lawrence* must have passed her first signal about half-past twelve. The question whether Captain Irvine did see the signal at Mud Point is conjectural. Captain Moore, as we know, had to turn his vessel round and wait for a favourable opportunity before he could obtain a glimpse of the signal station. The weather, according to this witness, had got more squally and thick in the two hours which intervened between the time when the *Tyrone* and *Curlew* passed Mud Point and the passage of the *Sir John Lawrence*. The signal station would be about five to six miles from the channel ordinarily taken by vessels engaged in the Chandbally trade. It being therefore impossible to arrive at any definite decision whether Captain Irvine did sight the storm signals at Mud Point, it becomes extremely important to note the state of the weather at the time when the *Sir John Lawrence*, leaving the *Tyrone* and *Curlew* at anchor at Kedgerree, went on her way out to sea. On this point both Captains Spence and Moore speak in no doubtful terms. In addition to the remarks made by Captain Spence as to his opinion of the weather, he says that had he been in command of the *Lawrence* he would not have gone to sea. He further asserts that at the time the *Sir John Lawrence* passed him he considered that there was going to be a cyclone. Captain Moore on this point is even more emphatic: he says that in his opinion eight out of ten Masters of ships would have hesitated to go out to sea in such weather. He continues,—“No man of any sense would have gone out in that cyclone except he was driven,” though he is unable to give any reason which might have influenced Captain Irvine to go to sea against his will. He says the Chief Officer, Mr. Smith, “was a tear-away sort of a man, and one who would have urged the Captain to go on.” “I am of opinion,” he further states, “that no man with a straight head on him would have gone to sea on that day.” Philip Arden, the Master of the steam tug *Hunsdon*, which was anchored below Saugor on the morning of the 25th, describes the cyclone as very intense, and that the wind and sea was very strong. He says, “I never saw the sea so bad at Saugor.”

After careful consideration of the evidence we have epitomised, it seems to us unnecessary to consider whether or not Captain Irvine saw the storm signals at Mud Point and Saugor. We have no difficulty in arriving at the conclusion that Captain Irvine, in proceeding out to sea in the face of the appearance of weather described by Captains Spence and Moore, was guilty of an act of foolhardiness which in some of its aspects was almost criminal. In saying thus much we feel we are treading on safe ground, for our conclusion is based on the evidence of witnesses who have every inducement to place Captain Irvine's conduct in as favourable a light as possible under the circumstances. When we attempt, however, to extract from the evidence given any definite or satisfactory reasons which may have induced Captain Irvine to act as he did, our task becomes a difficult one. On the one side, although we are told that Captain Irvine was a humane man, popular, on account of his kindness and consideration, with his Native passengers, we find him, in the face of every indication it was possible to give a sailor of his experience, proceeding out to sea with a full complement of Native passengers, a large proportion of whom were women and children, on a voyage which, whatever the ultimate result, must have entailed hours of intense misery, danger, and (if the evidence of Captain Spence may be accepted on this point) possible destruction of some of the lives of the passengers who had entrusted themselves to his care. The hint thrown out by one of the witnesses, that Captain Irvine may possibly have been an unwilling agent in the matter, and influenced by what he knew or suspected to be the wishes of his owners on the subject, is based on no evidence whatsoever, and is, in our opinion, practically absurd. If one theory more than another is to be accepted, we would give the preference to the view which attributes Captain Irvine's conduct to a mere act of bravado, stimulated possibly at the sight of the two steamers safely anchored at Kedgerree. We are quite aware that in accepting this explanation we have to ignore a considerable body of evidence which describes Captain Irvine as a careful and

Opinion on  
Captain  
Irvine's con-  
duct for ven-  
turing out to  
sea.

Captain  
Irvine's mo-  
tive a mys-  
tery.

conscientious sailor. The whole subject, however, is wrapped in mystery, and in the absence of any definite evidence we fear we have no alternative but to leave it still a matter for mere conjecture.

The next question which has to be considered is whether the *Sir John Lawrence* at the date of her last voyage was in a seaworthy condition. Among the papers connected with this branch of the subject are a series of letters written by one of the witnesses, Mr. H. W. Neustein, a discharged servant of the firm of Macneill and Company, part owners and agents of the ship. This witness served as Chief Officer on board the *Sir John Lawrence* for a period of 13 months, from September 1885 to 25th October 1886. On that date he was discharged from his post, and shortly after wrote a series of letters addressed to various officials, among whom were the Port and Health Officers. A communication of a similar kind was also forwarded to the Local Government. In these letters Mr. Neustein makes a number of charges connected with the seaworthiness of the *Sir John Lawrence*; he also declares that the surveys held on board the vessel were neither adequate nor satisfactory, and seriously impugns the motives which he alleges influenced the officials charged with this duty. This action of Mr. Neustein resulted in a departmental inquiry, and, as we are informed, in a Resolution by the Local Government. We are ignorant of the contents of this document; nor are we aware whether at that time any further action was taken by the Government in the matter. The *Sir John Lawrence* was lost at sea on the 26th May of this year, and shortly after this occurrence Mr. Neustein for a second time circulated a fresh series of letters, reiterating the same charges against the owners and agents of the vessel and the officials who surveyed her. These letters have been put in as evidence, and Mr. Neustein has himself been examined as a witness. We desire to indicate here, in support of the attitude assumed by this Court in regard to this branch of the inquiry, that the papers included with the formal notification sent to the President clearly indicate that the Local Government were desirous that the charges made by Mr. Neustein should engage the serious attention of the Court. In order to give practical effect to this intention, it was necessary to deal with each charge separately. Mr. Neustein, it must be remembered, came into Court with definite allegations which, if the vessel had only been afloat, could have been accepted or rejected after a local inspection—a task which might have been completed in a single day. The *Sir John Lawrence* having foundered, it was impossible, except after a long and patient hearing of the evidence on each of the points indicated by Mr. Neustein, for us to come to any definite conclusion. We are quite alive to the fact that this inquiry has been protracted far beyond the ordinary limits of an investigation of this kind. Although we regret the circumstance, we can see no reason for believing that its duration could have been shortened either by the action of Mr. Kilby, who was charged with the conduct of the inquiry, or the Court which was called upon to report upon the case placed before it for disposal.

Mr. Neustein, on entering the witness-box, was asked to specify those among the number of the charges he brought against the owners and Surveyors of the ship which in his opinion contributed towards the unseaworthiness of the *Sir John Lawrence*. He thereupon called attention to—

- (1) the windlass,
- (2) the state of the scuppers,
- (3) the pumps,

(4) the state of the ship's plating, directing attention more particularly to a patch which had been rivetted on to a plate, which he stated was too thin to bear it.

The evidence given in regard to the state of the windlass is in some respects contradictory—a remark which unfortunately may be applied to the allegations made by the witnesses on every point at issue in this inquiry. After a careful consideration of all that has been adduced either in support of or against Mr. Neustein's allegation, we are of opinion that the windlass in October 1886 was in a great measure unserviceable; that the evidence on this point on the whole contradicts the statement made by Mr. Neustein, that the windlass had remained in a state of disrepair for a considerable time previous to that date. We also find that the windlass was taken to pieces and thoroughly and efficiently repaired shortly after the October survey of 1886, and that there is every reason

Mr. Neustein's charges.

Reasons for protracted nature of inquiry.

The windlass.

for believing that it was in a sound and workable condition when the *Sir John Lawrence* made her last voyage to sea.

Mr. Neustein's description of the state of the scuppers has not in our opinion been borne out by the evidence. We are inclined, however, to endorse his views of the danger attending the absence of lip guards or flanges securing the outer ends of the scupper to the ship's sides. There is, however, the evidence of the two Surveyors that such precautions were unnecessary, and we therefore, in the presence of this opinion, do not feel disposed to lay much stress on this omission. As to the general state of the scuppers, we think that one at least was defective, in that it did on one occasion require the application of cement on the inside to render it perfectly water-tight. On this point we have the statement of Mr. Neustein, corroborated by that of Mr. Leech. The absence, however, of any mention of the scuppers in the numerous lists or indents for repairs submitted by Captain Irvine leads us to believe that the repairs, if needed, were of a trivial kind; and, apart from the danger which may be supposed to have been incurred through the absence of the lip guards or flanges, we are of the opinion that the condition of the scuppers did not in any way tend towards rendering the *Sir John Lawrence* unseaworthy at the time of her loss.

The scuppers.

In May 1885 a collision occurred between the inland steamer *Indore* and the *Sir John Lawrence*, which knocked a hole into the starboard bow of the latter vessel. This hole was patched in the first instance by a plate being bolted on, and afterwards the bolts were replaced by rivets. The knowledge gained by the circumstances attending the fitting on of this patch has been utilised as the basis for the charge brought by Mr. Neustein as to the general condition of the hull of the vessel. Mr. Neustein is himself uncertain of the precise position of the hole; his impression, however, is that it was below the main deck. That part of his statement which relates to the condition of the plate to which the patch was bolted is, as he himself admits, mere hearsay. His evidence therefore, if it can be believed, is only important in so far as it can be trusted to indicate the exact situation of the patch; and even here we have nothing more precise than the 'impression' of this witness. It is a matter of extreme importance to determine with some degree of precision the situation of this patch. If, as stated by some of the witnesses, it was above the main deck and in the forecastle, it is obvious that the thickness of the plate at a spot so much above the body of the ship would not be a matter of such serious importance if the hole, as stated by a second set of witnesses, were below the main deck and in the forepeak. Mr. Neustein's evidence on this point does not, for the reason already given, assist us towards coming to a conclusion. His statement is to a certain extent borne out by Mr. Leech and the witness Thorpe, who both place the patch in the forepeak. The former of these witnesses, however, if his evidence be carefully considered, shows signs of hesitation and uncertainty in speaking of the situation of the patch. Thorpe, though confident that the patch was below the main deck, asserts that it was on the port-side, and apparently was ignorant of the meaning of the term he used. As against these allegations, there is a firm and compact body of evidence given by the two Surveyors and the witnesses Tayler, Young, Lindsay, and Simpson, who are all unanimous in placing the position of the patch above the main deck in the forecastle. We do not lose sight of the fact that the evidence so given is drawn from not altogether disinterested sources; yet on the whole we are inclined to the belief that the patch was situated, as stated by them, in the forecastle and above the main deck. We are fortified in this opinion by such of the facts as have been elicited as to the manner in which the accident occurred to the *Sir John Lawrence*.

The patch on starboard bow.

The evidence as to the precise thickness of the plate is hopelessly contradictory. We discard at once Mr. Neustein's statement that it was only  $\frac{1}{32}$  of an inch thick as ridiculous. Leech, a witness on whose word we feel inclined to place great reliance in this matter, as he himself superintended the putting on of the patch, tells us that the plate was  $\frac{1}{8}$  of an inch thick. Thorpe also corroborates this assertion; while Simpson, who superintended the rivetting of the patch, puts the thickness at  $\frac{3}{8}$  to a  $\frac{1}{4}$ . All the other witnesses who speak to the fact are unanimous in their opinion that the plate was a quarter of an inch thick. The difficulty we have experienced in our endeavour to extract a few grains of truth from this mass of contradictory evidence has been very great.

Thickness of plate on which patch was placed.



Leaving aside for the moment the oral evidence, we find from a report of survey of repairs by Lloyds' Surveyor on the *Sir John Lawrence* in October 1877 that the ship was described to be "in first rate condition." Accepting this assertion as giving a true indication of the then state of the ship's plates, we find only four years later the ship condemned by Mr. Bushby himself as being in many respects unseaworthy. Among the causes which contribute to this view was (as stated by Mr. Bushby himself) the defective state of the upper plating at the ends of the ship in cabin and forecastle. He also admits in his evidence that he insisted on some of the plates in the forepeak being doubled, although he makes no definite mention of the doubling and renewing of defective plates described by him in the forecastle. This evidence in our opinion tends to show that the deterioration in the condition of the plates in the *Sir John Lawrence* from October 1877, the date of the report of Lloyds' Surveyor, and Mr. Bushby's report as he saw the vessel in 1882, must have been, either through neglect or the nature of the cargo carried, extremely rapid. We have before us the fact that the plating in the forecastle was defective, and, on the other hand, an absence of all evidence to show that those plates were doubled or renewed—a circumstance which in our opinion adds force to the statement made by Leech, that the plating in the forepart of the vessel soon after the great repairs of 1883-84 was abnormally thin. None of the witnesses took the trouble to measure the actual thickness of the plate. The evidence on this point, although that of experts, is after all obtained by the eye alone. On the whole, in our opinion the balance of truth lies in the direction of the statements made by Leech and the witnesses which support his account, that the plate on which the patch was put was nearer  $\frac{3}{8}$  than  $\frac{1}{4}$  of an inch in thickness.

Mr. Duncan Mackellar, with Lloyds' Rules before him, gave it as his opinion that for a vessel of the tonnage of the *Sir John Lawrence* plates  $\frac{1}{4}$  of an inch would be "quite safe for the poop and forecastle." Accepting this statement, we have no difficulty in coming to the conclusion that this particular plate was abnormally thin; and taking the thickness of this plate as an indication of what was probably the condition of the plates in the upper structure of the vessel, we think Mr. Leech was justified in the opinion he formed, that the plates in the forepart of the vessel generally were below the standard of safety.

We have now dealt with those charges brought by Mr. Neustein which in our opinion are of primary importance, in that they are directly connected with the seaworthiness of the ship. With regard to the minor allegations made by this witness, we deem it sufficient to do no more than express the conclusion we have arrived at on them.

It would have been as well perhaps if the pumps, as suggested by Mr. Neustein, had been connected with the bilges; but we do not consider that this omission tended in any way to lessen the seaworthiness of the ship.

A great deal of contradictory evidence was given in connection with the condition of the after port boat, more with the object, however, of indicating the manner in which the surveys were carried out than for the purpose of showing the state of the general equipment of the vessel. We do not feel disposed to lay any very serious stress on this charge, and on the whole are inclined to accept Mr. Young's explanation of the circumstance, that the boat, from exposure to the sun and its proximity to the funnel of the vessel, had opened out her seams, and was naturally in a very leaky condition when first put into the water, and in all probability therefore only required re-caulking.

As far as the bulkheads are concerned, we consider that those on board the *Sir John Lawrence* were sufficient for the safety of the vessel. The removal of the partition bulkhead in the engine-room, referred to by Mr. Neustein, did not, in our opinion, tend to lessen the stability of the ship.

The rudder braces (or pendants) should, we consider, have formed part of the necessary equipment of the rudder, as, in the event of an accident occurring to its upper portion, it would still be possible to steer the vessel.

Mr. John Mackellar's evidence as to the state of the cable at the time of his survey in October 1886 was not satisfactory; and if the decision on this point depended on the evidence given by this witness alone, there would be good reasons for giving some heed to Mr. Neustein's statement on this subject. We however find it difficult to believe that Captain Irvine would have refrained

Plates in upper structure of vessel below standard of safety.

Minor charges by Neustein.

Pumps.

After port boat.

Bulk heads.

Rudder pendants.



from indenting for a new length of cable had the one on board been in a defective condition; and the absence of any mention of this item in the numerous lists of repairs sent in by the Captain about this period confirms us in our opinion that the cable did not in any particular merit the description of it given by Mr. Neustein

Chain cable.

The allegation that the agents and owners were unduly parsimonious in their manner of dealing with the general up-keep of the vessel rests entirely on the words of Mr. Neustein. With this exception the whole of the evidence, both oral and documentary, on this point is all the other way, and we come without any hesitation to the conclusion that the vessel was supplied with all needful stores and material, and that the owners and agents did not on any occasion exhibit the slightest reluctance to comply with any reasonable request for repairs or stores made upon them by the Chief Engineer or Captain.

General up-keep of vessel.

We have now dealt with or noticed all the specific charges made by Neustein against the stability of the vessel which we consider worthy of attention. There remains for consideration the broader question whether the ship was seaworthy so far as the frames and plating of her hull were concerned. On this point we have Lloyd's certificate of survey for our authority that the plating of the *Sir John Lawrence*, when she was first built, was of extra thickness. We know also that she preserved this distinction up to the year 1877. From that period until October 1881, when Messrs. Walker and Mitchell declined to pass her, she must have, as we have already stated, deteriorated very rapidly; and this assumption, we think, would be justifiable even if we were disposed to accept Mr. Young's statement that her failure to pass Messrs. Walker and Mitchell was due to the defective state of her boiler alone, because we find from Mr. Bushby's report in September 1882 that the ship, both as to her hull and equipments, was in a dangerously unseaworthy condition.

Was the vessel seaworthy after repairs of 1883-84?

There is no doubt that at this period the ship underwent extensive repairs, and it is equally clear that the nature and extent of these repairs were regulated by the advice given from time to time by Mr. Bushby himself. While these repairs were in progress Mr. Bushby, in his capacity as Surveyor to the Port Commissioners, made three official surveys, visiting the vessel for that purpose on fifteen different occasions. Under these circumstances we naturally looked to Mr. Bushby for complete and satisfactory evidence as to the manner in which these extensive repairs were carried out. In this expectation, however, we have been disappointed, for Mr. Bushby has nothing better to offer us than such scraps of information as his recollection affords him after a lapse of three years of an extremely busy life. He either failed, or thought it unnecessary, to support his statements with notes, memoranda, or indeed any documentary evidence made at the time—a fact when taken in connection with an incident subsequently elicited, and which illustrates the nature of his connection with the owners of the vessel, justifies us in limiting our acceptance of the statements he made only so far as we find them corroborated by other evidence given in the case. Putting aside, therefore, Mr. Bushby's evidence for the moment, the only other witness who gives us any important information about the repairs effected in 1883-84 is Mr. Young, Superintending Engineer to the owners of the vessel. Although it may be said that his evidence must in a certain sense be biased by the nature of his position, yet he, unlike Mr. Bushby, comes before us with a large body of documentary evidence in support of the allegations he makes as to the thoroughness of the repairs effected on that occasion. This documentary evidence has been filed in Court, and has received very careful inspection at our hands; and we find on the whole that the repairs carried through under Mr. Bushby's supervision must have been, as indeed is stated by him and Mr. Young, of a very thorough and satisfactory nature. There is no doubt that the ship was scaled throughout. We are also inclined to believe that a large number of borings were made in various portions of the hull, and the renewing and doubling of the plates was effected to the extent indicated by Mr. Bushby and Mr. Young. The allegation that these repairs cost Messrs. Macneill and Company the sum of Rs. 95,000 is borne out by the indents and various bills connected with these repairs which have been filed; and on the whole we are of opinion that the ship, with the exception of the light plating already alluded to in connection with her upper structure, was, when her repairs were completed, in a seaworthy condition.

Conclusion

History of vessel from date of repairs in 1883-84 to date of foundering.

Vessel except the upper plating seaworthy on 25th May last.

Number of passengers carried on 25th May.

Duty of police to count passengers at Calcutta and Chandbally.

How such duty is performed.

The *Sir John Lawrence*, in the interval between August 1884 and the day on which she foundered, was surveyed every six months and docked once a year. The official survey certificates filed show that her hull and equipments remained good. We are aware, of course, that doubt has been thrown on the trustworthiness of these surveys. But even if we felt inclined to share Mr Neustein's suspicions on this point, there is yet sufficient evidence beyond the four corners of the survey reports themselves, all tending to show that the vessel was kept up in an efficient manner, and, excepting ordinary wear and tear, had deteriorated very little since her repairs in 1883-84. In support of this view we have the evidence of Mr. Lcech, and indirectly that given by Mr. Duncan Mackellar. We have also the indents for stores and materials of various kinds made by the Captain during the period—evidence which satisfies us not only of the liberal spirit exhibited by the owners in supplying those requirements, but also as giving prominence to the fact that the repairs and defects for which they were needed were in reality of a comparatively trivial and unimportant kind. We therefore come to the conclusion that the *Sir John Lawrence* on the 25th May, when she started on her last voyage, was, with the exception already noted, in a seaworthy condition.

The next point we have to consider is whether the loss of the *Sir John Lawrence* could in any way be connected with the number of passengers she took out with her to sea on the 25th May last. The evidence given by the police on this point is that she carried no more, nor less, than her full number of licensed passengers,—735 all told. We cannot, however, for the reasons to be presently given, place implicit reliance on this statement. The evidence shows that the maximum number of passengers licensed to be carried by the *Sir John Lawrence* varied with the season of the year. During what is termed "fair-weather voyages," a period extending from 1st January to 31st March, 16th August to 30th September, and 16th November to 31st December, the limit was 1,038; in "foul-weather" trips, which was from 1st April to 15th August and 1st October to 15th November, the number was reduced to 735.

The carrying capacity of these steamers, so far as Native passengers are concerned, is regulated by measurement; each passenger in fine weather being entitled to six feet by one foot of space: in foul weather the space reserved to each passenger is somewhat larger, being nine feet by one foot, and in addition each passenger accommodated on the main deck or 'tween decks is entitled to a further space of four feet by one foot on the upper deck. It is part of the duty of the river police in Calcutta to count every passenger on board—first when a vessel starts for Chandbally, and again upon her arrival in port on her return voyage. In addition, there is precisely the same process to be gone through with the passengers either embarking or disembarking at Chandbally.

Steamers engaged in the Chandbally trade on arrival in this port are moored in midstream, and discharge their passengers with the aid of Native boats. As a rule, passengers are not permitted to go on board until sunset of the day preceding the morning fixed for their departure. From 6 o'clock until daylight the next morning passengers are at liberty to embark by the starboard gangway ladder. At its foot, previous to the arrival of the passengers, is placed a flat-bottomed Native boat, which serves as a platform; a police boat is moored alongside, and we are told that the Native corporal in charge is supposed to continue counting the passengers as they arrive throughout the night until the small hours of the following morning.

In our opinion, even if this duty was, under the conditions stated, conscientiously performed, there would still remain ample opportunities for serious mistakes. But the nature of the evidence given both by the police and the Native witnesses who were examined indicates very clearly to us that this alleged counting of passengers previous to the departure of the vessel from Calcutta was little better than a mockery and a show. In the first place the full responsibility for the due performance of this duty is left to a Native officer of police alone, a corporal on a salary of Rs. 12 per month. No precautions are apparently taken by the police to guard against the surreptitious smuggling of passengers who may be admitted through port-holes or any other mode of access to the ship. It is in evidence also that passengers are permitted to come on board by the gangway ladder on the port-side, where the police do not even pretend to have a boat in attendance. It is also equally clear that a large proportion

of the passengers come alongside attended by relatives and friends who go to see them off. There is no attempt made to separate passengers from their friends, who apparently all go on board together in one living stream up the gangway ladder. It seems to us therefore impossible to believe that the counting done under these circumstances could ever hope to be either accurate or satisfactory. We even go further in our belief that the Calcutta police knowingly spend very little pains over this portion of their duty, trusting to the more conscientious method of counting they hope may be practised by the Chandbally police on the arrival of the vessel at that port. It is not seriously contended by the Calcutta police that they make any further effort to ascertain the number of passengers who arrive from Chandbally than an application to the Captain or Chief Mate of each vessel for the information they require; and the evidence shows that the passengers are permitted to scramble down the side of the vessel into boats and find their way to the shore long before the vessel reaches her moorings, where the police boat with the officer charged with the duty of counting arriving passengers is in waiting for her. A duty so perfunctorily performed by the police in Calcutta finds worthy imitation by their brethren in Chandbally. At that port the vessel goes alongside a jetty, and the passengers are supposed to embark and disembark over a stage about six feet in width. Here, again, the task of counting rests with a Native subordinate officer alone. We have it in evidence that the steamers arrive at Chandbally both by day and night; that boatloads of passengers follow a ship after she has left her moorings; and that passengers reach the shore in boats before the vessel gets alongside the jetty. Even the witness Captain Palmer, who was prepared to pledge his word as to the accuracy of the counting done at Chandbally, is forced to admit that under the system of counting which he claims to have introduced mistakes to the extent of ten or twelve passengers might occur. In our opinion it is very problematical whether Captain Palmer did interest himself in the task of counting the passengers to the extent he would fain have us believe. Mr. Augier bluntly declares that Captain Palmer never had anything to do with the counting, while Juggabundo Chatterjee puts Captain Palmer's exertions no higher than an occasional visit to the jetty to watch the passengers land. On the whole, we feel much more disposed to accept Mr. Augier's version of the manner in which the counting was performed; and we say this after giving due weight to the circumstances urged by Counsel who appear on behalf of Messrs. Macneill and Company against placing any reliance on the statements made by this witness. Holding, therefore, these views in connection with the manner in which the counting was done both in Calcutta and at Chandbally, the conclusion forces itself upon us that every inducement exists for the Captains, or even for the owners of the vessels engaged in the Chandbally trade, to avail themselves of the opportunity to carry more than the licensed number of passengers.

Evidence  
of Captain  
Palmer and  
Mr. Augier.

We do not understand that any serious objection is made to the conclusion we have arrived at on this point. It has, however, been urged upon us that the conduct and character of Captain Irvine as described by the witnesses is a safe indication that he would not contravene the law. This argument, however, has not much weight with us: it might have been made equally applicable to the case of Captain Spence if unfortunately his ship, the *Curlew*, had foundered with all on board instead of the *Sir John Lawrence*. But we have it from Captain Spence's own mouth that he was convicted on one occasion of carrying 70 passengers in excess. We therefore decline to allow our opinion in the matter to be influenced by any *a priori* views entertained of Captain Irvine's character by his friends. The safer, and we think the wiser, course is to follow the indications given by the evidence before us. Leaving Neustein out of the question, we have Leech's statement that the *Sir John Lawrence* occasionally carried during his time between 1,300 and 1,400 passengers; there is also the evidence of the Native witnesses in the case of the closely-packed condition of the awning deck and part of the main deck. We do not, however, place very much stress on this portion of the evidence, because it is clear that at the moment when these witnesses made their observations there must have been an appreciable number of friends with the intending passengers. But by far the most cogent part of the evidence comes from the witnesses representing the interests of the owners. Mr. Mackenzie tells us that the sale of tickets to passengers for the *Sir John*

Mr. Leech's  
evidence.

Mr. Mac-  
kenzie's evi-  
dence.

*Lawrence* on the occasion of her last voyage began at Rs. 3 and gradually rose to Rs. 6. He also informs us that his firm sold 710 tickets for that voyage: of these some 30 to 40 passengers went by the *Mahratta*. He also tells us that he refunded money on 21 of these tickets after the vessel had started. It is therefore obvious that the *Sir John Lawrence* started that morning with only 669 passengers holding tickets. The police, however, tell us that the *Sir John Lawrence* left with her full complement—735 all told. It must therefore follow with mathematical certainty that there were at least 66 passengers on board who had no tickets. The Captain was aware that the price of tickets had risen to six rupees. We may safely therefore assume that Captain Irvine would have been justified, and indeed did collect that sum from each of the candidates who came on board without tickets, which gives in the aggregate Rs. 396. Now Mr. Currie, who was put forward to give the Court information of the manner in which Messrs. Macneill and Company arranged for the sale of their tickets to passengers journeying to Chandbally, describes what he calls the “deck collections” (which, if we understood him rightly, not only included money for extra luggage, but the sums paid by passengers who had no tickets) as comparatively insignificant sums ranging from Rs. 5 to Rs. 20, and perhaps on extraordinary occasions being as much as Rs. 100. We consider it a curious and somewhat ominous contrast to this evidence that on the only occasion when it was possible to test the accuracy of these calculations we find that the difference lies between a sum of Rs. 396 and Rs. 100. A further circumstance worthy of note is the evidence, quite uncontradicted, that a party of Native passengers holding tickets issued for that voyage by Messrs. Macneill and Company were foiled in their attempt to go on board the *Sir John Lawrence* as early as 9 o'clock in the evening, the Captain basing his refusal on the ground that the ship had already received her full complement of passengers. Now, we know on unimpeachable evidence that nothing like the full number of tickets was sold by Messrs. Macneill and Company for that voyage: how came it, therefore, that the vessel had taken in her full complement of passengers at that comparatively early hour, except on the supposition that the Captain, mindful of the fact that every passenger taken on board without a ticket represented a larger margin of profit than a ticket-holder, preferred filling up the space at his disposal with passengers at Rs. 6 a head than with passengers the possessors of tickets sold beforehand at less remunerative rates?

Mr. Currie's  
evidence.

Conclusion.

From these circumstances we come to the conclusion that the *Sir John Lawrence* did on the morning of the 25th May proceed on her voyage, taking with her a larger number of passengers than she was entitled to carry. We think that Captain Irvine was undoubtedly aware of this fact.

“Impres-  
sion” on  
manner in  
which pas-  
senger traffic  
is conducted.

Before leaving this branch of the subject, we think it desirable to place on record the impressions we have formed in connection with the manner in which the passenger traffic is conducted between Calcutta and Chandbally. We use the word “impressions” advisedly, because this was a subject which only came before us indirectly, in so far as it could be made relevant to the question of the seaworthiness of the *Sir John Lawrence*. Such evidence, however, which has been forthcoming has forced upon us the very uncomfortable feeling that the interests of the passengers are not sufficiently safeguarded, and that the subject is one worthy of the serious attention of the Government. We have already given reasons for the belief we entertained that the counting of the passengers both in Calcutta and Chandbally is so unsatisfactory as to be almost useless, and that there is practically, therefore, every temptation for indulgence in an illicit traffic in passengers. It is clear also that this temptation is, if possible, aggravated by the profits, which at certain periods of the year must be enormous. The normal rate for passengers is, we are told, Rs. 2. This charge, however, as we know, often trebles itself before an appreciable number of intending passengers have had time to secure their tickets at the normal rate. The increase in the profit therefore obtainable on the Rs. 2 scale can be calculated by a simple sum in multiplication, and will give, if the experiment is tried, a sufficiently startling result. We have it on Mr. Mackenzie's own evidence that his firm reposed implicit confidence in Captain Irvine, and placed no check or restraint upon the manner in which he conducted the passenger traffic on board his ship. Mr. Mackenzie further failed to explain how it came about that the Captain refused to receive on board eleven passengers

armed with tickets at Rs. 3 a head at so early an hour as 9 o'clock in the evening, when, as he himself admits, the full number of tickets had not been sold for that voyage. This incident in our opinion shows that the supervision which is apparently exercised by Messrs. Macneill and Company over this branch of their trade is both loose and unsatisfactory, and only emphasises the necessity for the Government to take upon itself the performance of a duty which the owners and agents apparently deem it undesirable to assume.

Government supervision suggested.

We are also strongly of opinion that the number of passengers carried under the rules as they at present exist results in overcrowding, and entails much discomfort on the passengers. The facts on which the Government limit is based should, we think, be looked into and revised. In no case in our opinion should passenger space have been permitted between decks on the *Sir John Lawrence*. The ventilation, so far as we could judge, in this part of the vessel was both scanty and imperfect, and on the occasions when passengers were forced below must have resulted in much suffering. We say nothing on the question of sanitation, because this point was not even indirectly before the Court, except the single remark that in our opinion the matter should have the attention of some competent medical officer before vessels are permitted to carry Native passengers.

Rules at present in force result in overcrowding.

There remains only one more point, and in some aspects it is perhaps the most important one we had to consider during the course of this long and protracted inquiry. We allude to the manner in which the surveys of ships are conducted under the auspices of the Port Commissioners and Port Officer of Calcutta. The requirements of the law as they obtained on the date when the *Sir John Lawrence* foundered at sea are to be found in the *Inland Steam Vessels' Act of 1884*, the *Indian Steam Ship Act of the same year*, the *Native Passenger Act of 1876*, and in the *Indian License Act Amendment Act of 1880*. The surveys apparently under Act VII of 1884 are to be made by Surveyors appointed in that behalf by the Local Government. The declaration given to the Master of a ship after the survey of his vessel by a duly qualified Surveyor has to be presented to an officer appointed to receive it by Government—in this case the Vice-Chairman of the Port Commissioners. If the Local Government (apparently on the authority of the Vice-Chairman) is satisfied that the declaration is in accordance with the requirements of the Act, a duplicate copy of that certificate is delivered through an officer appointed for that purpose to the Master of the ship. We are not aware whether the officer to whom this duty is assigned is the Vice-Chairman of the Port Commissioners or the Port Officer. The same procedure in the matter of survey is prescribed in the *Inland Steam Vessels' Act of 1884*. We assume that the officer under this Act directly responsible to Government for the manner in which surveys are conducted under that Act is, as in the case of the surveys held under the *Steam Ship Act of 1884*, the Vice-Chairman to the Port Commissioners. Under the *Native Passenger Act of 1876* the Master, owner, or agent of any ship in which it is intended to carry Native passengers is bound to give notice of that intention to the officer authorised in that behalf by the Local Government, who happens to be, as Mr. Bushby informs us, the Port Officer, Captain Stiffe. That officer is therefore authorised, either himself or by his delegate, to enter and inspect the vessel, and the fittings, provisions, and stores, and on satisfying himself that he can safely do so, grant two certificates, known respectively as Certificate A and Certificate B. No vessel carrying passengers can obtain her port clearance unless these certificates have been filed with the officer charged with the duty of receiving them. Certificate A contains the declaration that the ship is seaworthy and properly equipped, fitted, and ventilated, and the number of passengers she is capable of carrying. The particulars of Certificate B will be found set forth at length in section 11 of the Act, and include, *inter alia*, the statement of the complement of the number of officers and seamen, the quantity of pure water and fuel and other things made requisite under section 46, the nature of the voyage, and the existence of substantial bulwarks, double awning, and other sufficient protection against the weather. The conclusions we draw from this exposition of the law as it existed at the time, is that at any rate so far back as the year 1884 it was the intention of the Legislature that there should be two separate and distinct surveys made in the case of steam-ships which at the same time happened to be Native passenger steam-ships,—one conducted by a Surveyor under the direct control of the Port Commissioners,

Surveys how performed under auspices of Port Commissioners and Port Officer.

Under Act VII of 1884.

Under Act VI of 1884.

Under Native Passenger Act of 1876.

Certificate  
A.

and the other conducted by Surveyors (not one Surveyor, as in the former case), for which the Port Officer is directly responsible. Captain Stiffe, the Port Officer, was called as a witness in this inquiry, and when questioned on the manner in which he discharged the duties imposed upon him by the Act of 1876, says that so far as the granting of Certificate A is concerned he is, under definite instructions to that effect given him by the Local Government, compelled to accept the materials requisite for that certificate furnished him by the Port Commissioners' Office, and apparently taken from the declaration made by their Surveyor after his survey held under one or other of the steam-ship Acts of 1884. In support of this statement Captain Stiffe has filed an official letter received from Government, and bearing date the 16th January 1884, and marked exhibit R in this case. We do not know, and indeed are not concerned with, the reasons which may have weighed with the Government in sending such letter; nor indeed does it concern us to inquire whether Captain Stiffe was justified in placing the interpretation upon the directions contained in it he apparently seems to have done. We only desire to note the fact that Captain Stiffe has considered himself, on the authority of this letter, absolutely absolved from any responsibility imposed upon him by the Act in the issue of this certificate. In order to indicate how far Captain Stiffe has carried this repression of his official self, we may point out that he admits that he has no personal knowledge of Mr. John Mackellar's capacities as a Surveyor. He asserts that he does not recognise this gentleman as a Surveyor, yet we find him accepting declarations made by this assistant to Mr. Bushby without the slightest demur. The excuse that he has done so because Mr. John Mackellar had, on the occasion when Mr. Bushby was on leave, been gazetted an Engineer-Surveyor by the Government will not explain the occasions when he utilised surveys made by Mr. John Mackellar alone, after the return of Mr. Bushby, for the materials wanted for his Certificate A. The fact therefore remains that Certificate A, instead of being the record of the opinions of independent Surveyors, is simply an empty repetition of the conclusions arrived at by the Surveyor to the Port Commissioners.

Certificate  
B.

With regard to Certificate B, Captain Stiffe admits that he grants it on the bare representation of the owners and agents that the requirements of the law described in the section have been complied with. As a matter of fact the specimens of Certificate B which fell under our notice were not even signed by Captain Stiffe, but by Mr. DeSilva, his head assistant—a fact which makes it extremely probable that the Port Officer seldom sees these certificates before their issue. With these facts before us, we deem ourselves amply justified in coming to the conclusion that the surveys insisted upon by the Native Passenger Act of 1876 have no real or independent existence. If this assumption be correct, we are thrown back on the survey held under the Acts of 1884 to discover the manner in which such duty is performed by the officers appointed thereunder. We find that the surveys for which the Port Commissioners are responsible are conducted by two officers—Messrs. Bushby and John Mackellar, sometimes acting in concert, but more often separately. Mr. Bushby was at one time a Board of Trade Surveyor. He combines within himself also the double qualifications of Engineer and Shipwright Surveyor, and, so far as his professional capacity is concerned, we readily admit him to be in every way fitted for the responsible position he holds. The case, however, is different with Mr. John Mackellar. Before receiving his present appointment Mr. John Mackellar was Chief Engineer on board a British India steamer. Throughout his career he has served in some such capacity the owners and agents of that Company, if we except a brief period of 1½ years spent in the British and African service. He himself admits that he is not a Shipwright Surveyor, and has no qualifications for the post. He was apparently nominated to his present appointment by Mr. Bushby, who set him a series of examination papers, which he answered to the best of his ability, and shortly afterwards found himself gazetted as Assistant Surveyor to Mr. Bushby.

Messrs.  
Bushby and  
John Mac-  
kellar.

Mr. John  
Mackellar's  
qualifica-  
tions.

We have been unable to discover any rules framed for the purpose of insuring the necessary qualifications in an Engineer-Surveyor. We are told they do not exist. Be that as it may, a very elaborate procedure is prescribed to secure the appointment of competent persons as Ship Surveyors under Chapter 4 of Act VII of 1880. Mr. John Mackellar admittedly never passed for a ship Surveyor. It is urged on his behalf that having been gazetted by the Local



Government he could legally discharge the duties of both an Engineer-Surveyor and Ship Surveyor combined. Whether this argument be a valid one or not, it is certain that Mr. John Mackellar does perform both duties. He himself tells us that, although he has no qualifications as a Ship Surveyor, he, independently of Mr. Bushby altogether, surveys something over 100 vessels in the year; Mr. Bushby and he apparently dividing the year's work between them. There is, therefore, no escape from the conclusion that quite one-half of the vessels surveyed during the year are entrusted for that purpose to an officer whose qualifications as an Engineer-Surveyor are problematical, and who is manifestly by previous training quite unfitted to discharge the duties of Ship Surveyor. The argument that the fact of Mr. John Mackellar having been gazetted by Government should silence any criticisms on his qualifications seems to us absolutely futile. Even if this were true, it only goes to show that the Local Government has been induced, for reasons of which we are ignorant, to ratify Mr. John Mackellar's appointment as a Surveyor without calling upon him to pass the necessary examinations, and in exercise of extraordinary powers reserved to it under the law. But it is by no means certain that the Government ever intended that Mr. John Mackellar should be permitted to exercise the double duty of Engineer and Ship Surveyor. Such evidence as we have before us points quite the other way. The only official notification we have seen in connection with this matter was the one which appoints Mr. John Mackellar to act for Mr. Bushby in the absence of that gentleman on leave; and in that notification the Government, we see, is careful to restrict Mr. John Mackellar's duties to those of an Engineer-Surveyor alone. Indeed the succeeding paragraph to that notification was one which appointed Mr. Duncan Mackellar (Lloyds' Surveyor) to act as Ship Surveyor to Government and assist his namesake in the surveys he might be called upon to make in the absence of Mr. Bushby. From this it seems to us clear that the Local Government never intended Mr. John Mackellar to perform the duties of a Ship Surveyor, but that this is just what he, ever since the return of Mr. Bushby, has been doing with, we presume, the full knowledge and consent of the Port Commissioners. The facts therefore, so far as Mr. John Mackellar is concerned, are that he, an old servant of the British India Steam Navigation Company and the Rivers Steam Company, is left untrammelled by any supervision whatsoever to perform duties which, according to his own showing, he is to a great extent manifestly unfitted to perform, and which in a large number of cases is exercised in respect of ships the property, either directly or indirectly, of his old employers.

Mr. John Mackellar acts as Engineer and Ship Surveyor.

More than 100 vessels surveyed by John Mackellar alone in the year.

Mr. John Mackellar gazetted Engineer-Surveyor only.

We have already expressed our opinion of the professional capacity of Mr. Bushby. That the Local Government fully shared in this opinion is apparent from the fact that Mr. Bushby shortly after his arrival was gazetted to various appointments, which practically placed the surveys of nearly every vessel in the port in his hands. The magnitude of the responsibility entrusted to him discloses itself when we come to remember that in India we have no equivalent for what is known as "Lloyds' Rules." A glance at the bulky volume containing these rules shows that they relate to the minutest details connected with the construction and equipment of a ship. The survey of a vessel, therefore, when conducted in England, is for the most part a mechanical performance, requiring no more special knowledge than would be necessary to see that the requirements specified in the rules have been complied with in the construction and equipment of the vessel under survey. In Calcutta, on the contrary, the case is altogether different. Mr. Bushby tells us the question whether a ship shall or shall not pass his survey is left entirely to his discretion. As a matter of precaution he occasionally consults the Board of Trade's requirements or adopts so much of Lloyds' Rules as he may deem desirable. He keeps no notes or memoranda of any of his surveys, and therefore possesses no reliable data upon which he could afford trustworthy evidence as to the manner in which he performed any particular survey. Mr. Bushby is a gazetted officer of the Government, and is in receipt of a salary of Rs. 1,000 per month. The proceeds of the fees paid for his services go to the Port Commissioners and increase their revenues, according to Mr. Bushby, by a yearly sum of Rs. 20,000. Mr. Bushby informed us that beyond his monthly salary he received nothing in the shape of fees. He, however, omitted to mention (it is only fair to say

Extent of Mr. Bushby's jurisdiction as Surveyor to the Port Commissioners.

His discretion practically unlimited.

Cheque of Rs. 1,000 sent to Mr. Bushby by owners or agents of the "Sir John Lawrence."

Mr. Mackenzie's explanation of this action discussed.

Effect of such incident on mind of Court.

Mr. John Mackellar's evidence.

Reform in method of surveys as at present conducted urged upon the Government.

Evidence of Mr. Pedler, Meteorological Reporter.

Suggested addition to Storm Signal Code.

Cable between Port Blair and main land.

Cable between Diamond Island and Bassein.

Conduct of cases before Marine Courts of Enquiry should be entrusted to firm of Solicitors.

the question was not put to him in direct form) that he had been offered, and we presume accepted, a cheque for Rs. 1,000, presented to him by Mr. Mackenzie, one of the partners in the firm of Macneill and Company, as an honorarium for professional advice given that firm in respect of certain alterations connected with the hull of the *Sir John Lawrence*. Mr. Mackenzie's explanation of the circumstance is that the money was given for Mr. Bushby's "professional advice as to the requirements of the Board of Trade in regard to the alterations in the hull of the vessel; Mr. Young, our Superintending Engineer, who carried out the repairs, not being cognisant what those requirements were." In the absence of any explanation of this circumstance which Mr. Bushby may hereafter be in a position to afford, we do not desire to add our comments upon an incident which came upon the Court with a shock of painful surprise. We deem it, however, our duty to point out that Mr. Mackenzie's explanation, instead of alleviating, tends rather to deepen, the sinister aspect of the action. The question may naturally be asked why the owners and agents of the vessel should so suddenly have conceived a desire that their vessel, which was apparently never intended to travel beyond the local coasting trade, should be made to comply with the requirements necessary for vessels employed in foreign trade. Nor can we understand how it came about that the payment of the money admittedly earned in 1883-84 was delayed until 1886. We do not feel ourselves called upon to say more on this incident except the remark that it has thrown a shadow of suspicion and doubt over the whole of the evidence given by Mr. Bushby, and has forced us to place him in the category of a witness whose word, so far as the facts of this case are concerned, needs the support of corroborative proof.

We have now indicated the value we set on the evidence given by Mr. Bushby; that given by Mr. John Mackellar was not altogether satisfactory. We are not in a position to accept his version of the facts connected with the examination of the chain cable in the October survey of 1886; and we think the reluctance he exhibited to produce his diary containing the details of the survey of the *Sir John Lawrence* in April of that year extremely reprehensible. We also fail to understand how he brought himself to give the necessary certificate after the October survey of the *Sir John Lawrence*, when at the moment when he signed that certificate the windlass was in an absolutely unserviceable condition. His explanation that the certificate could be granted with the windlass still in the state in which he described it is in our opinion both erroneous and absurd.

The deductions which follow upon the facts we have here indicated lie so completely upon the surface that we refrain from adding more than the expression of an earnest hope that the Government will take into its early and serious consideration the thorough revision and reform of the method of surveys at present observed in the Port of Calcutta.

The evidence given by Mr. Pedler, the Meteorological Reporter to the Government, has afforded us interesting and important information on the rise and progress of the cyclone across the Bay of Bengal. We desire to make one or two practical suggestions on the strength of the evidence so given. In the first place we think a new signal should be added to the Code, which, irrespective of the nature and probable position of an approaching cyclone, should, when hoisted, serve as an imperative prohibition to any ship, whatever her draft or size, from going to sea. We also echo with emphasis the suggestion that telegraphic communication should be established between Port Blair and the main land, and that the telegraph cable between Diamond Island and Bassein should be subjected to a thorough and careful supervision, so as to minimise the prospect of what indeed happened on this occasion—the sudden cessation in the punctual despatch of important information at a time when its value was incalculable.

We desire to point out that the incidents of this case have brought into strong relief the inconvenience involved in leaving the conduct of an inquiry of this protracted and intricate kind to a department which has no machinery at its disposal for collecting and tabulating evidence before the date fixed for such inquiry. In making this remark we have no wish to comment unfavourably on the way Mr. Kilby performed the long and arduous labours thrown upon him. We deem it, however, desirable that for the future the conduct of a Marine



Court Enquiry likely to involve a protracted hearing should be entrusted (as indeed is the case in England) to a firm of Solicitors charged with the special duty of collecting the necessary materials before the matter is deemed ripe for the consideration of members forming such Court of Enquiry.

The conclusions we have arrived at after this long and protracted inquiry may shortly be epitomised as follows :—

1. That the *Sir John Lawrence* foundered at sea with all hands on board probably between the Ridge Light and Palmyra Point; that Captain Irvine, who perished in the vessel, committed an act of foolhardiness, almost criminal in its nature, in taking the vessel out to sea on the morning of the 25th of May.
2. That the vessel, with the exception of the plating in her upper structure, which was abnormally thin, was in other respects seaworthy.
3. That the *Sir John Lawrence* carried more than her proper complement of passengers when she started on her last voyage, but that such overcrowding, in the face of the violent cyclone she encountered, aided very little, if anything, in hastening the disaster which befel her.
4. That the method of survey adopted under the auspices of the Port Commissioners and Port Officer is extremely unsatisfactory, and in urgent need of speedy and thorough reform.
5. That the Storm Signal Code can be amended with advantage; that cable communication should be established between the Andamans and main land; and that the cable already in existence between Diamond Island and Bassein should be overhauled and placed in a state of thorough repair.

Epitome of conclusions.

We have the honour to be,

SIR,

Your most obedient servants,

C. H. REILY,

*Chief Presidency Magistrate and President of  
Marine Court of Enquiry.*

HENRY DESMIDT,

*Marine Surveyor.*

EDWARD TRELAWNY.

} *Members.*





SUPPLEMENT TO  
**The Calcutta Gazette.**

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## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 15th October 1887.

| No.                       | District and date of return. | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|---------------------------|------------------------------|---------------------------------------|---|
| <b>BENGAL.</b>            |                              |                                       |   |
| <i>Western Districts.</i> |                              |                                       |   |
| BURDWAN DIV.              | 1 Burdwan, Oct. 15, '87      | 1.19                                  | Weather—cloudy and rainy for the most part of the week. Rain has considerably improved prospects, but rice in northern portion of Cutwa sub-division still suffering. More rain wanted generally. Prices pretty stationary except in Cutwa, where there has been another rise. Fever prevalent.   |
|                           | Culna, ...                   | 0.55                                  |   |
|                           | Cutwa, ...                   | 0.59                                  |   |
|                           | Raneergunge, ...             | 0.78                                  | Weather—dry, but cloudy. There have been light showers here and there which may have slightly benefited the <i>aman</i> rice. The plants on high lands have died out; those on low lands have been to some extent saved for the time being by waters drawn from neighbouring tanks. <i>Aus</i> has given an average crop. <i>Kelas</i> is being cut. Other crops are doing well. Prices are gradually rising. Public health fair. |
|                           | 2 Bankoora, „ 15, '87        | 0.33                                  |   |
|                           | Bishupore, ...               | 0.82                                  | Weather—cool and cloudy with frequent showers. The rainfall came “in the nick of time” for the fast ripening <i>aman</i> paddy. Had the drought lasted a week longer, the crop would have suffered irretrievably. As things are, it is safe for the present; but steady rain is needed at frequent intervals for the next fortnight. Prices rising. Public health very indifferent.   |
|                           | 3 Beerbhoom, „ 15, '87       | 2.81                                  |   |
|                           | Rampore Haut, ...            | 0.82                                  | Weather—moderately hot and muggy. Crops are reported to be good except in Ghatal, where rain was wanted. There has been 1.52 of rain there during the past week.  |
|                           | 4 Midnapur, „ 15, '87        | 2.89                                  |   |
|                           | 5 Hooghly, „ 15, „           | 2.16                                  | Weather—cloudy during the week with occasional rainfall. Prospects of winter rice have improved by rain. Rain still wanted. Public health good except in the Sudder and Jehanabad sub-divisions, where fever is reported.   |
| PRESIDENCY DIV.           | Serampore, ...               | 0.96                                  |   |
|                           | Jehanabad, ...               | 0.76                                  | Weather—cloudless with dry north-westerly wind. Recent rain has improved the prospect of <i>aman</i> . Lands are being prepared for <i>rubber</i> sowings. Prospect of sugarcane in the south very satisfactory, but more rain wanted for rice there.   |
|                           | Howrah, „ 15, '87            | 1.56                                  |   |
|                           | Oodoberiah, ...              | 0.68                                  | Weather—clear, bright and cool. Heavy rain throughout the district has much improved prospects of <i>aman</i> which are very favourable. Public health good.  |
|                           | 6 24-Perghs., „ 15, '87      | 1.16                                  |   |
|                           | 7 Nuddea, „ 15, „            | 4.38                                  |   |
|                           | Kushtea, ...                 | 2.48                                  | Weather—air cooler, sky cloudy. Rain has done much good to <i>aman</i> crop. Sowing of winter crops progressing. River levels have fallen rapidly. Fever prevalent.   |
|                           | Meherpur, ...                | 0.68                                  |   |
|                           | Chudanga, ...                | 3.19                                  | Weather—rainy and cool. Prospect of <i>aman</i> crop favourable. Rain of the week has done great good to the standing crop and to ploughing for winter crop. Some fever prevails. General health good.  |
|                           | Ranaghat, ...                | 1.99                                  |   |
| RAJSHAHY DIV.             | 8 Khoolna, „ 15, '87         | 3.18                                  | Weather—tolerably cool. Prospects of <i>aman</i> bettered by the rain of the week. Lands are being tilled for cold-weather crops. Fever reported from Jhenidah and Magura.  |
|                           | 9 Jessore, „ 15, „           | 2.05                                  |   |
|                           | Jhenidah, ...                | 4.5                                   | Weather—cloudy and rainy. Prospects of <i>aman</i> , <i>rahar</i> and <i>til</i> good. <i>Kalai</i> and <i>moong</i> are being sown. Late rain has improved the prospect in Kandi, where common rice now sells at 25 seers per rupee.   |
|                           | Magurah, ...                 | 2.73                                  |   |
|                           | Narail, ...                  | 0.9                                   | Weather—cloudy. State and prospects of <i>haimanti</i> paddy and sugarcane good. Rice 24 seers per rupee.   |
|                           | Bongog, ...                  | 5.12                                  |   |
|                           | 10 Moorshedabad, „ 15, '87   | 3.87                                  | Weather—cloudy with occasional showers throughout the week. Rain has done great good to <i>aman</i> paddy and other standing crops. Public health fair.   |
|                           | Kandi, ...                   | 1.35                                  |   |
|                           | 11 Dinagepur, „ 15, '87      | 1.48                                  | Report not received.  |
|                           | Thakurgaon, ...              | 0.17                                  |   |
| RAJSHAHY DIV.             | 12 Rajshahye, „ 15, '87      | 4.46                                  | Weather—rainy and cool. State and prospects of crops now very satisfactory.   |
|                           | Natore, ...                  | 1.32                                  |   |
|                           | Nowgong, ...                 | 1.76                                  | Weather—rainy and cloudy. State and prospects of crops good. Jute harvested. General health good.   |
|                           | 13 Rungpur, ...              | ...                                   |   |
|                           | 14 Bogra, „ 15, '87          | 2.79                                  | Weather—rainy. State and prospects of crops favourable.   |
|                           | Sheepur, ...                 | 1.44                                  |   |
|                           | Nowkhilla, ...               | 3.86                                  | Weather—rainy throughout the week. The rain that has fallen this week will do much good to the winter rice. Lands are being ploughed for tobacco and mustard. Common rice sells at 20 seers per rupee at the Sudder station. Public health generally good.  |
|                           | 15 Pubna, „ 15, '87          | 2.46                                  |   |
|                           | Serajgunge, ...              | 1.09                                  | Weather—hot and cloudy in the latter part of the week. <i>Ashrini</i> paddy being harvested. Sowing of pulses commenced. Rain has done much good to the crops. Prospects of crops and public health good.   |
|                           | 16 Darjeeling, „ 15, '87     | 3.14                                  |   |
| Dacca DIVISION.           | 17 Julpigoree, „ 15, „       | 2.67                                  | Weather—cloudy and showery. State of <i>aman</i> good. Cultivation for winter crops commenced. Public health fair.  |
|                           | 18 Dacca, Oct. 15, '87       | 3.73                                  |   |
|                           | Manickgunge, ...             | 0.56                                  | Weather—days hot, nights comparatively cool. Prospects of crops good. General health fair.  |
|                           | Munshigunge, ...             | 0.50                                  |   |
|                           | N.raigunge, ...              | 1.25                                  | Weather—rainy and cloudy. State and prospects of crops good.  |
|                           | 19 Furreedpur, „ 15, '87     | 2.85                                  |   |
|                           | Goswando, ...                | 4.31                                  | Weather—rainy and cloudy. State and prospects of crops good.  |
|                           | Madanipore, ...              | 1.94                                  |   |
|                           | 20 Backergunge, „ 14, '87    | 3.60                                  | Weather—rainy and cloudy. State and prospects of crops good.  |
|                           | Mymensingh, „ 14, '87        | 1.86                                  |   |
| Dacca DIVISION.           | Jamalpur, ...                | 0.84                                  | Nil   |
|                           | Kishoregunge, ...            | Nil                                   |   |
|                           | Attea, ...                   | 0.26                                  | Nil   |
|                           | Netrokona, ...               | 0.22                                  |   |

| No                                 | District and date of return     | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|------------------------------------|---------------------------------|---------------------------------------|---|
| <b>BENGAL—contd.</b>               |                                 |                                       |   |
| <i>Eastern Districts—contd.</i>    |                                 |                                       |   |
| CHITTAGONG DIVN.                   | 22 Chittagong, Oct. 18, '87     | 1.95                                  | Weather—seasonable. Early <i>aman</i> crop in ear. Prospects fair. Price steady. Public health generally good.  |
|                                    | 23 Nonkholly " 14, "            | 1.57                                  | Weather—seasonable. Recent rain has much improved the prospects of the <i>aman</i> crop. Public health fair.  |
|                                    | 24 Fenny " " "                  | 1.80                                  |   |
|                                    | Tipperah " 13, "                | 0.60                                  | Weather—very hot and rain in sufficient quantity is still keeping off. The crop on the low lands is safe as yet; that on the high lands is perishing; some rain has fallen, but a great deal more is still required.  |
|                                    | Brahmanbariah " " "             | Nil                                   |   |
|                                    | Chandpur " " "                  | 1.52                                  | Weather—hot during day. Morning foggy throughout the week. Gathering of jum paddy still continues. Cotton doing well. Early paddy on low lands flowering in some places. Rain wanted. Lands are being prepared for mustard.   |
|                                    | Chittagong Hill Tracts, " 11, " | 1.40                                  | Weather—hot during day. Morning foggy throughout the week. Gathering of jum paddy still continues. Cotton doing well. Early paddy on low lands flowering in some places. Rain wanted. Lands are being prepared for mustard.   |
|                                    | 25 Hill Tipperah " 12, "        | Nil                                   | Weather—nights and mornings cool and days hot. <i>Amun</i> paddy not doing well for want of rain. Prospects of sugarcane fair. Jum crops gathered; outturn moderate. Public health good.  |
| <b>BEHAR.</b>                      |                                 |                                       |   |
| PATNA DIVN.                        | 26 Patna, Oct. 15, '87          | 2.68                                  | Weather—cool during the latter part of the week with continuous rain and high wind for two days. Rain has much benefited the paddy crop which was suffering, and will improve the prospects of <i>rubbi</i> which has already commenced to be sown in some places. <i>Rahar</i> , cotton and sugarcane look well. Public health good.   |
|                                    | 27 " " " 15, "                  | 0.70                                  | Weather—seasonable. Cloudy. Paddy still suffering for want of rain. The small quantity of rain has enabled the agriculturist to sow <i>rubbi</i> , but has not been sufficient for paddy. Fever reported from all parts of the district and cholera from the Sudder thana.  |
|                                    | 28 Shahabad " 15, "             | 4.00                                  | Weather—fair in the early part of the week, but rainy and cloudy in the latter part. Recent rainfall will do much good to paddy and will facilitate <i>rubbi</i> sowings which have commenced. Prospects continue hopeful, except in Bhabua sub-division. Public health generally good. Some fever and cholera reported from sub-divisions.   |
|                                    | Buxar " " "                     | 2.61                                  |   |
|                                    | Sasaram " " "                   | 2.58                                  |   |
|                                    | Bhabua " " "                    | Nil                                   |   |
|                                    | 29 Darbhanga " 15, "            | 1.64                                  | Weather—rainy during the latter part of the week. Rain has greatly benefited the rice crop. It is expected that a good crop will be secured. <i>Rubbi</i> sowing has commenced in places. Prices remain stationary. Public health generally good.   |
|                                    | 30 Mozafferpur " 15, "          | 2.57                                  | Weather—at first hot and cloudy, latterly strong easterly winds and heavy rain has benefited immensely the rice crop and the <i>rubbi</i> cultivation. Fever is rather prevalent.   |
|                                    | Hajipur " " "                   | 1.26                                  |   |
|                                    | Sitamarhi " " "                 | 4.10                                  |   |
| BHAGIPORE DIVN.                    | 31 " " " 15, "                  | 3.33                                  | Weather—cool since 14th. Heavy rain during the week has greatly benefited paddy which would have otherwise been a failure. It will also do much good to <i>rubbi</i> . Public health generally good.  |
|                                    | Saran " " "                     | 0.38                                  |   |
|                                    | Sewan " " "                     | 0.38                                  |   |
|                                    | Gopalgunge " " "                | 3.32                                  | Weather—rainy and windy. The rainfall of the week has been very beneficial to the rice crop, rendering its prospects excellent. It has also facilitated the sowing of <i>rubbi</i> which has already commenced in the district. Public health good. Prices stationary.  |
|                                    | 32 Champaran " 15, "            | 3.75                                  | Weather—hot and sultry in the first part of the week, cloudy and stormy in the latter part. Prospects of winter rice very much improved by rain on the night of 14th. Sowing of <i>rubbi</i> crops is being pushed on. Public health generally good, except a few cases of cholera in Monohyr.  |
|                                    | Bettiah " " "                   | 6.19                                  |   |
|                                    | 33 Monohyr " 15, "              | 0.64                                  | Weather—unsettled since 12th. Scope reports no rain up to 12th, but the rain since then is believed to have been general, and if it has been so an average rice crop is secured. <i>Rubbi</i> sowings going on and prospects generally improved.  |
|                                    | Begaserai " " "                 | 0.10                                  |   |
|                                    | 34 Bhagalpur " 15, "            | 1.33                                  | Weather—hot in the earlier and rainy in the latter part of the week. <i>Aghani</i> will benefit greatly by the rain that has fallen and should now be a very good crop. Minor crops doing well. Public health exceptionally bad even for this district and season.  |
|                                    | Banka " " "                     | 2.65                                  | Weather—seasonable. The showers which have fallen on and off throughout the week have done much good to all crops, of which the prospects are now favourable. Common rice selling at an average of 22 seers per rupee. Fever prevalent.   |
| ORISSA.                            | 35 Purnea " 15, "               | 1.25                                  | Weather—cloudy with partial showers in the west and heavier rain in the east. East side of the district secure as regards <i>aghani</i> rice. West and north have had a little rain, but not enough. Some good rain at head-quarters to-day (15th). Public health fair, but fever in Rajmehal.  |
|                                    | Ki-sengunge " " "               | 1.88                                  |   |
|                                    | Arrah " " "                     | 1.50                                  |   |
|                                    | 36 Maldah " 15, "               | 1.13                                  | Report not received.  |
|                                    | Chanchal " " "                  | 1.48                                  | Weather—cloudy and rainy. <i>Sarat</i> crops have in many parts been benefited by the recent rain; but it has come too late to do much good in the Chitka tracts, or on the high lands elsewhere. <i>Lagha sarat</i> is in ear. <i>Rubbi</i> is being sown. Common rice 21 seers 10 chittacks per rupee in the Sudder sub-division and 20 seers 10 chittacks in the Khoorda sub-division. Public health good. |
|                                    | Shibgunge " " "                 | 0.91                                  |   |
|                                    | Gazol " " "                     | 1.30                                  |   |
|                                    | 37 Southal Pergah " 15, "       | 0.90                                  | Weather—cloudy; mornings cool. More or less rain throughout the district. Prospects of crops good. Weeding of <i>sarat</i> crop completed. Public health generally good, except a few cases of fever here and there.  |
|                                    | Deogarh " " "                   | 0.89                                  |   |
|                                    | Goada " " "                     | 0.65                                  |   |
| ORISSA DIVN.                       | 38 Cuttack " " "                | 5.52                                  |   |
|                                    | Poor " 13, "                    | 3.65                                  |   |
|                                    | Khoorda " " "                   | 3.65                                  |   |
|                                    | 40 Balasore " 14, "             | 3.66                                  |   |
| <b>CHOTA NAGPORE.</b>              |                                 |                                       |   |
| <i>South-West Frontier Agency.</i> |                                 |                                       |   |
|                                    | 41 " " " Oct. 14, '87           | 1.18                                  | Weather—cloudy since 12th. Moderate rain. Rain has done much good and agricultural prospects have greatly improved. General health fair.  |
|                                    | 42 Lohardugga " 15, "           | 1.26                                  | Weather—cloudy and cool. Showery at head-quarters. Rain urgently wanted in the interior. Prospects of crops not favourable. Prices as before. Cholera disappearing, but fever prevails in Palamow.  |
|                                    | 43 Singhbhum " 14, "            | 0.19                                  | Weather—cloudy and windy; cool. A little rain reported all over district; more required both for winter rice and <i>rubbi</i> sowings. General health good.   |
|                                    | 44 Manbhum " 15, "              | 0.15                                  | Weather—cloudy and cool. The rain in Godinapore has done much good. In the Sudder sub-division it has been very insufficient and partial. The high land paddy is fast withering and not more than an 8-anna crop can be expected. Public health good.   |

Published for general information.



ral for the month of September 1887.

| DISTRICT OBSERVATIONS. |                      |                       |                                   |                   |                      |            |                            |                                   |       |   | Representative stations.            | DISTRICT.          | METEOROLOGICAL DIVISION. |
|------------------------|----------------------|-----------------------|-----------------------------------|-------------------|----------------------|------------|----------------------------|-----------------------------------|-------|---|-------------------------------------|--------------------|--------------------------|
| RAINFALL.              |                      |                       |                                   |                   |                      |            |                            |                                   |       |   |                                     |                    |                          |
| Of month.              |                      |                       |                                   |                   | Since 15th May 1887. |            |                            |                                   |       |   |                                     |                    |                          |
| Normal mean.           | Variation from mean. | Number of rainy days. | Normal mean number of rainy days. | Mean of district. | Normal mean.         | Variation. | Mean number of rainy days. | Normal mean number of rainy days. |       |   |                                     |                    |                          |
| 6'59                   | 10'67                | -4'08                 | 11'5                              | 16'8              | 34'38                | 45'10      | -10'72                     | 53'6                              | 68'8  | Gopalpore ...                                 | Poorae ...                          | ORISSA.            |                          |
| 6'58                   | 9'06                 | -3'38                 | 13'5                              | 15'5              | 40'75                | 41'82      | -4'07                      | 61'6                              | 68'2  | False Point ...                               | Cuttack ...                         |                    |                          |
| 5'97                   | 11'61                | -5'64                 | 12'0                              | 14'9              | 38'54                | 47'06      | -8'52                      | 57'7                              | 67'5  | Cuttack ...                                   | Balasore ...                        |                    |                          |
| 12'12                  | 11'42                | +0'70                 | 18'0                              | 15'8              | 51'70                | 53'36      | -1'66                      | 71'4                              | 74'5  | Balasore ...                                  | Saugor Island ...                   |                    |                          |
| 6'97                   | 8'16                 | -1'19                 | 10'7                              | 13'1              | 48'17                | 46'17      | +2'00                      | 60'7                              | 64'6  | South-West Midnapore and South 24-Pergunnahs. | Midnapore ...                       | SOUTH-WEST BENGAL. |                          |
| 6'27                   | 8'67                 | -2'40                 | 13'0                              | 16'1              | 37'47                | 46'08      | -8'61                      | 68'2                              | 80'4  | Midnapore ...                                 | Midnapore ...                       |                    |                          |
| 6'65                   | 7'73                 | -1'08                 | 12'7                              | 13'5              | 42'90                | 41'79      | +1'11                      | 65'4                              | 67'8  | Calcutta ...                                  | 24-Pergunnahs, Howrah, and Hooghly. |                    |                          |
| 5'19                   | 8'68                 | -3'39                 | 11'5                              | 14'8              | 48'06                | 47'32      | +0'74                      | 66'8                              | 73'5  | Burdwan ...                                   | Burdwan ...                         |                    |                          |
| 7'33                   | 10'05                | -2'72                 | 11'3                              | 15'8              | 44'96                | 48'10      | -3'23                      | 69'8                              | 75'7  | Bankoora ...                                  | Bankoora ...                        | SOUTH-WEST BENGAL. |                          |
| 10'69                  | 10'37                | +0'32                 | 13'2                              | 14'8              | 55'13                | 44'65      | +10'45                     | 74'8                              | 70'3  | Ranigunj ...                                  | West Burdwan and Beerbhoom.         |                    |                          |
| 9'55                   | 8'54                 | +1'01                 | 13'2                              | 13'5              | 39'12                | 44'49      | -5'29                      | 67'6                              | 69'6  | Berhampore ...                                | Moorsheadabad ...                   |                    |                          |
| 8'39                   | 9'00                 | -0'61                 | 15'6                              | 14'2              | 36'33                | 48'40      | -12'07                     | 69'2                              | 75'8  | Krishnagore ...                               | Nuddes ...                          |                    |                          |
| 8'80                   | 14'04                | -5'75                 | 19'0                              | 17'9              | 82'47                | 105'02     | -22'55                     | 94'9                              | 94'5  | Jessore ...                                   | Jessore and Khoolna ...             | EAST BENGAL.       |                          |
| 10'91                  | 12'87                | -1'96                 | 17'5                              | 20'7              | 54'91                | 71'73      | -16'79                     | 94'3                              | 98'4  | Chittagong ...                                | Chittagong ...                      |                    |                          |
| 11'37                  | 12'45                | -1'08                 | 17'0                              | 19'2              | 50'61                | 70'42      | -19'81                     | 81'8                              | 91'7  | Demagri ...                                   | Chittagong Hill Tracts ...          |                    |                          |
| 8'55                   | 17'36                | -8'81                 | 18'0                              | 18'7              | 63'07                | 99'45      | -36'38                     | 83'3                              | 95'1  | Barrisal ...                                  | Backergunj ...                      |                    |                          |
| 3'80                   | 9'34                 | -5'54                 | 9'7                               | 13'8              | 31'13                | 51'00      | -19'87                     | 59'0                              | 77'8  | Noakhully ...                                 | Noakhully ...                       | EAST BENGAL.       |                          |
| 4'26                   | 11'12                | -6'86                 | 13'3                              | 14'9              | 34'93                | 55'05      | -20'72                     | 77'2                              | 82'0  | Furzedpore ...                                | Furzedpore ...                      |                    |                          |
| 3'64                   | 12'05                | -8'41                 | 10'8                              | 16'7              | 37'11                | 61'50      | -27'39                     | 68'4                              | 86'7  | Dacca ...                                     | Dacca ...                           |                    |                          |
| 9'28                   | 13'40                | -4'12                 | 13'6                              | 15'8              | 55'22                | 61'52      | -6'30                      | 67'8                              | 80'7  | Commilla ...                                  | Tipperah ...                        |                    |                          |
| 11'48                  | 10'27                | +1'21                 | 13'3                              | 13'2              | 56'16                | 51'80      | +4'36                      | 65'9                              | 70'2  | Mymensingh ...                                | Mymensingh ...                      | NORTH BENGAL.      |                          |
| 8'99                   | 10'50                | -1'51                 | 16'5                              | 14'1              | 39'77                | 48'48      | -8'71                      | 73'0                              | 71'6  | Bogra ...                                     | Bogra ...                           |                    |                          |
| 10'29                  | 11'53                | -1'24                 | 11'5                              | 14'2              | 45'90                | 48'62      | -2'72                      | 57'0                              | 69'4  | Serajgunj ...                                 | Pubna ...                           |                    |                          |
| 9'05                   | 11'25                | -2'20                 | 12'0                              | 15'0              | 41'00                | 50'33      | -9'33                      | 65'5                              | 78'5  | Rampore Beaulah.                              | Rajshahye ...                       |                    |                          |
| 9'61                   | 11'43                | -1'82                 | 12'2                              | 13'7              | 64'63                | 51'79      | +12'84                     | 71'8                              | 70'7  | Maldah ...                                    | Maldah ...                          | NORTH BENGAL.      |                          |
| 11'38                  | 13'50                | -1'94                 | 11'5                              | 13'8              | 70'83                | 67'09      | +3'74                      | 68'8                              | 69'4  | Dinapore ...                                  | Dinapore ...                        |                    |                          |
| 20'51                  | 21'82                | -1'31                 | 13'2                              | 16'0              | 115'00               | 103'72     | +11'28                     | 81'0                              | 88'9  | Rungpore ...                                  | Rungpore ...                        |                    |                          |
| 17'33                  | 18'64                | -1'31                 | 20'3                              | 19'4              | 112'13               | 113'31     | -1'20                      | 101'9                             | 101'2 | Julpigore ...                                 | Julpigore and Cooch Behar.          |                    |                          |
| 9'90                   | 12'54                | -2'64                 | 11'0                              | 13'1              | 61'21                | 53'73      | +7'51                      | 66'8                              | 64'0  | Darjeeling ...                                | Darjeeling Hill Tracts...           | NORTH BENGAL.      |                          |
| 5'56                   | 9'20                 | -3'64                 | 7'7                               | 10'8              | 42'32                | 34'08      | +8'24                      | 56'0                              | 51'5  | Purneah ...                                   | Purneah and North Bhagulpore.       |                    |                          |
| 5'01                   | 9'53                 | -4'51                 | 8'0                               | 10'9              | 46'34                | 40'68      | +5'66                      | 61'4                              | 51'9  | Mozufferpore ...                              | Mozufferpore ...                    |                    |                          |
| 10'34                  | 9'23                 | +1'12                 | 9'0                               | 9'5               | 42'09                | 42'32      | -0'23                      | 50'0                              | 46'9  | Durbhanga ...                                 | Durbhanga ...                       |                    |                          |
| 5'99                   | 7'54                 | -1'55                 | 7'3                               | 10'5              | 33'66                | 37'83      | -3'97                      | 49'6                              | 51'3  | Chumpran ...                                  | Chumpran ...                        | SOUTH BENGAL.      |                          |
| 4'98                   | 7'03                 | -2'05                 | 10'8                              | 11'8              | 32'65                | 35'88      | -3'23                      | 48'4                              | 54'9  | Motihari ...                                  | Chupra ...                          |                    |                          |
| 5'82                   | 6'86                 | -1'04                 | 10'5                              | 10'1              | 35'01                | 37'76      | -2'75                      | 52'8                              | 50'5  | De'roe ...                                    | Shahabad ...                        |                    |                          |
| 5'02                   | 7'16                 | -2'14                 | 10'0                              | 12'0              | 33'39                | 37'30      | -3'97                      | 52'6                              | 55'6  | Buxar ...                                     | Arrah ...                           |                    |                          |
| 6'97                   | 7'57                 | -1'00                 | 10'4                              | 12'0              | 40'44                | 39'09      | +1'35                      | 35'6                              | 8     | Gya ...                                       | Gya ...                             | SOUTH BENGAL.      |                          |
| 7'98                   | 10'33                | -2'35                 | 12'0                              | 14'1              | 40'57                | 46'06      | +5'51                      | 69'6                              | 68'6  | Hankipore ...                                 | Patna ...                           |                    |                          |
| 7'14                   | 9'56                 | -2'42                 | 11'2                              | 15'7              | 45'05                | 46'18      | -1'13                      | 63'0                              | 73'5  | Bhagulpore ...                                | South Bhagulpore and Moughyr.       |                    |                          |
| 6'89                   | 8'21                 | -1'32                 | 13'0                              | 14'9              | 42'47                | 43'13      | -0'66                      | 62'6                              | 73'6  | Naya Doomka ...                               | Sonthal Pergunnahs ...              |                    |                          |
| 6'15                   | 8'45                 | -2'30                 | 12'0                              | 17'0              | 40'30                | 47'13      | +6'83                      | 69'0                              | 81'0  | Hazaribagh ...                                | Hazaribagh ...                      | CHUTIA NAGPUR.     |                          |
|                        |                      |                       |                                   |                   |                      |            |                            |                                   |       | Bauchaee ...                                  | Lohardugga and Mou Bhoom.           |                    |                          |
|                        |                      |                       |                                   |                   |                      |            |                            |                                   |       | Chaibassa ...                                 | Singbhoom ...                       |                    |                          |
|                        |                      |                       |                                   |                   |                      |            |                            |                                   |       | Sibangar ...                                  |                                     |                    |                          |
|                        |                      |                       |                                   |                   |                      |            |                            |                                   |       | Dhubri ...                                    | Assam ...                           | ASSAM.             |                          |
|                        |                      |                       |                                   |                   |                      |            |                            |                                   |       | Shilohar ...                                  |                                     |                    |                          |





in Bengal in September 1887.

[illegible]

Table of Rainfall recorded at Stations

| Meteorological division. | District.                             | Station.        | 1    | 2    | 3    | 4     | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|--------------------------|---------------------------------------|-----------------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| EAST BENGAL<br>—concd.   | Noakhally—<br>concd.<br>Furzedpore... | Harishpore      | 0'22 | ...  | 1'32 | ...   | ...  | 0'08 | ...  | ...  | ...  | 0'35 | ...  | ...  | 0'15 | 1'31 | ...  | 0'35 | ...  | ...  | 0'28 | 0'38 |
|                          |                                       | Banganj         | 0'19 | 0'07 | 0'10 | 0'09  | ...  | ...  | ...  | 0'20 | ...  | ...  | 0'32 | 0'45 | ...  | 1'14 | 0'24 | 0'30 | 0'07 | ...  | ...  | 0'65 |
|                          |                                       | Madaripore      | 0'18 | 0'35 | 0'57 | ...   | ...  | ...  | ...  | ...  | ...  | 0'30 | 0'04 | ...  | 0'04 | 0'11 | 1'36 | 0'58 | ...  | ...  | ...  | 0'14 |
|                          |                                       | Furzedpore...   | ...  | ...  | 0'18 | ...   | ...  | ...  | ...  | ...  | ...  | 0'35 | 0'23 | ...  | ...  | 0'04 | 0'83 | 0'14 | ...  | ...  | ...  | 0'35 |
|                          |                                       | Gaulundo        | ...  | 0'27 | 0'11 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'35 |
|                          | Dacca                                 | Manishgunge     | ...  | 0'43 | 0'35 | 0'08  | ...  | ...  | ...  | ...  | ...  | 0'12 | ...  | ...  | 0'10 | ...  | 0'21 | 0'12 | ...  | ...  | ...  | 0'06 |
|                          |                                       | Dacca           | 0'20 | 0'12 | 0'06 | 0'46  | ...  | ...  | ...  | ...  | 1'32 | ...  | ...  | 0'16 | ...  | 0'73 | 0'22 | ...  | ...  | ...  | ...  | 0'06 |
|                          |                                       | Naraingunge     | 0'03 | 0'05 | 0'23 | 0'03  | ...  | ...  | ...  | ...  | ...  | 0'87 | ...  | ...  | 0'21 | 0'05 | 0'34 | 0'24 | 0'03 | ...  | ...  | 0'06 |
|                          |                                       | Manickgunge     | ...  | 0'07 | 0'30 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'07 | 0'07 | 0'07 | 0'30 | ...  | ...  | ...  | 0'06 |
|                          |                                       | Joydebpore      | ...  | 0'03 | 0'48 | 0'13  | 0'03 | 0'15 | ...  | ...  | ...  | ...  | ...  | ...  | 0'13 | 0'06 | 0'15 | 0'35 | ...  | ...  | ...  | 0'30 |
|                          | Hill Tipperah                         | Agartola        | 0'04 | 1'10 | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'35 | 0'30 | ...  | ...  | ...  | ...  | ...  |
|                          |                                       | Comilla         | 0'73 | 0'03 | 0'16 | ...   | ...  | ...  | 0'13 | ...  | ...  | ...  | 0'17 | 0'18 | 0'33 | ...  | 0'80 | 0'03 | 0'03 | ...  | ...  | ...  |
|                          |                                       | Chandpore       | 0'40 | 0'20 | ...  | 0'10  | ...  | ...  | ...  | ...  | ...  | ...  | 0'10 | ...  | ...  | 0'05 | 0'50 | ...  | ...  | ...  | ...  | 0'08 |
|                          |                                       | Brakmanberia    | ...  | 0'08 | 0'03 | 0'14  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'10 | 0'44 | 0'27 | ...  | ...  | ...  | 0'08 |
|                          |                                       | Ramchandrapore. | ...  | 1'22 | ...  | 0'32  | 1'41 | ...  | ...  | ...  | ...  | 0'09 | ...  | 0'31 | 0'26 | ...  | 0'14 | 0'21 | 0'03 | 0'03 | 0'03 | ...  |
|                          | Tipperah                              | Nasirnagar      | 0'50 | 0'10 | ...  | 0'20  | ...  | ...  | ...  | ...  | ...  | ...  | 0'50 | ...  | 0'80 | ...  | 0'50 | ...  | ...  | ...  | 0'43 | ...  |
|                          |                                       | Daukandi        | ...  | 0'87 | 0'38 | 0'15  | ...  | ...  | ...  | ...  | ...  | 0'07 | 0'03 | ...  | 0'17 | 0'07 | 0'50 | 0'30 | ...  | ...  | ...  | ...  |
|                          |                                       | Karbi           | ...  | 1'20 | 0'70 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | 0'40 | ...  | ...  | 0'10 | 0'04 | 0'05 | ...  | ...  | ...  | ...  |
|                          |                                       | Laksham         | 0'19 | ...  | 0'15 | ...   | ...  | ...  | ...  | ...  | ...  | ...  | 0'28 | ...  | 0'05 | ...  | 0'10 | 0'53 | 0'32 | ...  | ...  | 0'7  |
|                          |                                       | Mymensingh      | ...  | ...  | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          | Mymensingh                            | Kishoregunge    | 0'17 | 3'01 | 0'32 | 0'07  | 0'61 | ...  | ...  | ...  | ...  | ...  | ...  | 0'09 | ...  | ...  | 0'33 | 0'15 | ...  | ...  | ...  | 0'19 |
|                          |                                       | Atia (Tangail)  | 0'45 | 0'39 | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'76 | ...  | ...  | ...  | ...  | ...  | 0'81 |
|                          |                                       | Mymensingh      | 0'20 | 0'53 | 1'32 | 0'23  | 0'15 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'21 | ...  | ...  | ...  | ...  | 0'27 | 0'14 | 1'16 |
|                          |                                       | Jamulpore       | 0'08 | 1'28 | ...  | 4'15  | 0'36 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'15 | ...  | 0'28 | 0'50 | ...  | ...  | 1'07 |
|                          |                                       | Netrokona       | 0'40 | 0'16 | 0'32 | 0'30  | 0'45 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'36 | 1'15 | ...  | 2'18 | 0'27 | ...  | ...  | 0'67 |
|                          | NORTH BENGAL                          | Subarnachally   | ...  | 4'18 | 0'63 | ...   | 0'20 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1'00 | ...  | ...  | ...  | 0'80 | 1'00 |
|                          |                                       | Durgapore       | 1'00 | 1'00 | 0'00 | 1'10  | 2'00 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1'20 | 1'30 | 0'10 | ...  | ...  | ...  |
|                          |                                       | Dewanganj       | ...  | 2'35 | 4'36 | 0'18  | 2'54 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'60 | ...  | ...  | ...  | 2'71 |
|                          |                                       | Pubna           | ...  | 0'70 | 0'10 | 0'00  | 1'81 | ...  | ...  | ...  | ...  | ...  | 1'72 | 0'33 | 0'08 | ...  | 0'14 | 1'04 | 0'36 | ...  | 0'27 | 0'08 |
|                          |                                       | Sernagunge      | ...  | 1'43 | 0'23 | ...   | 0'21 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'14 | 0'08 | 0'22 | 0'15 | ...  | 1'43 | 3'43 |
|                          | Rajshahiye                            | Sherpore        | 0'09 | 2'05 | 2'35 | 1'04  | 0'30 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'32 | 0'54 | ...  | ...  | ...  | 1'40 |
|                          |                                       | Nowkhilla       | 1'32 | 1'53 | 1'00 | 0'46  | 0'31 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'07 | 1'25 | ...  | ...  | 0'54 | 0'35 |
|                          |                                       | Rogra           | 0'32 | 1'33 | 2'33 | 1'80  | 0'70 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'53 | 0'07 | ...  | ...  | ...  | 0'33 |
|                          |                                       | Panchbibi       | ...  | 2'37 | 1'87 | 1'97  | 2'24 | 0'41 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'50 | ...  | 0'36 | ...  | ...  | ...  | 1'44 |
|                          |                                       | Rajshahiye      | ...  | ...  | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          | Maldah                                | Beaulah         | 0'04 | 2'05 | 1'32 | 2'19  | 0'50 | ...  | ...  | ...  | ...  | ...  | 0'30 | ...  | ...  | ...  | 0'35 | 0'03 | 0'75 | ...  | ...  | 0'33 |
|                          |                                       | Natore          | 0'32 | ...  | 0'30 | ...   | 0'10 | 2'80 | ...  | ...  | ...  | ...  | ...  | 0'40 | ...  | ...  | 0'30 | ...  | ...  | ...  | ...  | 1'80 |
|                          |                                       | Singur          | 0'73 | 0'33 | 2'03 | 2'54  | 0'40 | ...  | ...  | ...  | ...  | ...  | ...  | 0'44 | ...  | 0'44 | 0'23 | 0'24 | 0'18 | ...  | ...  | 2'20 |
|                          |                                       | Kalpi           | 0'42 | 0'72 | 0'50 | 0'10  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1'16 | 0'07 | ...  | 0'54 | 1'15 | 0'12 | ...  | 0'35 | 0'39 |
|                          |                                       | Manda           | ...  | 0'47 | 2'30 | 2'16  | 2'50 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'38 | ...  | 0'03 | ...  | ...  | ...  | ...  | 2'70 |
|                          | Dinapore                              | Mohadebpore     | 0'20 | 1'00 | 2'20 | 3'50  | 1'55 | ...  | ...  | ...  | ...  | ...  | 1'00 | ...  | ...  | ...  | 0'90 | 0'10 | ...  | ...  | 2'27 | ...  |
|                          |                                       | Churamon        | ...  | 0'46 | 1'24 | 1'21  | 0'29 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'81 | 0'21 | 0'03 | ...  | 0'20 | 1'31 |
|                          |                                       | Raipur          | 0'20 | 0'39 | 0'44 | 3'72  | 0'33 | ...  | ...  | ...  | ...  | ...  | ...  | 0'14 | ...  | ...  | 0'16 | 0'11 | ...  | ...  | ...  | 0'56 |
|                          |                                       | Dinapore        | 1'02 | 0'39 | 1'43 | 4'08  | 0'25 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'27 | 0'28 | 0'10 | ...  | 0'03 | ...  | ...  | 1'44 |
|                          |                                       | Balourhat       | ...  | 0'32 | 1'33 | 1'87  | 1'40 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'07 | 0'09 | 0'33 | 0'72 | ...  | 0'03 | 0'23 | 3'36 |
|                          | Rungpore                              | Bhawanigunge    | 0'36 | 0'20 | 4'45 | 1'57  | 3'28 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 2'13 | ...  | ...  | ...  | ...  | 0'38 |
|                          |                                       | (Gyabanda)      | ...  | ...  | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                                       | Rungpore        | 0'05 | 0'32 | 2'27 | 1'55  | 1'52 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'11 | 0'14 | 0'09 | 0'02 | 0'30 | 1'47 |
|                          |                                       | Kurigram        | 1'43 | 0'30 | 1'35 | 3'45  | 2'05 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'51 | 0'05 | ...  | ...  | ...  | 0'70 |
|                          |                                       | Rakdara         | 0'31 | 0'20 | 0'35 | 0'75  | 1'28 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'07 | ...  | ...  | ...  | 0'31 | 0'12 |
|                          | Jalpigore                             | (Niphamar)      | ...  | ...  | ...  | ...   | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |
|                          |                                       | Ulipore         | 1'25 | 0'45 | 4'48 | 2'50  | 3'15 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'30 | 0'36 | ...  | ...  | ...  | 0'73 |
|                          |                                       | Jalpigore       | ...  | 2'87 | 1'16 | 11'03 | 0'97 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'04 | ...  | ...  | ...  | ...  | 0'37 |
|                          |                                       | Alipore Doar    | 1'75 | 2'17 | 3'05 | 9'06  | 5'33 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1'23 | ...  | ...  | ...  | 0'36 | 4'38 |
|                          |                                       | Falacolla       | 0'30 | 2'41 | 0'04 | 16'09 | 3'05 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'30 | ...  | 1'35 | ...  | ...  | ...  | 0'10 | 0'34 |
|                          | Cooch Behar...                        | Debaganj        | 0'75 | 3'10 | 0'04 | 10'00 | 1'05 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'02 | ...  | 0'30 | 0'05 | ...  | ...  | ...  | 0'40 |
|                          |                                       | Dinhat          | 2'40 | 0'35 | 0'36 | 0'07  | 1'41 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'01 | ...  | 0'00 | 0'44 | ...  | ...  | ...  | 0'11 |
|                          |                                       | Cooch Behar     | 2'07 | 3'28 | 1'40 | 4'80  | 1'47 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'13 | 0'53 | 0'15 | ...  | ...  | 0'33 |
|                          |                                       | Miekhigunge     | 4'78 | 0'33 | 0'05 | 12'50 | 2'46 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1'32 | ...  | ...  | 0'42 | 0'12 | ...  | ...  | 1'36 |
|                          |                                       | Matabhanga      | 1'31 | 0'90 | 0'77 | 8'73  | 2'07 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'09 | 0'48 | 0'13 | 0'02 | ...  | 0'08 |
|                          | Darjeeling Hill                       | Buxa            | 0'55 | 5'16 | 0'03 | 9'22  | 1'23 | 0'17 | 0'05 | 0'04 | ...  | ...  | ...  | 0'03 | ...  | ...  | 0'13 | 0'03 | 1'11 | 0'75 | 3'43 | 2'33 |
|                          |                                       | Siliguri        | 0'35 | 3'17 | 0'08 | 4'33  | 1'47 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'25 | ...  | ...  | ...  | 0'75 | 2'44 |
|                          |                                       | Darjeeling      | 1'35 | 1'32 | 0'38 | 2'33  | 1'57 | 0'23 | ...  | 1'31 | 0'05 | ...  | ...  | ...  | 0'02 | ...  | 0'11 | 0'31 | 0'10 | ...  | 0'03 | 0'35 |
|                          |                                       | Kalimpong       | 0'47 | 1'28 | 0'30 | 3'10  | 0'02 | ...  | ...  | 0'32 | ...  | ...  | ...  | ...  | 0'06 | 0'10 | 0'04 | ...  | 0'13 | 0'33 | ...  | 0'34 |
|                          |                                       | Kamengunge      | 0'42 | 4'53 | ...  | 2'30  | 1'23 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'08 | ...  | ...  | ...  | ...  | ...  |
|                          | Furneah                               | Arrarong        | 1'70 | 3'00 | 0'36 | 3'04  | 0'25 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'30 | ...  | ...  | ...  | ...  | 3'10 |
|                          |                                       | Furneah         | 0'04 | 2'30 | 0'73 | 2'14  | 0'15 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'12 | ...  | 0'28 | ...  | 0'10 | 0'05 | 0'30 |
|                          |                                       | Gandwara        | ...  | 0'87 | 0'33 | 0'04  | 0'30 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'54 | 0'10 | 0'35 | ...  | 0'29 | 0'06 |
|                          |                                       | Bularanpore     | 0'25 | 2'32 | 0'30 | 3'00  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'30 | 0'20 | 0'3  | ...  | 0'25 | 1'10 |
|                          |                                       | Matuari         | 5'70 | 0'33 | 0'40 | 16'20 | ...  | 0'90 | ...  | ...  | ...  | ...  | ...  | ...  | 0'00 | 0'12 | ...  | 1'33 | 0'26 | ...  | 0'23 | 1'43 |
|                          | North Bhagulpore.                     | Kaliaganj       | 1'74 | 3'13 | ...  | 5'12  | 0'55 | 0'23 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'44 | 0'70 | ...  | ...  | 2'40 |
|                          |                                       | Maddapore       | ...  | 5'51 | 1'07 | 2'45  | 0'42 | ...  | 0'21 | ...  | ...  | ...  | ...  | ...  | ...  | 0'11 | ...  | ...  | ...  | ...  | ...  | 2'41 |
|                          |                                       | Shoopool        | ...  | 0'17 | 0'74 | 0'50  | 0'05 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0'00 | 0'40 | ...  | 0'13 | 1'35 |

Rengal in September 1887—continued.

| 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | Number of rainy days. | Average number of rainy days. | Total rainfall for the month. | Average rainfall for the month. | Heaviest rainfall during the month. | Total rainfall from 1st January 1887 up to 30th September 1887. | Average rainfall from 1st January up to 30th September 1887. | Station.      | District.        | Meteorological division. |
|------|------|------|------|------|------|------|------|-----------------------|-------------------------------|-------------------------------|---------------------------------|-------------------------------------|---|--|---------------|------------------|--------------------------|
| 1.21 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 12                    | 12                            | 10.02                         | 0.83                            | 1.92                                | 83.03   | 0.83   | Harishpore... | North-holly-     | EAST BENGAL              |
| 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 17                    | 17                            | 7.96                          | 0.46                            | 1.08                                | 80.13   | 0.46   | Rangaj...     | comd.            | -comd.                   |
| 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 13                    | 13                            | 5.38                          | 0.41                            | 1.36                                | 39.71   | 0.41   | Maduripore... | Farrak-pore.     |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 11                    | 11                            | 4.97                          | 0.45                            | 0.77                                | 42.59   | 0.45   | Farrak-pore.  |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 5                     | 5                             | 1.94                          | 0.39                            | 0.31                                | 42.73   | 0.39   | Gokuldo.      |                  |                          |
| 12   | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 15                    | 15                            | 14.7                          | 0.98                            | 0.93                                | 47.96   | 0.98   | Munshigunge.  | Dacca.           |                          |
| ...  | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 13                    | 13                            | 14.8                          | 1.03                            | 1.22                                | 61.24   | 1.03   | Dacca.        |                  |                          |
| ...  | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 13                    | 13                            | 10.3                          | 0.78                            | 0.93                                | 47.73   | 0.78   | Narsingtunge. |                  |                          |
| ...  | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 12                    | 12                            | 13.9                          | 0.93                            | 0.97                                | 41.69   | 0.93   | Manikmunge.   |                  |                          |
| ...  | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 14                    | 14                            | ?                             | ?                               | 0.48                                | 61.24   | ?  | Joydebpore.   |                  |                          |
| ...  | 1.10 | 0.70 | 0.16 | ...  | ...  | ...  | ...  | 7                     | 7                             | 10.3                          | 0.68                            | 1.10                                | 60.13   | 0.68   | Agartola      | Hill Tipperah.   |                          |
| ...  | ...  | 0.30 | 0.08 | ...  | ...  | ...  | ...  | 12                    | 12                            | 15.1                          | 0.78                            | 0.93                                | 55.91   | 0.78   | Comilla       | Tipperah.        |                          |
| ...  | 0.15 | 0.05 | 0.20 | 0.10 | 0.13 | ...  | ...  | 13                    | 13                            | 16.9                          | 0.71                            | 0.65                                | 45.25   | 0.71   | Chandipore.   |                  |                          |
| ...  | 0.78 | 0.33 | 0.01 | 0.23 | 0.08 | ...  | ...  | 11                    | 11                            | 16.3                          | 0.52                            | 0.94                                | 62.69   | 0.52   | Brahmanbaria  |                  |                          |
| ...  | ...  | 0.02 | 0.33 | ...  | ...  | ...  | ...  | 13                    | 13                            | ?                             | 4.57                            | 1.41                                | 47.92   | ?  | Raichandra-   |                  |                          |
| 0.50 | 0.45 | 0.05 | 0.31 | 0.03 | ...  | ...  | ...  | 10                    | 10                            | ?                             | 3.93                            | 0.50                                | 46.76   | ?  | Nasirganj.    |                  |                          |
| ...  | 0.20 | 0.05 | 0.31 | 0.03 | ...  | ...  | ...  | 13                    | 13                            | ?                             | 3.78                            | 0.87                                | 43.74   | ?  | Dandi audi.   |                  |                          |
| 0.07 | 0.12 | 0.33 | 0.40 | 0.25 | ...  | ...  | ...  | 11                    | 11                            | ?                             | 3.70                            | 1.20                                | 46.85   | ?  | Kasba.        |                  |                          |
| ...  | 0.55 | 0.00 | 1.22 | ...  | ...  | ...  | ...  | 11                    | 11                            | ?                             | 3.57                            | 1.22                                | 29.45   | ?  | Laksham.      |                  |                          |
| ...  | 0.45 | 0.22 | ...  | ...  | ...  | ...  | ...  | 12                    | 12                            | 16.6                          | 0.82                            | 1.20                                | 61.33   | 0.82   | Kishoreganjo. | Mymensingh.      |                          |
| 0.22 | ...  | 0.43 | 0.15 | ...  | ...  | ...  | ...  | 7                     | 7                             | 11.5                          | 0.81                            | 0.76                                | 41.79   | 0.81   | Ain (Tanzil). |                  |                          |
| 0.07 | 0.04 | 1.42 | 0.18 | 0.10 | ...  | ...  | ...  | 20                    | 20                            | 18.6                          | 1.14                            | 1.10                                | 71.61   | 1.14   | Mymensingh.   |                  |                          |
| ...  | ...  | 0.90 | 0.30 | 0.08 | 0.00 | ...  | ...  | 13                    | 13                            | 15.7                          | 1.03                            | 1.07                                | 68.79   | 1.03   | Jamulpore.    |                  |                          |
| ...  | ...  | 1.25 | 0.35 | 1.22 | 0.35 | ...  | ...  | 16                    | 16                            | 16.7                          | 1.03                            | 1.07                                | 80.52   | 1.03   | Netrokona.    |                  |                          |
| ...  | 0.25 | 0.65 | 0.60 | 0.50 | 0.50 | ...  | ...  | 10                    | 10                            | ?                             | 1.73                            | 4.18                                | 38.30   | ?  | Sabornakhal.  |                  |                          |
| ...  | 5.10 | 2.00 | 0.40 | ...  | 4.70 | 0.80 | ...  | 13                    | 13                            | ?                             | 1.57                            | 5.10                                | 129.62  | ?  | Dargapore.    |                  |                          |
| 0.50 | ...  | ...  | ...  | ...  | 1.05 | ...  | ...  | 9                     | 9                             | ?                             | 1.61                            | 4.86                                | 82.58   | ?  | Deoaganj.     |                  |                          |
| ...  | 0.11 | 0.37 | 0.70 | 0.15 | 0.06 | 0.08 | ...  | 18                    | 18                            | 15.4                          | 0.85                            | 1.81                                | 44.92   | 0.85   | Palma         | Palma.           | NORTH BENGAL             |
| ...  | 0.04 | 0.23 | 0.25 | 0.42 | 0.27 | 0.32 | ...  | 15                    | 15                            | 12.8                          | 0.85                            | 0.87                                | 56.67   | 0.85   | Serajganj.    |                  |                          |
| ...  | ...  | 0.65 | 0.46 | 0.58 | 0.06 | 0.27 | ...  | 13                    | 13                            | 12.2                          | 1.11                            | 0.25                                | 62.24   | 1.11   | Sherpore      | Boera.           |                          |
| 0.41 | ...  | 0.78 | 0.28 | 0.40 | 0.28 | 0.80 | 0.05 | 17                    | 17                            | 14.5                          | 1.39                            | 0.77                                | 60.69   | 1.39   | Nowkhilla.    |                  |                          |
| 0.68 | ...  | 0.56 | 0.32 | 0.14 | 0.39 | ...  | ...  | 13                    | 13                            | 11.6                          | 0.99                            | 1.14                                | 68.86   | 0.99   | Boera.        |                  |                          |
| ...  | 0.21 | ...  | ...  | ...  | 0.70 | ...  | ...  | 10                    | 10                            | 11.1                          | 1.21                            | 1.08                                | 60.31   | 1.21   | Panchibibi.   |                  |                          |
| ...  | ...  | 1.04 | 0.30 | 0.27 | 0.27 | ...  | ...  | 14                    | 14                            | 15.8                          | 1.15                            | 1.05                                | 52.27   | 1.15   | Beaulah       | Rajshahye        |                          |
| ...  | ...  | 0.10 | ...  | 2.50 | ...  | ...  | ...  | 9                     | 9                             | 12.5                          | 0.82                            | 1.47                                | 51.78   | 0.82   | Natore.       |                  |                          |
| ...  | ...  | 0.66 | ...  | 1.90 | ...  | 0.45 | ...  | 14                    | 14                            | ?                             | 13.32                           | ?                                   | 65.78   | ?  | Nazim.        |                  |                          |
| 0.27 | ...  | 2.22 | 0.27 | ...  | 0.12 | ...  | ...  | 15                    | 15                            | ?                             | 8.66                            | ?                                   | 37.05   | ?  | Lopore.       |                  |                          |
| 0.10 | ...  | 0.46 | ...  | ...  | ...  | ...  | ...  | 10                    | 10                            | ?                             | 12.62                           | ?                                   | 60.35   | ?  | Manda.        |                  |                          |
| ...  | 0.26 | ...  | ...  | ...  | 0.22 | ...  | ...  | 12                    | 12                            | 14.7                          | 1.23                            | 0.91                                | 54.61   | 1.23   | Maldah        | Maldah.          |                          |
| ...  | ...  | 0.13 | ...  | 0.10 | ...  | ...  | ...  | 12                    | 12                            | 15.3                          | 0.86                            | 1.00                                | 42.85   | 0.86   | Chanchal.     |                  |                          |
| ...  | ...  | ...  | ...  | 0.50 | ...  | ...  | ...  | 10                    | 10                            | ?                             | 7.39                            | ?                                   | 62.19   | ?  | Gajol.        |                  |                          |
| 0.12 | ...  | 0.01 | ...  | 0.02 | ...  | 0.21 | ...  | 13                    | 13                            | ?                             | 9.08                            | ?                                   | 61.25   | ?  | Sibganj.      |                  |                          |
| ...  | ...  | ...  | 0.15 | ...  | 0.10 | 0.17 | ...  | 10                    | 10                            | 13.0                          | 1.21                            | 1.26                                | 67.62   | 1.21   | Mohad-pore.   | Dinag-pore.      |                          |
| ...  | ...  | ...  | 0.02 | ...  | 0.18 | ...  | ...  | 13                    | 13                            | 13.8                          | 0.49                            | 1.21                                | 60.12   | 0.49   | Churamou.     |                  |                          |
| 0.15 | 0.03 | 0.21 | 0.14 | 0.22 | 0.02 | 0.39 | ...  | 10                    | 10                            | 13.3                          | 0.71                            | 1.06                                | 71.75   | 0.71   | Raizang.      |                  |                          |
| ...  | ...  | 0.15 | ...  | ...  | ...  | ...  | ...  | 17                    | 17                            | 15.8                          | 1.16                            | 1.28                                | 60.62   | 1.16   | Dinag-pore.   |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 11                    | 11                            | 12.8                          | 1.12                            | 1.05                                | 60.86   | 1.12   | Balookhat.    |                  |                          |
| ...  | ...  | 0.57 | ...  | ...  | 0.28 | 0.08 | ...  | 10                    | 10                            | 11.3                          | 1.38                            | 1.17                                | 72.34   | 1.38   | Bhawanganj.   | Raizang.         |                          |
| 0.33 | ...  | 1.07 | ...  | 0.05 | 0.22 | 0.35 | ...  | 10                    | 10                            | 10.2                          | 1.07                            | 1.21                                | 89.12   | 1.07   | Raizang.      |                  |                          |
| 0.20 | ...  | 0.09 | ...  | ...  | 0.07 | 0.31 | ...  | 12                    | 12                            | 14.9                          | 1.09                            | 1.25                                | 97.30   | 1.09   | Kurigan.      |                  |                          |
| ...  | ...  | 0.75 | ...  | ...  | ...  | ...  | ...  | 9                     | 9                             | ?                             | 13.91                           | ?                                   | 104.08  | ?  | Bazodra.      |                  |                          |
| ...  | ...  | 0.96 | 0.28 | 0.65 | ...  | 0.75 | ...  | 10                    | 10                            | 17.6                          | 21.11                           | 24.12                               | 133.92  | 21.11  | (Niphawari)   |                  |                          |
| ...  | 0.02 | 0.13 | ...  | ...  | 0.07 | 0.24 | 0.05 | 10                    | 10                            | ?                             | 28.57                           | ?                                   | 154.65  | ?  | Uipore.       |                  |                          |
| 0.90 | ...  | 0.32 | 0.29 | ...  | 0.25 | 0.10 | ...  | 13                    | 13                            | ?                             | 30.38                           | ?                                   | 112.41  | ?  | Julpore.      | Julpore.         |                          |
| ...  | 0.01 | 0.11 | ...  | ...  | 0.08 | 0.17 | ...  | 16                    | 16                            | 16.8                          | 15.95                           | 22.29                               | 116.37  | 15.95  | Alipore Doar. |                  |                          |
| ...  | ...  | 1.54 | ...  | ...  | 0.08 | 0.60 | 0.10 | 14                    | 14                            | 16.9                          | 17.32                           | 22.24                               | 150.22  | 17.32  | Falwola.      |                  |                          |
| ...  | ...  | 3.63 | ...  | ...  | 0.02 | ...  | ...  | 11                    | 11                            | 16.0                          | 28.58                           | 21.03                               | 155.07  | 28.58  | Bariganj.     |                  |                          |
| ...  | ...  | 2.48 | 0.07 | ...  | 0.30 | 0.37 | ...  | 15                    | 15                            | 17.4                          | 10.10                           | 21.18                               | 129.36  | 10.10  | Dumatta       | Cooch Behar.     |                          |
| 0.42 | 0.00 | 0.46 | 0.10 | 0.12 | 0.08 | 1.78 | 0.26 | 25                    | 25                            | 20.8                          | 29.68                           | 32.27                               | 186.82  | 29.68  | Gouri Behar.  |                  |                          |
| 0.15 | 0.00 | 1.55 | ...  | ...  | 0.07 | 0.24 | 0.05 | 13                    | 13                            | 16.5                          | 16.37                           | 11.79                               | 43.81   | 16.37  | Micklunga.    |                  |                          |
| ...  | 0.35 | 0.10 | 0.12 | ...  | 0.30 | ...  | 0.13 | 18                    | 18                            | 22.1                          | 18.81                           | 17.60                               | 122.16  | 18.81  | Matlabganj.   |                  |                          |
| ...  | 0.08 | ...  | 0.38 | ...  | ...  | ...  | ...  | 9                     | 9                             | 14.4                          | 18.65                           | 14.25                               | 4.53  | 18.65  | Buxa          | Darjeeling Hill. |                          |
| ...  | 0.18 | ...  | ...  | ...  | ...  | ...  | ...  | 12                    | 12                            | 12.4                          | 9.37                            | 17.55                               | 3.90  | 9.37   | Silguri.      |                  |                          |
| 0.09 | 0.02 | ...  | ...  | ...  | ...  | 0.05 | ...  | 14                    | 14                            | 14.5                          | 7.57                            | 18.01                               | 2.80  | 7.57   | Darje. ing.   |                  |                          |
| 2.75 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 10                    | 10                            | ?                             | 7.53                            | ?                                   | 67.77   | ?  | Kashimpore.   |                  |                          |
| ...  | ...  | 0.12 | ...  | ...  | ...  | ...  | ...  | 10                    | 10                            | ?                             | 10.51                           | ?                                   | 66.16   | ?  | Kissengunge.  | Purneah          | NORTH BENGAL             |
| ...  | 0.80 | 0.12 | ...  | ...  | ...  | 0.03 | 0.07 | 12                    | 12                            | ?                             | 26.95                           | ?                                   | 160.20  | ?  | Arrah.        |                  |                          |
| 1.08 | 0.11 | ...  | ...  | ...  | ...  | ...  | ...  | 10                    | 10                            | 11.2                          | 14.67                           | 10.30                               | 51.99   | 14.67  | Pinsoh.       |                  |                          |
| 0.00 | 0.13 | ...  | ...  | ...  | 0.18 | ...  | ...  | 10                    | 10                            | 12.0                          | 4.24                            | 9.00                                | 55.79   | 4.24   | Gandaura.     |                  |                          |
| 0.54 | 0.35 | ...  | ...  | ...  | ...  | ...  | ...  | 9                     | 9                             | ?                             | 0.26                            | ?                                   | 75.41   | ?  | Balarampore.  |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 9                     | 9                             | 10.5                          | 4.21                            | 8.12                                | 41.38   | 4.21   | Maituri.      |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 6                     | 6                             | 10.8                          | 5.50                            | 9.02                                | 43.94   | 5.50   | Katiajanj.    |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 5                     | 5                             | ?                             | 5.90                            | 10.15                               | 54.71   | 5.90   | Tajpore       | Darbhanga.       |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 4                     | 4                             | ?                             | 0.46                            | ?                                   | 54.55   | ?  | Durhanga.     |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 7                     | 7                             | 0.7                           | 7.85                            | 9.64                                | 57.07   | 7.85   | Madhubani.    |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 8                     | 8                             | 11.2                          | 5.46                            | 8.37                                | 42.90   | 5.46   | Bahera.       |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 4                     | 4                             | ?                             | 5.27                            | ?                                   | 40.61   | ?  | Rohara.       |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 5                     | 5                             | ?                             | 6.08                            | ?                                   | 32.46   | ?  | Siamaerhi     | Mozafferpore.    |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 3                     | 3                             | ?                             | 7.57                            | ?                                   | 41.60   | ?  | Moanerpore.   |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 5                     | 5                             | ?                             | 5.90                            | ?                                   | 41.34   | ?  | Rajpore.      |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 8                     | 8                             | 9.3                           | 14.05                           | 8.78                                | 54.69   | 14.05  | Parh.         |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 10                    | 10                            | 9.7                           | 8.03                            | 9.38                                | 54.41   | 8.03   | Mahua.        | Champan.         |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 8                     | 8                             | ?                             | 6.46                            | ?                                   | 40.95   | ?  | Sinhari.      |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 9                     | 9                             | ?                             | 4.15                            | ?                                   | 33.39   | ?  | Papri.        |                  |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 7                     | 7                             | 10.3                          | 9.07                            | 6.80                                | 39.54   | 9.07   | Gopalgunge    | Saran.           |                          |
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 10                    | 10                            | 11.9                          | 6.92                            | 8.06                                | 34.90   | 6.92   | Sawai.        |                  |                          |

### Table of Rainfall recorded at Station

| Metereological<br>division. | District.           | Station.        | 1                  | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |      |
|-----------------------------|---------------------|-----------------|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| SOUTH BHAR                  | Shahabad            | Buxar           | 0.24               | 0.10 | 1.04 | 0.02 | 1.38 | 0.07 | ...  | ...  | ...  | ...  | 0.30 | 0.05 | ...  | 0.51 | 0.04 | 0.93 | 0.13 | 0.09 | 0.04 | 0.07 |      |
|                             |                     | Delree          | ...                | 0.75 | 0.77 | 0.06 | 1.82 | ...  | ...  | ...  | ...  | ...  | 1.15 | 0.07 | ...  | ...  | ...  | 0.40 | 0.12 | ...  | 0.40 | 0.07 |      |
|                             |                     | Bhuboah         | ...                | 0.65 | 0.80 | ...  | ...  | ...  | ...  | ...  | 0.15 | ...  | 0.30 | 1.20 | ...  | ...  | ...  | 0.16 | 0.80 | ...  | 0.65 | 0.07 |      |
|                             |                     | Sasseran        | ...                | 0.40 | 0.25 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.72 | 0.30 | ...  | ...  | ...  | 0.30 | 0.65 | 0.90 | 0.40 | 0.07 |      |
|                             |                     | Arrah           | 0.90               | 1.05 | 1.44 | 0.95 | 0.25 | ...  | ...  | ...  | ...  | ...  | 0.30 | 0.07 | ...  | ...  | ...  | 0.05 | 0.15 | ...  | 0.25 | 1.30 |      |
|                             |                     | Mohasnah        | ...                | ...  | 2.00 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1.35 | ...  |
|                             | Gya                 | Aurangabad      | ...                | ...  | 0.22 | 0.19 | 0.09 | ...  | ...  | 0.18 | ...  | ...  | ...  | 0.25 | 0.40 | ...  | ...  | ...  | 0.20 | ...  | ...  | ...  | 0.07 |
|                             |                     | Gya             | ...                | 0.81 | 0.37 | 0.75 | 0.22 | ...  | ...  | ...  | ...  | ...  | ...  | 0.15 | 0.44 | ...  | ...  | ...  | 2.85 | 0.45 | 1.45 | 2.2  |      |
|                             |                     | Nowadah         | 0.35               | 0.76 | 0.15 | 1.30 | 0.32 | 0.30 | 0.10 | ...  | ...  | ...  | ...  | 0.13 | ...  | ...  | ...  | ...  | 0.23 | 0.28 | ...  | 0.17 |      |
|                             |                     | Johannabad      | 0.86               | 1.67 | 0.12 | 0.81 | 0.10 | 0.32 | ...  | ...  | ...  | ...  | 0.16 | 0.45 | ...  | ...  | ...  | 0.08 | 0.25 | ...  | 1.36 | 0.07 |      |
|                             |                     | Arwal           | ...                | ...  | 0.05 | 1.01 | ...  | 0.31 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.21 | ...  | 1.37 | 1.9  |      |
|                             |                     | Jaudnapar       | ...                | ...  | 0.30 | ...  | 0.25 | ...  | ...  | ...  | ...  | 0.70 | ...  | ...  | ...  | ...  | ...  | 0.12 | 0.30 | ...  | ...  | 1.1  |      |
|                             |                     | Sherrphati      | ...                | 0.70 | 0.50 | 1.50 | 0.09 | ...  | ...  | ...  | ...  | ...  | 0.43 | ...  | ...  | ...  | ...  | ...  | 0.50 | 0.50 | ...  | 0.13 |      |
|                             |                     | Rajauli         | 0.80               | 0.80 | ...  | ...  | 0.40 | ...  | ...  | 0.40 | 0.80 | 0.20 | ...  | ...  | ...  | ...  | 0.30 | ...  | ...  | ...  | ...  | 0.03 |      |
|                             |                     | Pakri Bara-wan. | 0.50               | 0.90 | ...  | 1.90 | 0.35 | 1.02 | ...  | ...  | ...  | ...  | ...  | 0.15 | ...  | ...  | ...  | ...  | 0.25 | 0.15 | ...  | ...  |      |
|                             | Patna               | Patna           | 0.05               | 0.40 | 0.28 | 0.40 | 0.02 | 0.17 | ...  | ...  | ...  | ...  | ...  | 0.01 | ...  | ...  | ...  | 0.05 | 0.40 | ...  | ...  | 0.73 |      |
|                             |                     | Dinapore        | 1.74               | ...  | 0.05 | 0.40 | 0.40 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.15 | ...  | ...  | 0.30 |      |
|                             |                     | Behar           | ...                | ...  | 0.04 | 0.00 | 0.50 | 0.10 | 2.54 | ...  | ...  | ...  | ...  | 0.47 | 0.00 | ...  | ...  | ...  | 0.00 | 0.08 | ...  | 1.2  |      |
|                             |                     | Barh            | ...                | ...  | 0.10 | 0.50 | 0.70 | 0.40 | 3.00 | ...  | ...  | ...  | ...  | ...  | 0.25 | ...  | ...  | ...  | 0.00 | ...  | 0.20 | ...  |      |
|                             |                     | Bickram         | ...                | ...  | 1.60 | 0.20 | 0.80 | ...  | ...  | ...  | ...  | ...  | ...  | 0.20 | ...  | ...  | ...  | ...  | 0.15 | ...  | ...  | ...  |      |
|                             |                     | Hilsa           | ...                | ...  | 0.16 | ...  | 1.23 | ...  | ...  | ...  | ...  | ...  | ...  | 0.32 | 0.73 | ...  | ...  | ...  | ...  | ...  | ...  | ...  |      |
|                             | Monghyr             | Hegosaerai      | ...                | ...  | 2.65 | 0.50 | 0.30 | 1.07 | ...  | ...  | ...  | ...  | ...  | ...  | 0.40 | ...  | ...  | 0.14 | 1.10 | ...  | ...  | ...  |      |
|                             |                     | Monghyr         | ...                | 0.14 | 1.10 | 0.33 | 0.80 | 1.45 | ...  | ...  | ...  | ...  | ...  | ...  | 0.18 | ...  | ...  | 0.38 | 0.08 | ...  | ...  | 0.1  |      |
|                             |                     | Jamui           | ...                | 0.45 | 1.53 | 1.12 | 0.00 | ...  | ...  | ...  | ...  | ...  | ...  | 0.46 | ...  | ...  | 0.13 | 0.59 | 0.08 | 0.23 | ...  | 0.41 |      |
|                             |                     | Gugri           | ...                | 2.20 | ...  | 2.18 | 0.39 | 3.14 | ...  | ...  | ...  | ...  | ...  | ...  | 0.90 | ...  | ...  | 0.65 | ...  | ...  | ...  | 1.2  |      |
|                             | South Bhagulpore.   | Sheikhpura      | ...                | 0.37 | 0.90 | ...  | ...  | 5.05 | 0.30 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.40 | ...  | ...  | ...  | ...  | ...  |      |
|                             |                     | Bhagulpore      | ...                | ...  | 3.32 | 0.14 | 0.36 | ...  | ...  | ...  | ...  | ...  | ...  | 0.33 | ...  | ...  | ...  | 0.42 | 0.12 | ...  | ...  | 0.32 |      |
|                             |                     | Bunka           | ...                | ...  | 1.84 | 0.83 | 0.5  | ...  | ...  | ...  | ...  | ...  | ...  | 0.38 | ...  | ...  | ...  | 0.26 | 0.08 | 0.12 | ...  | 0.25 |      |
|                             | Sonthal Pergunnahs. | Kolcong         | ...                | 0.68 | 2.61 | 0.31 | 0.23 | ...  | ...  | 0.88 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |      |
|                             |                     | Rajmchal        | ...                | ...  | 0.56 | 1.31 | 0.40 | 0.09 | ...  | ...  | ...  | ...  | ...  | 0.22 | ...  | ...  | 0.59 | 0.23 | 0.51 | ...  | ...  | 0.81 |      |
|                             |                     | Godda           | ...                | 0.25 | ...  | 1.05 | 0.30 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.28 | 0.57 | 0.31 | ...  | 0.00 |      |
|                             |                     | Pakour          | ...                | 0.24 | 1.05 | 3.79 | 0.97 | 1.02 | ...  | ...  | ...  | ...  | ...  | 1.25 | 0.75 | ...  | ...  | 1.44 | 0.49 | 0.05 | 1.02 | 1.78 |      |
|                             |                     | Nya Doomsa      | ...                | 1.32 | 0.91 | 1.20 | 0.78 | 0.11 | ...  | ...  | ...  | ...  | ...  | 0.19 | 0.71 | ...  | ...  | 0.34 | 0.36 | 0.02 | ...  | 3.19 |      |
|                             |                     | Deoghur         | ...                | 0.13 | 0.45 | 0.5  | 0.42 | 0.15 | ...  | ...  | ...  | ...  | ...  | 1.44 | ...  | ...  | ...  | 0.06 | 0.9  | 0.15 | ...  | 0.11 |      |
|                             |                     | Jamtara         | ...                | ...  | 2.14 | 0.37 | 0.44 | 0.14 | ...  | ...  | ...  | ...  | ...  | 1.19 | 0.45 | ...  | ...  | ...  | 0.35 | 0.20 | ...  | 0.08 |      |
|                             |                     | Sonra           | ...                | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |      |
|                             |                     | Anahat          | ...                | 1.40 | 1.40 | 2.20 | 0.30 | ...  | ...  | ...  | ...  | ...  | ...  | 1.60 | 0.29 | 0.29 | ...  | ...  | ...  | 0.30 | ...  | 1.44 |      |
|                             | CHUTIA NAG-PUR.     | Hasaribach      | Pachanba (Giridi). | 0.03 | 0.10 | 0.15 | 1.45 | 0.00 | ...  | ...  | 0.40 | ...  | ...  | 0.70 | 0.25 | ...  | ...  | ...  | 0.33 | 0.40 | 1.86 | 1.00 |      |
|                             |                     |                 | Hasaribach         | 0.68 | 0.68 | 0.14 | 0.74 | ...  | 0.06 | ...  | ...  | ...  | ...  | 0.40 | 0.22 | 0.25 | 0.04 | ...  | ...  | 0.90 | 0.31 | ...  | 0.05 |
|                             |                     |                 | Santagurah         | 0.30 | 0.15 | 0.65 | 0.39 | 1.49 | 0.50 | ...  | ...  | ...  | ...  | ...  | 0.32 | 0.25 | ...  | ...  | 0.20 | 0.60 | ...  | ...  | 2.4  |
|                             |                     |                 | Mahudi Hills       | 0.47 | 1.04 | 0.51 | ...  | ...  | ...  | 0.23 | 0.20 | ...  | ...  | ...  | 0.58 | 0.12 | 0.45 | ...  | ...  | 0.02 | ...  | ...  | 2.6  |
|                             |                     |                 | Juomrah Hills      | ...  | ...  | 0.30 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.30 | 0.70 | 1.00 | 0.30 | ...  | 0.20 | 1.00 | 0.70 | ...  | 3.6  |
|                             |                     |                 | Barha              | 0.08 | 1.00 | 1.78 | 0.13 | 0.31 | ...  | ...  | ...  | ...  | ...  | 0.05 | 0.41 | 0.05 | ...  | ...  | 0.30 | 0.42 | ...  | ...  | 1.75 |
|                             |                     | Lohardugga      | Chatra             | ...  | 0.69 | 0.76 | 1.32 | ...  | 0.22 | 0.29 | ...  | ...  | ...  | ...  | 0.55 | 0.10 | ...  | 0.24 | ...  | 0.83 | 1.50 | 1.70 | 0.89 |
|                             |                     |                 | Korngdeha          | ...  | 2.90 | 0.44 | 3.40 | 2.44 | ...  | ...  | ...  | ...  | ...  | ...  | 0.80 | ...  | ...  | ...  | ...  | 0.45 | ...  | ...  | 3.0  |
|                             |                     |                 | Ranghar            | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1.40 | ...  | 1.40 | ...  | ...  | 1.40 | ...  | ...  | 1.2  |
|                             |                     |                 | Lohardugga         | 0.45 | 0.49 | 0.82 | 1.32 | ...  | 0.85 | ...  | ...  | ...  | ...  | ...  | 1.37 | 0.25 | 0.40 | ...  | 1.58 | 0.54 | 0.01 | ...  | 0.04 |
|                             |                     |                 | Ranchi             | ...  | 0.08 | ...  | 0.85 | 0.44 | ...  | ...  | 0.20 | ...  | ...  | ...  | 2.41 | 0.39 | 0.17 | ...  | 0.14 | 0.95 | 0.18 | 0.90 | 0.01 |
| Pakimow                     |                     |                 | 0.55               | 1.76 | 0.54 | 1.08 | ...  | ...  | 0.62 | ...  | ...  | ...  | ...  | 0.10 | 1.06 | 0.16 | 0.25 | ...  | 0.20 | 0.18 | ...  | 0.12 |      |
| Singbhoom                   | Silli               | ...             | 2.02               | ...  | ...  | 2.60 | ...  | ...  | ...  | ...  | ...  | 0.05 | 0.08 | ...  | 0.05 | ...  | ...  | 1.03 | ...  | ...  | ...  |      |      |
|                             | Batumat             | ...             | ...                | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |      |      |
|                             | Hosainabad          | ...             | 1.75               | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1.30 | ...  | ...  | 0.22 |      |      |
|                             | Garwah              | ...             | ...                | ...  | 2.18 | 0.43 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.70 | ...  | ...  | 0.27 |      |      |
| Manbhoom                    | Chyabansa           | ...             | 0.08               | 0.07 | 0.17 | ...  | ...  | ...  | ...  | ...  | ...  | 0.95 | 0.75 | 0.05 | ...  | 0.03 | 0.70 | 0.20 | 1.95 | 1.10 | 0.10 |      |      |
|                             | Chakratihar-pore.   | ...             | 0.22               | 0.10 | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 0.55 | 0.87 | 0.41 | ...  | ...  | 0.59 | 0.61 | 0.45 | ...  | ...  |      |      |
|                             | Ghatsila            | ...             | 0.32               | ...  | 0.85 | 0.15 | ...  | ...  | ...  | ...  | ...  | 0.09 | 1.36 | 1.65 | 1.39 | 1.21 | 0.83 | 0.36 | 0.13 | 0.15 | 0.25 |      |      |
| Manbhoom                    | Baharagura          | 0.50            | 0.32               | 0.35 | 0.39 | ...  | ...  | 0.20 | ...  | ...  | ...  | 1.32 | ...  | ...  | 1.43 | ...  | 0.28 | 1.70 | 0.13 | 0.10 | ...  |      |      |
|                             | Purulia             | ...             | ...                | ...  | 0.61 | 0.77 | ...  | ...  | ...  | ...  | ...  | 0.45 | 1.33 | 0.81 | 0.88 | ...  | ...  | 0.35 | 0.58 | 0.04 | 0.31 |      |      |
|                             | Gobindpore          | ...             | 0.25               | 0.90 | 1.46 | 0.04 | ...  | ...  | ...  | ...  | ...  | 1.15 | 0.08 | ...  | 0.65 | ...  | 0.06 | 0.21 | 0.30 | ...  | 0.1  |      |      |
|                             | Raghunath-pore.     | ...             | ...                | ...  | 0.46 | 0.36 | ...  | ...  | 0.15 | ...  | ...  | 0.35 | 1.75 | 0.26 | 0.47 | ...  | 0.13 | 0.45 | 0.90 | ...  | 0.50 |      |      |
|                             | Barrabhoom          | ...             | 0.42               | 0.77 | 0.23 | ...  | ...  | ...  | ...  | ...  | ...  | 0.85 | 2.19 | 0.60 | 0.03 | ...  | 0.47 | 0.70 | 0.04 | 0.48 | ...  |      |      |
|                             | Jhalda              | ...             | ...                | 0.44 | ...  | 1.34 | ...  | ...  | ...  | ...  | ...  | 2.66 | ...  | ...  | ...  | ...  | 1.10 | ...  | ...  | ...  | 1.84 |      |      |

## n Bengal for the month of September 1887—concluded.

| 21   | 22   | 23   | 24  | 25   | 26   | 27  | 28  | 29  | 30  | Number of rainy days. | Average number of rainy days. | Total rainfall for the month. | Average rainfall for the month. | Heaviest rainfall during the month. | Total rainfall from 1st January 1887 up to 30th Sept. 1887. | Average rainfall from 1st January up to 30th Sept. 1887. | Station.         | District.          | Metereological division. |
|------|------|------|-----|------|------|-----|-----|-----|-----|-----------------------|-------------------------------|-------------------------------|---------------------------------|-------------------------------------|---|--|------------------|--------------------|--------------------------|
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 15                    | 12.4                          | 5.31                          | 7.24                            | 1.38                                | 31.74   | 38.22  | Buxar            | ...                | SOUTH BHAR.              |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 10                    | 9                             | 5.71                          | 0.07                            | 1.82                                | 37.79   | 38.01  | Dohree.          | ...                |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 9                     | 10.4                          | 4.81                          | 0.07                            | 1.20                                | 37.97   | 38.01  | Bluhooah.        | ...                |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 8                     | 12.3                          | 3.82                          | 0.94                            | 0.90                                | 33.03   | 38.07  | Nasseram.        | ...                |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 11                    | 12.2                          | 5.06                          | 5.44                            | 1.05                                | 57.21   | 41.63  | Arrah.           | ...                |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 4                     | ...                           | 5.90                          | ...                             | 2.00                                | ...   | ...  | Mohaniah.        | ...                |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 8                     | 10.0                          | 2.33                          | 7.21                            | 0.80                                | 31.20   | 40.26  | Aurangabad...    | Gya                |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 10                    | 12.5                          | 9.27                          | 7.12                            | 2.85                                | 43.41   | 38.40  | Gya.             |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | 9.3                           | 4.37                          | 0.97                            | 1.39                                | 37.12   | 38.47  | Nowadah.         |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | 9.4                           | 0.91                          | 5.06                            | 1.57                                | 10.21   | 33.57  | Jehanabad.       |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 8                     | ...                           | 4.28                          | ...                             | 1.37                                | 37.55   | ...  | Arwal.           |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 6                     | ...                           | 2.77                          | ...                             | 1.10                                | 26.81   | ...  | Indunagar.       |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 9                     | ...                           | 0.20                          | ...                             | 1.88                                | 38.03   | ...  | Sherrghati.      |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 8                     | ...                           | 4.00                          | ...                             | 0.80                                | 31.03   | ...  | Rajauli.         |                    |                          |
| 0.50 | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 10                    | ...                           | 5.97                          | ...                             | 1.90                                | 23.70   | ...  | Pakri Bara-wan.  |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | 12.6                          | 3.51                          | 8.01                            | 0.73                                | 35.44   | 38.66  | Patna            | Patna.             |                          |
| 0.67 | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 8                     | 11.1                          | 3.93                          | 6.84                            | 1.74                                | 37.44   | 38.01  | Dinapore.        |                    |                          |
| 0.65 | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 10                    | 12.1                          | 5.27                          | 6.23                            | 2.58                                | 38.92   | 40.29  | Behar.           |                    |                          |
| 1.00 | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 10                    | 14.6                          | 7.35                          | 7.70                            | 3.00                                | 35.31   | 38.20  | Burra.           |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 5                     | ...                           | 2.35                          | ...                             | 1.00                                | 31.05   | ...  | Bickram.         |                    |                          |
| 1.01 | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 5                     | ...                           | 2.85                          | ...                             | 1.23                                | 38.00   | ...  | Hilaa.           |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 10                    | 11.1                          | 9.59                          | 7.27                            | 2.65                                | 52.52   | 38.65  | Hogonsarai       | Monghyr.           |                          |
| 0.51 | 2.11 | ...  | ... | ...  | ...  | ... | ... | ... | ... | 11                    | 12.9                          | 0.97                          | 8.40                            | 2.11                                | 48.98   | 41.19  | Monghyr.         |                    |                          |
| 0.32 | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | 10.2                          | 0.45                          | 7.45                            | 1.53                                | 43.28   | 42.09  | Jamui.           |                    |                          |
| 0.05 | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 8                     | ...                           | 10.76                         | ...                             | 3.14                                | ...   | ...  | Gugri.           |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 5                     | ...                           | 7.02                          | ...                             | 0.05                                | 28.63   | ...  | Shickpara.       |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 8                     | 13.1                          | 5.40                          | 7.07                            | 3.32                                | 44.79   | 43.10  | Bhagulpore       | South Bhagulpore.  |                          |
| 0.26 | ...  | ...  | ... | ...  | 0.20 | ... | ... | ... | ... | 11                    | 12.8                          | 6.43                          | 8.23                            | 1.88                                | 40.40   | 42.29  | Banks.           |                    |                          |
| ...  | 1.11 | ...  | ... | ...  | ...  | ... | ... | ... | ... | 6                     | ...                           | 5.75                          | ...                             | 2.51                                | 48.86   | ...  | Kolgong.         |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 11                    | 11.9                          | 5.16                          | 9.77                            | 1.05                                | 54.43   | 44.53  | Rajmehal         | Sonthal Pergunnah. |                          |
| 0.05 | 0.36 | ...  | ... | 0.17 | ...  | ... | ... | ... | ... | 11                    | 15.5                          | 10.62                         | 12.67                           | 3.79                                | 76.26   | 55.08  | Gidda.           |                    |                          |
| 1.25 | ...  | ...  | ... | 0.21 | ...  | ... | ... | ... | ... | 16                    | 15.5                          | 10.62                         | 12.67                           | 3.79                                | 76.26   | 55.08  | Pakour.          |                    |                          |
| ...  | 0.07 | 0.03 | ... | 0.27 | ...  | ... | ... | ... | ... | 14                    | 17.9                          | 9.50                          | 10.63                           | 3.19                                | 48.95   | 53.33  | Syn Duomka.      |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 11                    | 15.2                          | 4.97                          | 8.90                            | 1.11                                | 40.72   | 48.23  | Dookhar.         |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 9                     | 12.6                          | 6.88                          | 7.88                            | 2.14                                | 42.62   | 47.64  | Jumara.          |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | ...                   | ...                           | ...                           | ...                             | ...                                 | ...   | ...  | Nimra.           |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 11                    | ...                           | 12.10                         | ...                             | 2.20                                | 30.25   | ...  | Nanhat.          |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | 16.3                          | 7.11                          | 8.82                            | 1.86                                | 42.58   | 47.08  | Pachamba         | Hazaribagh         | CHUTIA NAUPUR.           |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | 18.2                          | 6.53                          | 7.92                            | 2.46                                | 40.53   | 45.76  | (Uridd).         |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | 14.8                          | 6.53                          | 8.18                            | 1.49                                | 40.06   | 45.62  | Hazaribagh.      |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 10                    | 13.0                          | 6.54                          | 8.73                            | 2.06                                | 40.50   | 46.23  | Semtaguran.      |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 9                     | 16.3                          | 8.90                          | 12.07                           | 3.50                                | 68.80   | 60.8   | Manudi Hills.    |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | ...                           | 6.50                          | ...                             | 1.78                                | 42.40   | ...  | Jnoomrah Hills.  |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 13                    | ...                           | 10.39                         | ...                             | 1.70                                | 50.83   | ...  | Barkhi.          |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 7                     | ...                           | 12.46                         | ...                             | 3.40                                | 73.93   | ...  | Chatra.          |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | ...                   | ...                           | ...                           | ...                             | ...                                 | ...   | ...  | Karagdeha.       |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | ...                   | ...                           | ...                           | ...                             | ...                                 | ...   | ...  | Kamghar.         |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 13                    | ...                           | 8.26                          | ...                             | 1.58                                | 55.27   | ...  | Lohardugga       | Lohardugg          |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | 17.1                          | 0.87                          | 8.20                            | 2.41                                | 57.27   | 40.34  | Rauchu.          |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 13                    | 12.8                          | 8.38                          | 7.93                            | 1.76                                | 50.42   | 41.71  | Palanow.         |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 6                     | ...                           | 5.83                          | ...                             | 2.00                                | 43.26   | ...  | Silli.           |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | ...                   | ...                           | ...                           | ...                             | ...                                 | ...   | ...  | Bilumat.         |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 2                     | ...                           | 3.05                          | ...                             | 1.75                                | 35.32   | ...  | Hosemabad.       |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 5                     | ...                           | 3.75                          | ...                             | 2.13                                | 52.36   | ...  | Garwah.          |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | 17.0                          | 6.15                          | 8.54                            | 1.85                                | 51.96   | 51.86  | Chyebasua        | Singbhoom.         |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 8                     | ...                           | 3.60                          | ...                             | 0.67                                | 38.98   | ...  | Chakradhar-pore. |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 15                    | ...                           | 10.30                         | ...                             | 1.95                                | 57.90   | ...  | Chatsila.        |                    |                          |
| 0.45 | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 11                    | ...                           | 7.51                          | ...                             | 1.92                                | 42.47   | ...  | Baharagura.      |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 11                    | 16.6                          | 0.24                          | 7.74                            | 0.81                                | 45.07   | 46.24  | Purulia          | Manbhoom.          |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | 13.3                          | 5.22                          | 7.32                            | 1.40                                | 51.51   | 41.48  | Gobindpore.      |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 13                    | ...                           | 0.77                          | ...                             | 1.75                                | 37.82   | ...  | Kaghunath-pore.  |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 12                    | ...                           | 7.77                          | ...                             | 2.19                                | 44.47   | ...  | Barabhoom.       |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | 5                     | ...                           | 7.38                          | ...                             | 2.06                                | ...   | ...  | Jhalda.          |                    |                          |
| ...  | ...  | ...  | ... | ...  | ...  | ... | ... | ... | ... | ...                   | ...                           | ...                           | ...                             | ...                                 | ...   | ...  | Chas.            |                    |                          |

**SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS TAKEN IN ASSAM, DURING THE MONTH OF SEPTEMBER 1887.**

The weather conditions in Bengal during September are generally similar to those of the previous monsoon months. The south-west monsoon continues to bring up large amounts of aqueous vapour, and during the earlier weeks of the month the rainfall, more especially in the western districts, is partly due to the Bombay branch of the monsoon current, though the greater part of the rainfall is undoubtedly brought up by the current blowing from the Bay of Bengal. The Bombay branch, however, gives way earlier than that from the Bay of Bengal, and from the second or the third week it ceases to influence Bengal. The Bay of Bengal branch also weakens during September, particularly during the latter half of the month, and at its close it almost withdraws from the province, and thus the rainfall in September in Bengal is decidedly smaller than in July and August, and the decrease is also greater in the western districts than elsewhere, from the cessation of the Bombay monsoon current comparatively early in the month.

The intermittent character of the monsoon rainfall has been frequently pointed out in previous summaries. Each heavy burst of rainfall appears to exhaust for the time being the supplies of aqueous vapour available for condensation. Hence, after each such burst, the monsoon current falls off, and appears to die away in and near its northern limits. Local variable winds set in over the Gangetic plain and extend eastwards. This goes on until the moisture current in the rear accumulates fresh supplies of aqueous vapour and renewed energy, when it again advances and gives general rain. The majority of these advances accompany a certain amount of atmospheric disturbance, which frequently takes the form of small moving depressions or cyclonic circulations or storms. These usually occur near the front of the increasing monsoon current, or near its limits of retreat. Hence these depressions may originate either over the land or the sea, according to the strength and other conditions of the monsoon current at the time. The chief meteorological features of the month are usually the depressions which introduce and accompany the bursts of rain. Their place of formation, the rapidity with which they follow one another, and the total amount of rain they give, depend mainly upon the strength of the monsoon current itself, whilst the directions which the depressions pursue, and the local distribution of rainfall, are determined by the local meteorological conditions prevalent during their formation and existence.

*Normal distribution of rainfall.*—The average distribution of rainfall for the month of September depends mainly upon the geographical relations of the province to the Bay of Bengal monsoon current, which are similar to those of the preceding month. The withdrawal of the Bombay branch westward deprives a portion of the province (chiefly the western districts) of one of its sources of rainfall, and also somewhat alters the conditions and relations of the province to the other branch. Hence the average distribution of the month of September differs, more especially in the western districts, considerably from that of the two preceding months of July and August.

The average rainfall of the month exceeds 20 inches in the districts at the foot of the hills in North Bengal. Between this area and a line running west and east through Bagdogra, and also in a small area in East Bengal including Fenny and Noakholly, the mean rainfall varies between 15 and 20 inches. Between these areas and a curved line defined by the stations of Bettiah, Durbhunga, Bhagulpore, Godda, Berhampore, Goalundo, Manickgunge, Bagirhat, Diamond Harbour, Kendrapara and Pooce, and thus including the greater part of North-East and South-West Bengal and the northern districts of North Behar, the average rain is from 10 to 15 inches. In the area to the south and west of this line, including the whole of Behar, except the most northern portions, the northern and central districts of South-West Bengal, the Northal Pergunnahs, Chutia Nagpur, and the western districts of Orissa, the average rainfall is less than 10 inches, and ranges between 6 and 10 inches. The greater part of South-West Bengal and Chutia Nagpur, within this area, has an average varying from 8 to 10 inches. The average rainfall of the month is least in the Patna, Gya and Shahabad districts of South Behar, and in a small area in South-West Bengal, including the stations of Magoorah, Bongong, Ranaghat, Krishnagur and Culna. In these districts the average rainfall very slightly exceeds 6 inches, and ranges between 6 and 7 inches.

*Meteorology of the month.*—At the close of August, Bengal had been influenced by one or two very feeble barometric depressions, which had formed over the land; one had formed over South-East Bengal and had given rather heavy rain to the southern parts of the province, while a second very feeble depression, accompanied by slight cyclonic circulation of winds, was formed over North Bengal, and gave rise to excessive rainfall at some of the stations affected by it, some stations receiving falls in excess of ten inches within 24 hours. On the 1st of September this feeble depression had almost disappeared, but conditions over the greater part of the province were favourable for rainfall, and the great majority of stations on this day received moderate rain. Conditions at the commencement of September were thus fairly normal for the season, and rainfall was general for the first three or four days, but on the 4th a distinct cyclonic circulation of winds again set up over part of Behar and North Bengal, the centre of which appeared to be near Maldah, and in connection with this feeble whirl some heavy falls of rain occurred, and thus Matari in the Purneah district and Falacotta in the Julpigoree district each received more than fifteen inches in a single day; while Mickligunge, Julpigoree

and Debigunge received amounts of between ten and fifteen inches. On the 5th, the feeble wind circulation was transferred to Behar, and rather heavy rainfall continued in the north of the province, but a rapid rise of pressure took place on the 5th, which brought about on the 6th a rapid and almost complete change in the meteorological conditions. The minimum pressure recorded in the Bay retreated southwards to Oconada; pressure again rose rapidly in Bengal, the rise in some instances exceeding a tenth of an inch. Winds became light and variable, and at neighbouring stations were frequently of opposite directions in the interior of the province, and instead of the very strong monsoon current which had previously been blowing at the head of the Bay, a light and rather irregular current was reported, though at the same time an extremely strong monsoon current was blowing in the south of the Bay. Rainfall also to a great extent ceased in Bengal, though in Behar some heavy falls were reported. On the 7th these conditions developed further, winds became northerly at the greater number of stations in the province, pressure remained very high in Bengal, and an almost complete break in the rains was established. Conditions over the centre and south of the Bay were probably decidedly disturbed at this time, and wind directions all round the Bay showed distinct indraught towards the sea area, while in the south of the Bay at Galle a particularly strong monsoon current was blowing. These conditions continued unaltered until the 9th, when an extremely rapid fall of pressure set in over the northern half of the Bay, the pressure giving way most rapidly at the eastern stations, and on this day conditions were decidedly favourable to the production of a barometric depression in the eastern part of the Bay. From the 6th to the 9th, therefore, there was an alm at complete break in the rains over the greater part of the province.

The conditions last noticed continued to develop, and on the 10th a distinct depression was formed at the head of the Bay, south or south-west of Burisal, which afterwards drifted in a westerly direction across the head of the Bay through Orissa and South-West Bengal into the Central Provinces, when it ceased to affect Bengal on about the 13th. In its advance it as usual brought heavy rain to the area affected by it. The storm having disappeared inland, it then became possible for the monsoon winds again to flow over the interior of the province. Moderate rain commenced to fall in many districts, but it was neither very general nor heavy. A rather strong south-easterly current set in over the whole of Bengal from about the 13th, though, at the same time, a strong westerly current was blowing across the south of the Bay from the Arabian Sea. This seems to have deflected the area of heavy rainfall from the Bengal current towards the east coast of the Bay, and on the 14th Diamond Island reported the excessive rainfall of 9.58 inches. On the 15th and 16th another very feeble depression formed in the north west angle of the Bay, which passed inland through South-West Bengal, and with its disappearance a fairly steady monsoon current from the Bay of Bengal again flowed over the province, and easterly and south-easterly winds were reported from almost all stations. Conditions were almost unchanged on the 17th, and on this day very light and local rain was reported from the greater part of the province. On the 18th the changes of pressure over the province were a little irregular, and at the western stations winds became rather westerly, showing that the westerly current blowing from the Arabian Sea was still influencing Bengal. On the 18th rainfall was again irregularly distributed, and the greater part of the centre of the province received little or no rain. On the 19th pressure commenced to fall, the fall being rather large in North Bengal and Assam, and the area of lowest pressure at the Bay stations was transferred to the north-west angle of the Bay and the Orissa Coast; the westerly winds strengthened, and winds became westerly and south-westerly over the greater part of the province. On this day also general and rather heavy rain was received in Behar and North Bengal, but the remainder of the province received little rain. On the 20th a brisk fall of pressure took place over parts of South-West Bengal, and pressure became distinctly low, a band of low pressure apparently stretching from South-West Bengal through West Bengal into Behar. Winds also commenced to show a very faint tendency to circulation over Bengal, and rain again fell over a considerable part of Behar and North Bengal. On the 21st pressure continued to fall, and a low pressure area was formed over the whole of the centre of the province, while on the 22nd a distinct barometric depression was formed at the head of the Bay, which subsequently advanced in a northerly or north-north-easterly direction through the centre of the province into North Bengal, giving moderate to heavy rain in its advance. On the 26th the depression had practically filled up, the cyclonic circulation of winds accompanying it had disappeared, and winds became rather irregular in direction, though rain-showers are still reported. With the disappearance of the depression conditions became at once less favourable for rainfall, and for the remainder of the month generally local showers only were reported, principally from the east and north of the province. From the 27th to the end of the month, pressure almost steadily rose, westerly and south-westerly winds also set in at the western stations, and gradually forced back the southerly winds previously blowing until, at the close of the month, north-westerly winds were blowing over the whole province except at the eastern stations, where still south-easterly and southerly winds were reported. With the setting in of the dry north-westerly winds humidity rapidly decreased, until at several of the western stations the saturation was less than fifty per cent. of the possible amount. Cloud proportion also decreased rapidly, while temperature generally increased, and at the close of the month the conditions over the greater part of the province were distinctly those which mark the close of the rainy season, and the commencement of the transition conditions which obtain, previous to the setting in of the north-east monsoon or the cold weather season in Bengal.



For the whole month therefore it may be said that the monsoon blowing over the province was weak, the number of depressions formed in the Bay and advancing over the land was small, the depressions themselves were very feeble, and finally the monsoon diminished in strength more rapidly and much earlier than usual, for the monsoon from the Bay of Bengal had almost ceased to flow over Bengal from the 27th of the month.

*Barometric depressions for the month.*—Leaving out of consideration one or two extremely feeble whirls which formed over the land, and which were of no practical interest, three feeble barometric depressions only have been formed during the month. Neither of these had been of much importance beyond giving moderate to heavy rain to the areas affected by their advance.

*First feeble barometric depression of September 9th to 12th*—On September, the 9th, an extremely rapid fall of pressure set in over the northern half of the Bay, the pressure giving way most rapidly at the eastern stations, and thus forming an area of relatively low pressure over the north-eastern part of the Bay. On the 10th a further very rapid fall of pressure took place over the northern half of the Bay, and at some of the stations in South Bengal the fall equalled about 0·15 inch. A distinct barometric depression with cyclonic circulation of winds was therefore formed on the 10th, the centre of which was apparently not very far south of the Sunderbans to the south or south-west of Burrisal. The depression then travelled in a westerly direction, and on the 11th it was about midway between Saugor Island and False Point, and it was again accompanied by a distinct cyclonic circulation of winds, though the wind velocities in connection with it were light. On the morning of the 12th the depression had passed well inland, and had disappeared into the Central Provinces. During the formation and advance of the feeble storm, moderate to heavy rain was brought to the southern districts; and in some cases the falls were very heavy.

*Second very feeble barometric depression, September 15th and 16th.*—On September 15th a rapid fall of the barometer took place in the north-west angle of the Bay, resulting in the formation of a very feeble depression, the centre of which was near Balasore, and which was accompanied with cyclonic circulation of winds. The depression gave heavy rainfall on this day to parts of South-West Bengal and Orissa, and thus Pooree reported 3·18 inches, False Point 4·46 inches, Dharmasallah 4·02 inches, Garbetta 2·18 inches, and Anda (Bankoorah district) 2·70 inches. On the 16th the depression had entirely passed inland, and had almost disappeared. It was therefore of very slight importance.

*Third feeble barometric depression of September 22nd to 26th.*—On September 21st a moderate fall of pressure took place, which was most rapid in South-East Bengal. On the 22nd a distinct barometric depression, accompanied by cyclonic circulation of winds, had formed over the head of the Bay, the centre being only a short distance south of the Sunderbans and south or south-west of Burrisal. On the morning of the 23rd at 10 A.M. its centre was almost over the coast line of the Sunderbans, and between Saugor Island and Burrisal. The feeble storm was, as usual, accompanied by distinct cyclonic circulation of winds, but the wind force at the land stations was moderate only, though at the head of the Bay squally weather generally prevailed. On the 24th the depression advanced slowly in a northerly or north-north-easterly direction, and at 10 A.M. its centre was near Burrisal and between this station and Jessore, and with the advance of the feeble storm inland, strong winds set in at the coast stations at the head of the Bay and moderate to heavy rain fell over the greater part of the south of the province. The feeble storm continued its advance in a northerly direction, and at 10 A.M. of the 25th its centre was in North Bengal between Serajgunge and Rampore Beaulah. It was still well defined, but the depression was decidedly shallower than on the previous day, and it was evidently filling up. On the 26th the depression had practically filled up, the cyclonic circulation of winds accompanying the feeble storm had disappeared, and winds became rather irregular in direction, while pressure generally rose, and on the 27th the depression had quite disappeared.

*Pressure.*—At the commencement of September the pressure distribution was fairly normal, but on the 5th and 6th a very rapid rise took place over the greater part of the province, the rise in some instances equalling about a fifth of an inch. For the first week of the month, therefore, pressure was in excess of the normal by 0·06 inch. During the second week, owing to the formation of the depression above described, the mean pressure became very considerably below the normal, the average defect equalling more than a tenth of an inch. The defect was to a certain extent neutralized in the third week, but still pressure was in defect by 0·02 inch; while during the fourth week pressure became more nearly normal, though there was still an average defect of 0·01 inch. For the whole month, therefore, the mean pressure has been below the normal at almost all stations, and taking only those stations into consideration which have recorded observations for many years, and which, therefore, yield reliable averages, the mean pressure for September for the whole province has been 0·014 inch below the normal. The defects have generally been largest at the stations in the south of the province.

*Temperature.*—Owing to the fact that rainfall has generally been below the normal over the province throughout the month, temperature has been distinctly above it. The mean temperature of the whole province has thus been 0·2° in excess of the normal. The distribution of temperature, however, is a little irregular, and thus while East Bengal and Orissa have been 0·6° in excess and North Bengal 0·7° in excess, North Behar has shown a mean temperature of 0·5° in defect. In South-West Bengal, South Behar, and Chutia Nappur the variations from normal temperatures have been very small. In Assam temperature has been rather largely in excess, and the mean excess has equalled 0·3°.



**Rainfall.**—Speaking generally, over the whole province there were three distinct breaks in the rains during September. The periods of these breaks differed in various districts, but may be said roughly to have been from the 6th to the 9th, from the 17th to the 19th, and from the 26th to the end of the month, though over the greater part of Behar and Chutia Nagpur rain ceased to fall from the 22nd. The actual number of rainy days during September has therefore been very considerably smaller than usual, and thus while the average number of rainy days in this month varies from about 11 days in North Behar to 16 or 17 in East Bengal, the actual number this year has been from 9 days in North Behar to 14 days in East Bengal, or an average of about two or three days less than usual. As stated previously, also the falls have been decidedly light and scanty. North Bengal has received the largest average fall of 12·01 inches, but this is 1·66 inches less than the normal amount. South-West Bengal has received the next largest fall of 8·02 inches, which is also 1·11 inches less than the normal. North Behar has received an average fall of 7·48 inches, or less than the normal amount by 2·52 inches. East Bengal has only received 7·37 inches, which is the extremely large amount of 5·21 inches less than the normal. South Behar has received 6·38 inches or 1·71 inches less than the normal, and Chutia Nagpur 6·35 inches which is no less than 2·56 inches smaller than the normal, while Orissa has received only 6·32 inches, which is again the very large amount of 4·49 inches less than the normal. Compared with the normal fall and expressed as a percentage of that amount, the actual rainfall in each large meteorological district becomes—in Orissa 59 per cent., in South-West Bengal 88 per cent., in East Bengal 58 per cent., in North Bengal 88 per cent., in North Behar 75 per cent., in South Behar 79 per cent. and in Chutia Nagpur 71 per cent. Considering each of these districts to have an equal value in the calculation, the actual rainfall of the province for September may be said to have been equal to only 74 per cent. of the normal.

The following table, which includes the above figures, gives a comparison between the actual monthly and total rainfall, and the normal rainfall of the province up to the end of September in the same form that has been employed in the previous monthly abstracts of the present year. The figures represent the ratio of the rainfall of each month of the present year to the normal rainfall expressed as a percentage. The table thus gives a condensed summary of the rainfall data of the present year for each meteorological division. The first nine columns give the percentage amount of rainfall received in each month, and the last column the percentage rainfall of the whole period from the 1st of January to the end of September.

| Meteorological Divisions. | January. | February. | March. | April. | May. | June. | July. | August. | September. | Actual rainfall of first nine months expressed as a percentage of the normal fall for the period. |
|---------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|---|
| Orissa                    | 119      | Nil       | 137    | 60     | 193  | 66    | 91    | 83      | 59         | 84  |
| South-West Bengal         | 292      | 2         | 252    | 56     | 139  | 82    | 103   | 76      | 88         | 95  |
| East Bengal               | 612      | 14        | 206    | 34     | 71   | 79    | 80    | 71      | 58         | 77  |
| North Bengal              | 530      | 2         | 274    | 114    | 158  | 159   | 63    | 97      | 88         | 110   |
| North Behar               | 381      | Nil       | 127    | 109    | 177  | 135   | 59    | 111     | 75         | 100   |
| South Behar               | 411      | Nil       | 263    | 188    | 423  | 70    | 83    | 83      | 79         | 161   |
| Chutia Nagpur             | 500      | Nil       | 10     | 111    | 331  | 73    | 93    | 90      | 71         | 95  |

Taking up the discussion of the rainfall more in detail, the first point of importance is the great irregularity of its distribution. It frequently happens that, when a weak monsoon is blowing, the distribution of rainfall is irregular and capricious, and the rainfall of September has been no exception to this rule. Owing to the great irregularities the actual distribution of the rain is a little difficult to describe. The heaviest falls as usual have been in and near the hills to the north of Bengal, where such stations as Falacotta, Buxa, Alipur Duars, and Mickligunge report nearly 30 inches of rain. The second area of large precipitation in the east of the province is, however, almost entirely wanting, and a large part of South-East Bengal has received a fall of less than five inches, while at Goalundo in the Furreedpur district less than two inches has fallen. Speaking generally, almost the whole of North Bengal, the Mymensingh district in East Bengal, a considerable part of the Jessore and Nuddea districts in Central Bengal, the Soonderbuns districts, and parts of the Chumparun, Rungpore, and Cuttack districts, have received falls of ten inches and upwards; the remaining parts of the western and central districts and the extreme south-east of Bengal have received falls from ten to five inches in amount, while falls of less than five inches are reported from a large part of East Bengal, from one or two districts in Behar and the south of Chutia Nagpur, and from a district represented in West Bengal by such stations as Cutwa, Bankoorah, Maliara, Gangajalghati, Sonamukhi and Bolpore.

Compared with the normal falls for the month, practically the whole of the province has received a largely defective fall except the Sunderbuns, and a narrow band running through the centre of the province through parts of Jessore, Nuddea, Burdwan, and Moorsheadabad districts, and a part of North Bengal comprising portions of Malda, Rajshahye, and the Bogra districts. Small isolated areas of excess rainfall are also found in the following districts:—Gya, Palamow, Chumparun, Monghyr, Bhagulpore and Cooch Behar. These regions of excess fall, however, are small and of not much importance, and certainly the area of excess precipitation is not one-tenth of the whole province. The defective fall over the province generally varies from about three up to five inches of rain, but over a large

part of East and South-East Bengal the defect exceeds five inches, and over the greater part of the Tipperah and parts of the Noakholly and Chittagong districts, the rainfall has been more than seven inches below the normal, and therefore the defects in this part of Bengal are very serious.

Comparing the averages district by district with the normal, and allowing due weight for the area which each reporting station represents, it is found that the average rainfall in the Comilla or Tipperah district has been rather less than 30 per cent. of the normal amount; in the following districts the falls have been only from 40 to 50 per cent. of the normal amount:—Balasore, Furreedpore and Dacca; and in the following districts the falls have been from 50 to 60 per cent. of the normal:—Bankoorah, Chittagong, Noakholly and Durbhunga; and in the following the falls are from 60 to 70 per cent.:—Pooree, Howrah, Hooghly, Mozufferpore and Shahabad; and in the Singbhoom, Maubhoom, South Bhagulpore, Sonthal Pergunnahs, Patna, Sarun, Purneah, Mymensingh, Khoolna, Beerbhoom, Midnapore and Cuttack districts the actual falls have been from 70 to 80 per cent. of the normal. Elsewhere the falls have not been so seriously in defect.

The following table gives full data for the comparison of the actual and the normal rainfall of the month of September in all districts of the province. The figures are derived in the manner explained in preceding monthly summaries. The first column gives the average district rainfall as determined from the rainfall observations of the past 15 years. The second column gives the actual district rainfall as determined from the weighted actual rainfalls of the month at the reporting stations in the district. The third column expresses the ratio of the actual district rainfall to the normal district rainfall expressed as a percentage. The fourth column gives the same information as the third column in a slightly different form. It states by what percentage the actual rainfall varied in excess (+) or in defect (—) from the normal rainfall:—

*Percentage Table for September 1887.*

| DIVISION.         | DISTRICT.              | Normal district rainfall for September 1887. | Actual district rainfall for September 1887. | Percentage of actual to normal rainfall. | Percentage excess (+) defect (—) |
|-------------------|------------------------|--|--|--|----------------------------------|
| Orissa            | Pooree ...             | 10.08  | 6.35   | 63                                       | — 37                             |
|                   | Cuttack ...            | 9.62   | 7.12   | 74                                       | — 26                             |
|                   | Balasore ...           | 11.33  | 5.15   | 46                                       | — 54                             |
|                   | Midnapore ...          | 8.86   | 6.26   | 73                                       | — 27                             |
|                   | 24 Pergunnahs ...      | 9.68   | 9.22   | 95                                       | — 5                              |
|                   | Howrah ...             | 8.80   | 6.06   | 69                                       | — 31                             |
| South-West Bengal | Hooghly ...            | 8.24   | 4.92   | 60                                       | — 40                             |
|                   | Burdwan ...            | 7.89   | 7.67   | 97                                       | — 3                              |
|                   | Bankoora ...           | 8.72   | 4.88   | 56                                       | — 44                             |
|                   | Beerbhoom ...          | 9.16   | 6.70   | 73                                       | — 27                             |
|                   | Nuddea ...             | 8.64   | 9.50   | 110                                      | + 10                             |
|                   | Khoolna ...            | 9.58   | 7.52   | 79                                       | — 21                             |
|                   | Jessore ...            | 8.62   | 8.72   | 101                                      | + 1                              |
|                   | Moorshedabad ...       | 9.97   | 10.49  | 105                                      | + 5                              |
|                   | Chittagong ...         | 14.18  | 8.21   | 58                                       | — 42                             |
|                   | Backergunge ...        | 12.22  | 12.21  | 100                                      | 0                                |
| East Bengal       | Noakholly ...          | 16.47  | 8.52   | 52                                       | — 48                             |
|                   | Furreedpore ...        | 8.86   | 4.23   | 47                                       | — 53                             |
|                   | Dacca ...              | 10.31  | 4.65   | 45                                       | — 55                             |
|                   | Commilla ...           | 11.70  | 3.45   | 29                                       | — 71                             |
|                   | Mymensingh ...         | 13.20  | 10.02  | 76                                       | — 24                             |
|                   | Pubna ...              | 10.61  | 8.99   | 85                                       | — 15                             |
|                   | Bogra ...              | 10.95  | 11.39  | 104                                      | + 4                              |
|                   | Rajshahye ...          | 11.19  | 10.40  | 93                                       | — 7                              |
| North Bengal      | Maldah ...             | 10.76  | 9.05   | 84                                       | — 16                             |
|                   | Dinapore ...           | 11.64  | 9.61   | 83                                       | — 17                             |
|                   | Rungpore ...           | 13.22  | 11.47  | 87                                       | — 13                             |
|                   | Cooch Behar ...        | 23.09  | 18.75  | 81                                       | — 19                             |
|                   | Julpigoree ...         | 24.12  | 21.11  | 88                                       | — 12                             |
|                   | Darjeeling ...         | 13.78  | 12.68  | 91                                       | — 9                              |
|                   | Purneah ...            | 13.98  | 10.15  | 73                                       | — 27                             |
|                   | North Bhagulpore ...   | 9.88   | 8.41   | 85                                       | — 15                             |
| North Behar       | Durbhunga ...          | 9.49   | 5.12   | 54                                       | — 46                             |
|                   | Mozufferpore ...       | 8.49   | 5.70   | 67                                       | — 33                             |
|                   | Chumparun ...          | 9.11   | 9.72   | 107                                      | + 7                              |
|                   | Sarun ...              | 7.63   | 5.47   | 72                                       | — 28                             |
|                   | Shahabad ...           | 7.25   | 4.85   | 67                                       | — 33                             |
|                   | Gya ...                | 6.92   | 5.99   | 87                                       | — 13                             |
| South Behar       | Patna ...              | 7.28   | 5.11   | 70                                       | — 30                             |
|                   | Monghyr ...            | 7.79   | 7.29   | 94                                       | — 6                              |
|                   | South Bhagulpore ...   | 8.12   | 5.99   | 74                                       | — 26                             |
|                   | Sonthal Pergunnahs ... | 10.84  | 7.93   | 77                                       | — 23                             |
|                   | Hazaribagh ...         | 8.31   | 6.65   | 80                                       | — 20                             |
|                   | Lohardugga ...         | 7.96   | 8.21   | 103                                      | + 3                              |
| Chutia Nagpur     | Singbhoom ...          | 8.54   | 6.15   | 72                                       | — 28                             |
|                   | Maubhoom ...           | 7.66   | 6.07   | 79                                       | — 21                             |

The following table gives the summary of the temperature and rainfall data of each of the seven Meteorological Divisions of the province for the month of September 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                   |                               |                         |                        |                       |  |           | RAINFALL.       |            |                          |                                 |            |                      |                 |
|------------------------------|--------------------------------|-------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|--------------------------|---------------------------------|------------|----------------------|-----------------|
|                              | Highest observed during month. | Lowest observed during month. | Averages for month.     |                        |                       | Average mean of month above or below normal mean of month. | Of month. |                 |            | Rainy days.              |                                 |            | Since 15th May 1887. |                 |
|                              |                                |                               | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average.  | Normal average. | Variation. | Average number in month. | Normal average number in month. | Variation. | Average.             | Normal average. |
|                              |                                |                               |                         |                        |                       |  |           |                 |            |                          |                                 |            |                      |                 |
| Orissam. ... ..              | 97.4                           | 74.8                          | 88.6                    | 78.4                   | 83.5                  | +0.6   | 6.32      | 10.81           | -4.49      | 11.5                     | 15.6                            | -4.1       | 38.32                | 45.79           |
| South-West Bengal ... ..     | 95.3                           | 69.8                          | 89.1                    | 78.1                   | 83.6                  | +0.2   | 8.02      | 9.13            | -1.11      | 13.0                     | 14.8                            | -1.8       | 43.23                | 46.81           |
| East Bengal ... ..           | 96.3                           | 68.8                          | 87.8                    | 77.4                   | 82.6                  | +0.6   | 7.37      | 12.54           | -5.21      | 14.2                     | 16.7                            | -2.5       | 48.68                | 68.31           |
| North Bengal ... ..          | 95.6                           | 68.8                          | 88.6                    | 77.0                   | 82.8                  | +0.7   | 12.01     | 13.67           | -1.66      | 12.7                     | 14.5                            | -1.8       | 69.98                | 64.00           |
| North Behar ... ..           | 95.4                           | 70.6                          | 89.2                    | 77.0                   | 83.1                  | -0.5   | 7.48      | 10.00           | -2.52      | 8.9                      | 11.3                            | -2.4       | 47.47                | 44.14           |
| South Behar ... ..           | 97.0                           | 70.3                          | 89.3                    | 77.4                   | 83.4                  | -0.1   | 6.38      | 8.09            | -1.71      | 10.8                     | 12.3                            | -1.5       | 38.71                | 39.80           |
| Chutia Nagpur ... ..         | 80.3*                          | 66.2*                         | 84.5*                   | 71.0*                  | 77.8*                 | 0*   | 6.35      | 8.91            | -2.56      | 11.6                     | 15.5                            | -3.9       | 43.09                | 45.05           |
| Assam ... ..                 | 101.1                          | 71.3                          | 88.8                    | 77.0                   | 82.9                  | +0.8   |           |                 |            |                          |                                 |            |                      |                 |

\* Chyebassa not included.

METEOROLOGICAL OFFICE, BENGAL ;  
The 14th October 1887.

ALEXANDER PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal.

Meteorological Report of the Province of Bengal

| METEOROLOGICAL DIVISION | DISTRICT.                 | Representative station.    | STATION OBSERVATIONS.           |                            |                      |                       |                     |                            |                |                     |                 |                           |                                   |                                 |                                     |                  |
|-------------------------|---------------------------|----------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------------|----------------|---------------------|-----------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|------------------|
|                         |                           |                            | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.               |                |                     |                 |                           |                                   |                                 |                                     |                  |
|                         |                           |                            | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week.       | Date.          | Lowest during week. | Date.           | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean rain in in. |
|                         |                           |                            |                                 |                            |                      |                       |                     |                            |                |                     |                 |                           |                                   |                                 |                                     |                  |
| CENTRAL.                | Pooree ... ..             | Gopalpore ...              | 29.978                          | 29.928                     | +0.041               | Variable              | 185                 | 88.3                       | 8th & 9th Oct. | 73.8                | 11th Oct.       | 84.7                      | 76.8                              | 80.7                            | -1.3                                | 80.              |
|                         | False Point ...           | False Point ...            | 29.922                          | 29.944                     | +0.051               | ESE                   | 219                 | 90.0                       | 8th ..         | 75.1                | 11th-13th Oct.  | 85.8                      | 76.4                              | 81.1                            | -1.0                                | 81.              |
|                         | Cuttack ... ..            | Cuttack ... ..             | 29.920                          | 29.932                     | +0.043               | NE                    | 34                  | 93.9                       | 8th ..         | 75.3                | 13th ..         | 88.0                      | 76.7                              | 82.8                            | +0.1                                | 84.              |
|                         | Balasore ... ..           | Balasore ... ..            | 29.987                          | 29.946                     | +0.036               | Southerly             | 40.9                | 94.4                       | 9th ..         | 72.3                | 13th ..         | 87.3                      | 74.8                              | 81.0                            | -0.5                                | 83.4             |
|                         | South-West Midnapore ...  | Saugor Island ...          | 29.941                          | 29.967                     | +0.073               | SE                    | 230                 | 90.3                       | 10th ..        | 72.0                | 12th ..         | 85.8                      | 76.0                              | 80.9                            | -1.1                                | 81.5             |
| SOUTH-WEST BENGAL.      | South 24-Pargunnahs ...   | Midnapore ...              | 29.813                          | 29.965                     | +0.061               | S                     | 55.7                | 93.3                       | 8th ..         | 72.2                | 12th, 13th Oct. | 87.9                      | 74.3                              | 81.1                            | -0.1                                | 83.2             |
|                         | 24-Pargunnahs ... ..      | Calcutta ... ..            | 29.937                          | 29.950                     | +0.061               | E                     | 80                  | 88.5                       | 10th ..        | 73.0                | 12th ..         | 85.5                      | 76.0                              | 80.3                            | -2.0                                | 81.7             |
|                         | Howrah ... ..             | Burdwan ... ..             | 29.861                          | 29.962                     | +0.053               | Southerly             | 55                  | 93.6                       | 8th ..         | 74.4                | 12th ..         | 80.6                      | 76.5                              | 82.6                            | 0                                   | 82.8             |
|                         | Hooghly ... ..            | Bankoora ... ..            | 29.936                          | —                          | —                    | Calm                  | 15.5                | 93.6                       | 8th ..         | 72.6                | 13th ..         | 80.5                      | 76.0                              | 82.3                            | —                                   | 83.5             |
|                         | Beerbhoom ... ..          | Raneegunge ...             | 29.618                          | 29.929                     | +0.077               | ESE                   | 85.1                | 94.9                       | 8th ..         | 72.9                | 14th ..         | 80.9                      | 74.7                              | 82.3                            | —                                   | 83.6             |
| EAST BENGAL.            | West Burdwan ... ..       | Berhampore ...             | 29.905                          | 29.972                     | +0.074               | SSW                   | 87.3                | 91.7                       | 8th ..         | 75.3                | 11th, 12th      | 88.4                      | 74.9                              | 81.7                            | -1.3                                | 81.8             |
|                         | Moorsheadabad ... ..      | Krishnaghur ...            | 29.893                          | 29.961                     | —                    | ESW                   | 98.0                | 90.8                       | 8th ..         | 72.3                | 12th ..         | 87.5                      | 73.7                              | 80.0                            | —                                   | 83.3             |
|                         | Nuddes ... ..             | Jessore ... ..             | 29.917                          | 29.930                     | +0.065               | Calm                  | 65.4                | 92.8                       | 8th ..         | 73.4                | 12th ..         | 87.7                      | 75.0                              | 81.4                            | -1.6                                | 82.5             |
|                         | Khoolna ... ..            | Chittagong ...             | 29.908                          | 29.998                     | +0.104               | ENE                   | 41                  | 89.6                       | 9th ..         | 72.5                | 11th ..         | 87.7                      | 74.3                              | 81.0                            | 0                                   | 82.0             |
|                         | Chittagong Hill Tracts .. | Demagiri ... ..            | —                               | —                          | —                    | —                     | —                   | Observations not received  |                |                     |                 |                           |                                   |                                 | —                                   | —                |
| NORTH BENGAL.           | Backergunge ... ..        | Barisal ... ..             | 29.958                          | 29.970                     | +0.103               | Calm                  | 43.4                | 90.3                       | 9th ..         | 72.4                | 13th ..         | 80.3                      | 75.2                              | 80.7                            | -0.3                                | 83.3             |
|                         | Noakholly ... ..          | Noakholly ... ..           | 29.750                          | 29.980                     | —                    | Calm                  | 5.6                 | 89.0                       | 9th ..         | 71.9                | 13th ..         | 85.5                      | 74.6                              | 80.1                            | —                                   | 81.5             |
|                         | Furzedpore ... ..         | Furzedpore ...             | 29.940                          | 29.979                     | +0.064               | S                     | 54.3                | 88.5                       | 9th, 13th Oct. | 71.9                | 13th ..         | 80.1                      | 74.1                              | 80.1                            | -1.1                                | 81.7             |
|                         | Dacca ... ..              | Dacca ... ..               | 29.955                          | 29.978                     | +0.083               | South-easterly.       | 69                  | 91.1                       | 9th ..         | 72.6                | 13th ..         | 87.9                      | 75.3                              | 81.6                            | -0.8                                | 82.6             |
|                         | Commillah ... ..          | Commillah ... ..           | 29.880                          | 29.916                     | +0.032               | SE                    | 90.3                | 90.3                       | 9th ..         | 70.8                | 10th ..         | 88.1                      | 74.1                              | 81.1                            | -1.0                                | 82.3             |
| SOUTH BENGAL.           | Mymensingh ... ..         | Mymensingh ...             | 29.981                          | 29.963                     | +0.117               | ESE                   | 49.4                | 89.3                       | 8th, 10th Oct. | 71.1                | 11th, 13th Oct. | 85.9                      | 72.8                              | 79.4                            | -2.0                                | 80.2             |
|                         | Bogra ... ..              | Bogra ... ..               | 29.895                          | 29.950                     | —                    | Calm                  | 44.4                | 91.8                       | 8th ..         | 70.8                | 10th ..         | 80.8                      | 73.0                              | 79.9                            | —                                   | 79.6             |
|                         | Pubna ... ..              | Serajgunge ...             | 29.936                          | 29.985                     | +0.091               | Easterly              | 62.4                | 92.0                       | 8th ..         | 71.2                | 13th ..         | 87.6                      | 73.1                              | 80.4                            | -1.3                                | 80.3             |
|                         | Rajshahye ... ..          | Rampore Beau-leah ...      | 29.895                          | 29.906                     | +0.069               | SE                    | 74.3                | 92.3                       | 8th ..         | 69.7                | 11th ..         | 88.4                      | 71.8                              | 80.1                            | -0.9                                | 82.2             |
|                         | Maldah ... ..             | Maldah ... ..              | 29.798                          | —                          | —                    | Calm                  | 7                   | 91.2                       | 8th ..         | 71.7                | 14th ..         | 89.1                      | 74.2                              | 81.7                            | —                                   | 83.4             |
| NORTH BENGAL.           | Dinagopore ... ..         | Dinagopore ...             | 29.828                          | 29.950                     | +0.071               | Northerly             | 79.0                | 92.6                       | 8th ..         | 70.6                | 10th ..         | 87.2                      | 73.3                              | 80.3                            | -2.1                                | 80.9             |
|                         | Rungpore ... ..           | Rungpore ... ..            | 29.840                          | 29.976                     | +0.036               | Calm                  | 35.6                | 92.8                       | 8th ..         | 71.3                | 14th ..         | 87.9                      | 75.0                              | 81.5                            | +0.1                                | 81.3             |
|                         | Julpigoree ... ..         | Julpigoree ...             | 29.704                          | 29.906                     | +0.062               | Easterly              | 61.1                | 91.0                       | 8th ..         | 67.8                | 14th ..         | 85.9                      | 70.4                              | 78.2                            | -1.3                                | 79.1             |
|                         | Cooch Behar ... ..        | Darjeeling Hill Tracts ... | 23.908                          | —                          | +0.018               | Calm                  | 69.2                | 63.1                       | 8th, 9th Oct.  | 47.1                | 14th ..         | 59.5                      | 49.2                              | 54.4                            | -2.6                                | 54.2             |
|                         | Purneah ... ..            | Purneah ... ..             | 29.902                          | 29.991                     | +0.059               | Calm                  | 19.7                | 91.2                       | 8th ..         | 68.7                | 14th ..         | 80.3                      | 72.5                              | 79.4                            | -1.9                                | 81.0             |
| SOUTH BENGAL.           | North Bhagulpore ... ..   | Mozufferpore ...           | —                               | —                          | —                    | —                     | —                   | Observations suspended.    |                |                     |                 |                           |                                   |                                 | —                                   | —                |
|                         | Mozufferpore ... ..       | Darbhunga ...              | 29.815                          | 29.987                     | +0.068               | ESE                   | 96                  | 91.4                       | 8th ..         | 70.5                | 14th ..         | 88.1                      | 74.6                              | 81.4                            | +1.1                                | 78.9             |
|                         | Darbhunga ... ..          | Motihari ... ..            | 29.708                          | 29.932                     | +0.064               | E                     | 165.9               | 92.7                       | 8th-10th Oct.  | 67.8                | 9th ..          | 80.6                      | 71.1                              | 80.4                            | +1.8                                | 83.2             |
|                         | Chumparun ... ..          | Chupra ... ..              | 29.736                          | 29.934                     | +0.036               | E                     | 92.1                | 94.0                       | 9th ..         | 70.7                | 14th ..         | 89.0                      | 73.6                              | 80.7                            | +0.7                                | 80.5             |
|                         | Saran ... ..              | Dehree ... ..              | —                               | —                          | —                    | —                     | —                   | Observations not received. |                |                     |                 |                           |                                   |                                 | —                                   | —                |
| SOUTH BENGAL.           | Shahabad ... ..           | Buxar ... ..               | 29.692                          | 29.927                     | +0.032               | E                     | 168.3               | 95.4                       | 8th ..         | 70.3                | 13th ..         | 87.3                      | 73.8                              | 80.6                            | -0.4                                | 81.0             |
|                         | Arrah ... ..              | Arrah ... ..               | 29.716                          | 29.910                     | +0.026               | E                     | 168.4               | 95.4                       | 9th ..         | 71.2                | 14th ..         | 89.2                      | 73.4                              | 81.3                            | +1.3                                | 80.9             |
|                         | Gya ... ..                | Gya ... ..                 | 29.508                          | 29.867                     | -0.010               | NE                    | 58                  | 94.5                       | 8th, 9th Oct.  | 71.8                | 14th ..         | 90.6                      | 74.3                              | 82.4                            | +1.4                                | 85.2             |
|                         | Patna ... ..              | Bankipore ...              | 29.784                          | 29.951                     | +0.047               | ENE                   | 65                  | 94.9                       | 9th ..         | 71.7                | 14th ..         | 80.4                      | 74.8                              | 80.1                            | +0.8                                | 80.5             |
|                         | South Bhagulpore ... ..   | Bhagulpore ...             | 29.790                          | 29.984                     | +0.069               | E                     | 57.9                | 92.4                       | 9th ..         | 71.0                | 11th ..         | 88.0                      | 74.2                              | 81.1                            | +0.8                                | 82.6             |
| SOUTH BENGAL.           | Monghyr ... ..            | Duonka ... ..              | 29.446                          | —                          | —                    | Calm                  | 15.6                | 92.6                       | 8th ..         | 72.0                | 11th ..         | 86.9                      | 73.9                              | 81.4                            | —                                   | 81.7             |
|                         | South 24-Pargunnahs ...   | Hazaribagh ...             | 27.926                          | 29.939                     | +0.044               | Southerly             | 213                 | 89.3                       | 8th ..         | 68.7                | 11th-13th Oct.  | 85.0                      | 70.3                              | 77.7                            | +1.9                                | 79.1             |
|                         | Lohardugga ... ..         | Ranchoe ... ..             | 27.801                          | 29.933                     | +0.030               | SE                    | 129.3               | 87.0                       | 8th ..         | 68.4                | 11th ..         | 84.3                      | 67.6                              | 76.0                            | +0.6                                | 77.9             |
|                         | Munbhoom ... ..           | Chyebases ...              | 29.165                          | —                          | —                    | SSE                   | 34.2                | 91.4                       | 8th ..         | 71.7                | 11th ..         | 88.6                      | 73.1                              | 81.0                            | —                                   | 82.2             |
|                         | Singhoom ... ..           | Sitabgar ... ..            | 29.659                          | 30.028                     | +0.080               | NE                    | 45                  | 88.6                       | 8th ..         | 69.9                | 12th ..         | 83.1                      | 71.7                              | 77.4                            | -1.9                                | 9.8              |
| SOUTH BENGAL.           | Assam ... ..              | Dhubri ... ..              | 29.874                          | 29.983                     | +0.085               | Calm                  | 154                 | 91.2                       | 8th ..         | 71.8                | 14th ..         | 86.6                      | 74.1                              | 80.3                            | -0.4                                | 79.8             |
|                         | Silchar ... ..            | Silchar ... ..             | 29.883                          | 29.901                     | +0.050               | Calm                  | 41                  | 93.0                       | 8th ..         | 71.3                | 11th ..         | 88.8                      | 75.0                              | 80.9                            | 0                                   | 81.0             |

Explanatory. - Summary. - The normal means of air pressure and temperature are the arithmetical average or means of the readings during the same period for the past ten years. The humidity of the atmosphere is expressed as percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The number in the parentheses means or average of the rainfall in that district determined from the returns sent in by the sub-divisions; station from the rainfall in inches in the district sending in returns divided by the number of stations.

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or the week ending Friday, the 14th October 1887.

| DISTRICT OBSERVATIONS.      |   |  |                    |              |                     |                    |              |                 |        |        |                               |                              |                  |                        | Representative station. | DISTRICT. | METEOROLOGICAL DIVISION. |
|-----------------------------|---|--|--------------------|--------------|---------------------|--------------------|--------------|-----------------|--------|--------|-------------------------------|------------------------------|------------------|------------------------|-------------------------|-----------|--------------------------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | OF WEEK.           |              | RAINFALL.           |                    |              |                 |        |        | Average number of rainy days. | Normal number of rainy days. |                  |                        |                         |           |                          |
|                             |   |  |                    |              | Since 1st of month. |                    |              | Since May 15th. |        |        |                               |                              |                  |                        |                         |           |                          |
|                             |   |  | Mean for district. | Normal mean. | Variation.          | Mean for district. | Normal mean. | Variation.      |        |        |                               |                              |                  |                        |                         |           |                          |
| 87                          | 86  | 720                                    |                    |              |                     |                    |              |                 |        |        |                               |                              |                  |                        | Gopalpore               | Poorce    | ORISSA.                  |
| 88                          | 79  | 984                                    |                    | 2'05         |                     | 3'85               |              |                 | 48'95  |        |                               |                              | 2'4              | Falae Point            | Cuttack                 |           |                          |
| 77                          | 71  | 0'42                                   |                    | 1'48         |                     | 2'92               |              |                 | 47'74  |        |                               |                              | 2'2              | Cuttack                | Balasore                |           |                          |
| 81                          | 67  | 6'10                                   |                    | 1'58         |                     | 3'31               |              |                 | 50'37  |        |                               |                              | 2'0              | Balasore               | South-West Midnapore    |           |                          |
| 86                          | 84  | 8'63                                   |                    | 1'35         |                     | 2'89               |              |                 | 56'25  |        |                               |                              | 2'5              | Saugor Island          | South 24-Pergunnahs     |           |                          |
| 76                          | 64  | 2'91                                   | 2'00               | 1'23         | 2'10                | 2'12               | -0'08        | 50'27           | 48'29  | +1'98  | 3'3                           | 1'7                          | Midnapore        | Midnapore              |                         |           |                          |
| 82                          | 81  | 2'40                                   | 2'06               | 1'15         | 2'04                | 2'14               | +0'50        | 40'13           | 40'10  | -8'07  | 3'5                           | 2'3                          | Calcutta         | 24-Pergunnahs          |                         |           |                          |
| 73                          | 78  | 1'10                                   | 1'32               | 1'10         | 1'34                | 2'12               | -0'78        | 44'29           | 43'91  | +0'38  | 3'3                           | 1'8                          | Howrah           | Hooghly                |                         |           |                          |
| 75                          | 67  | 0'34                                   | 0'74               | 0'92         | 0'74                | 2'15               | -1'41        | 48'70           | 40'47  | -0'08  | 2'8                           | 1'9                          | Burdwan          | Burdwan                |                         |           |                          |
| 72                          | 70  | 0'89                                   | 1'43               | 0'04         | 1'43                | 1'87               | -0'44        | 40'39           | 50'06  | -3'07  | 3'0                           | 1'5                          | Bankoora         | Bankoora               |                         |           |                          |
| 83                          | 61  | 3'47                                   | 2'14               | 1'33         | 2'40                | 2'38               | +0'11        | 57'65           | 47'06  | +10'59 | 3'3                           | 2'0                          | Raneegunge       | Beerbhoom              |                         |           |                          |
| 70                          | 69  | 4'38                                   | 3'19               | 1'26         | 3'57                | 2'35               | +1'02        | 42'50           | 46'75  | -4'25  | 4'4                           | 2'1                          | West Burdwan     | Mooresheadabad         |                         |           |                          |
| 84                          | 89  | 2'40                                   | 3'50               | 1'00         | 3'99                | 2'03               | +1'96        | 40'32           | 50'43  | -10'11 | 4'6                           | 2'0                          | Berhampore       | Nudda                  |                         |           |                          |
| 83                          | 74  | 0'93                                   |                    | 1'43         |                     | 4'09               |              |                 | 109'11 |        |                               | 2'0                          | Krishnaghur      | Jessore                |                         |           |                          |
| 80                          | 77  | 5'03                                   | 3'29               | 1'45         | 3'70                | 3'23               | +0'47        | 54'30           | 73'65  | -19'35 | 4'0                           | 2'7                          | Jessore          | Khoolna                |                         |           |                          |
| 81                          | 39  | 1'86                                   |                    | 2'02         |                     | 4'03               | -2'01        | 57'15           | 76'56  | -19'41 | 2'0                           | 2'9                          | Chittagong       | Chittagong             |                         |           |                          |
| 80                          | 40  | 3'43                                   | 3'20               | 1'38         | 3'79                | 2'42               | +1'37        | 34'93           | 53'42  | -18'49 | 3'3                           | 2'2                          | Demagiri         | Chittagong Hill Tracts |                         |           |                          |
| 82                          | 63  | 3'26                                   | 2'07               | 1'30         | 3'01                | 2'02               | +0'39        | 37'04           | 58'27  | -20'33 | 3'5                           | 2'0                          | Harrisal         | Backergunge            |                         |           |                          |
| 73                          | 59  | 5'85                                   |                    | 1'48         |                     | 3'38               |              |                 | 67'83  |        |                               | 2'0                          | Noakholly        | Noakholly              |                         |           |                          |
| 84                          | 76  | 2'78                                   | 3'02               | 1'30         | 3'63                | 2'72               | +0'31        | 58'23           | 64'24  | -5'99  | 3'8                           | 2'0                          | Furreedpore      | Furreedpore            |                         |           |                          |
| 84                          | 64  | 2'51                                   | 3'04               | 1'10         | 3'04                | 2'37               | +1'27        | 59'82           | 54'17  | +5'65  | 5'3                           | 1'8                          | Dacca            | Dacca                  |                         |           |                          |
| 83                          | 03  | 3'35                                   | 2'39               | 1'43         | 3'00                | 2'41               | +0'53        | 42'84           | 50'89  | -8'05  | 3'5                           | 2'2                          | Commillah        | Commillah              |                         |           |                          |
| 79                          | 41  | 4'04                                   | 2'80               | 1'53         | 2'89                | 2'59               | +0'30        | 48'70           | 51'41  | -2'62  | 3'6                           | 1'8                          | Mymensingh       | Mymensingh             |                         |           |                          |
| 80                          | 36  | 1'13                                   | 2'07               | 1'40         | 2'07                | 2'40               | -0'33        | 40'08           | 52'73  | -6'65  | 4'0                           | 1'8                          | Bogra            | Bogra                  |                         |           |                          |
| 82                          | 67  | 1'70                                   | 3'12               | 0'67         | 3'12                | 2'24               | +0'88        | 67'75           | 54'03  | +13'72 | 4'0                           | 1'9                          | Serajgunge       | Pubna                  |                         |           |                          |
| 81                          | 31  | 1'77                                   | 1'70               | 1'05         | 1'70                | 2'97               | -1'27        | 78'54           | 70'06  | +7'88  | 3'8                           | 2'0                          | Rampore Beaulal  | Rajshahye              |                         |           |                          |
| 77                          | 57  | 2'00                                   | 1'20               | 0'78         | 1'20                | 3'85               | -2'65        | 116'21          | 107'37 | +8'64  | 3'2                           | 2'0                          | Maldah           | Maldah                 |                         |           |                          |
| 83                          | 77  | 3'02                                   | 3'81               | 0'91         | 4'05                | 3'73               | +0'32        | 110'18          | 117'00 | -0'88  | 6'0                           | 1'8                          | Dinapore         | Dinapore               |                         |           |                          |
| 81                          | 41  | 1'25                                   | 2'51               | 0'88         | 2'51                | 2'20               | +0'31        | 63'75           | 55'03  | +7'82  | 3'4                           | 1'4                          | Rungpore         | Rungpore               |                         |           |                          |
| 82                          | 61  | 1'42                                   | 1'72               | 0'98         | 1'72                | 2'36               | +0'07        | 45'64           | 41'43  | +4'21  | 2'7                           | 1'8                          | Julpigoree       | Cooch Behar            |                         |           |                          |
| 71                          | 67  | 4'27                                   | 5'45               | 1'22         | 5'45                | 2'91               | +2'54        | 47'56           | 45'23  | +2'33  | 3'0                           | 1'8                          | Darjeeling       | Darjeeling Hill Tracts |                         |           |                          |
| 85                          | 49  | 3'30                                   | 4'08               | 1'09         | 4'08                | 3'36               | +1'12        | 38'64           | 41'39  | -2'55  | 3'0                           | 1'2                          | Purneah          | Purneah                |                         |           |                          |
| 74                          | 60  | 2'90                                   | 4'36               | 0'58         | 4'36                | 2'13               | +2'23        | 36'91           | 37'96  | -1'05  | 2'5                           | 1'1                          | North Bhagulpore | North Bhagulpore       |                         |           |                          |
| 79                          | 01  | 2'08                                   |                    |              |                     | 2'36               | +0'07        | 45'64           | 41'43  | +4'21  | 2'7                           | 1'1                          | Mozufferpore     | Mozufferpore           |                         |           |                          |
| 07                          | 70  | 0'70                                   | 2'47               | 0'80         | 2'47                | 2'03               | -0'31        | 48'06           | 42'71  | +5'35  | 2'3                           | 1'1                          | Durbhunga        | Durbhunga              |                         |           |                          |
| 83                          | 79  | 2'66                                   | 1'73               | 0'88         | 1'73                | 2'91               | +2'54        | 47'56           | 45'23  | +2'33  | 3'0                           | 0'9                          | Motihari         | Chumparun              |                         |           |                          |
| 76                          | 44  | 1'20                                   | 1'30               | 0'82         | 1'30                | 3'36               | +1'12        | 38'64           | 41'39  | -2'55  | 3'0                           | 0'9                          | Chupra           | Sarun                  |                         |           |                          |
| 77                          | 34  | 1'21                                   | 1'76               | 1'14         | 1'88                | 2'13               | +2'23        | 36'91           | 37'96  | -1'05  | 2'5                           | 0'8                          | Dehrue           | Dehrue                 |                         |           |                          |
| 69                          | 66  | 1'23                                   |                    | 0'92         |                     | 2'36               | +0'07        | 45'64           | 41'43  | +4'21  | 2'7                           | 0'8                          | Buxar            | Shahabad               |                         |           |                          |
| 72                          | 73  | 1'25                                   | 0'68               | 0'92         | 1'30                | 2'03               | -0'31        | 48'06           | 42'71  | +5'35  | 2'3                           | 0'0                          | Arrah            | Arrah                  |                         |           |                          |
| 78                          | 77  | 0'25                                   | 0'19               | 0'85         | 0'19                | 2'03               | -0'31        | 48'06           | 42'71  | +5'35  | 2'3                           | 0'0                          | Gya              | Gya                    |                         |           |                          |
| 82                          | 89  | 1'94                                   |                    |              |                     | 2'03               | -0'30        | 35'16           | 30'30  | -4'24  | 2'5                           | 1'0                          | Bankipore        | Patna                  |                         |           |                          |
| 81                          | 54  | 0'86                                   |                    |              |                     | 1'03               | -0'03        | 41'74           | 41'02  | +0'72  | 3'0                           | 1'2                          | Bhagulpore       | South Bhagulpore       |                         |           |                          |
| 80                          | 76  |  |                    |              |                     | 2'54               | -0'06        | 51'45           | 48'60  | +2'85  | 3'3                           | 1'6                          | Monghyr          | Monghyr                |                         |           |                          |
| 73                          | 73  |  |                    |              |                     | 2'29               |              |                 | 48'47  |        |                               | 1'3                          | Doonka           | Sonthal Pergunnahs     |                         |           |                          |
| 78                          | 77  |  |                    |              |                     | 2'03               | -0'64        | 45'86           | 45'10  | -1'30  | 2'8                           | 1'4                          | Hasaribagh       | Hasaribagh             |                         |           |                          |
| 83                          | 89  |  |                    |              |                     | 1'50               | -1'31        | 49'40           | 48'63  | +0'86  | 2'0                           | 1'4                          | Ranchee          | Lohardugga             |                         |           |                          |
| 81                          | 54  |  |                    |              |                     |                    |              |                 |        |        |                               | 1'9                          | Chyebasae        | Manbhoom               |                         |           |                          |
| 80                          | 76  |  |                    |              |                     |                    |              |                 |        |        |                               |                              | Sibesar          | Singbhoom              |                         |           |                          |
|                             |   |  |                    |              |                     |                    |              |                 |        |        |                               |                              | Dhubri           | Assam                  |                         |           |                          |
|                             |   |  |                    |              |                     |                    |              |                 |        |        |                               |                              | Silchar          | Silchar                |                         |           |                          |

Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 14th of October 1887.

| Meteorological<br>division. | District.            | Station.       | RAINFALL.                    |                            |                             |                              |                                |                               |                             | TOTAL.                      |                   | Total rain-<br>fall since<br>1st of<br>month. | Average<br>total rain-<br>fall from<br>1st of<br>month. | Total rain-<br>fall since<br>1st May<br>1887. | Average<br>rainfall<br>from 1st<br>May<br>to date. |
|-----------------------------|----------------------|----------------|------------------------------|----------------------------|-----------------------------|------------------------------|--------------------------------|-------------------------------|-----------------------------|-----------------------------|-------------------|---|---|---|--|
|                             |                      |                | Saturday,<br>8th<br>October. | Sunday,<br>9th<br>October. | Monday,<br>10th<br>October. | Tuesday,<br>11th<br>October. | Wednesday,<br>12th<br>October. | Thursday,<br>13th<br>October. | Friday,<br>14th<br>October. | Number<br>of<br>rainy days. | Rainfall<br>week. |   |   |   |  |
| Orissa                      | Pooree               | Pooree         | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Khurdah        | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Bampur         | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | False Point    | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Gop            | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             | Outtaek              | Pipli          | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Jagatsingapore | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Banki          | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Cuttack        | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Kendrapara     | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
| Balasore                    | Jajpore              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Dharmasalla          | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Salipore             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Chandhall            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Bhuddruk             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| SOUTH-WEST<br>BENGAL.       | Midnapore            | Sorah          | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Balasore       | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Jellesore      | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Baripodah      | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Contal         | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             | 24-Pergunnahs        | Saugor Island  | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Tumlook        | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Midnapore      | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Ghatal         | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
|                             |                      | Kukrahati      | 0.71                         | 0.13                       | 0.71                        | 1.20                         | 0.08                           | 0.83                          | 0.23                        | 5                           | 5.01              | 5.06  | 3.87  | 30.37   | 43.73  |
| Howrah                      | Horis                | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Bhagwanpore          | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Garbeta              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Diamond Har-<br>bour | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Canning Town         | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Hooghly                     | Alipore Jail         | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Barrackpore          | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Dum-Dum              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Ranaghat             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Buseerhat            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Burdwan                     | Howrah               | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Mohestra             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Hooghly              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Hooghly              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Jehanabad            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Bankoora                    | Quina                | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Burdwan              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Quina                | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Raneergunge          | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Manikur              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Beerbhoom                   | Bankoora             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Bishnupore           | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Mallara              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Khatra               | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Indas                | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Nuddea                      | Kotalpore            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Anda                 | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Gangajalghati        | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Satpore              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Sonamukhi            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Jessore                     | Bh. Soory            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Hetampore            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Kampore Haut         | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Boipore              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Ranaghat             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Khoolna                     | Kishnaghat           | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Choodanga            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Meherpore            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Kooshien             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Sathkira             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Moorsheadabad               | Bagrinat             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Khoolna              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Narail               | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Jessore              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Jhenidah             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Chittagong                  | Magorah              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Bongong              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Kandi                | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Berhampore           | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Lalbagh              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Chittagong Hill Tracts.     | Asimgunge            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Jungipore            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Lalgola              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Akhrigam             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Patkhali             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
| Mackeringinge               | Patkhali             | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Peronpore            | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Burrial              | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.87  | 30.37   | 43.73   |  |
|                             | Bhola                | 0.71           | 0.13                         | 0.71                       | 1.20                        | 0.08                         | 0.83                           | 0.23                          | 5                           | 5.01                        | 5.06              | 3.8   |   |   |  |

**SUPPLEMENT TO THE CALCUTTA GAZETTE, OCTOBER 19, 1887.**

**Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 14th of October 1887—contd.**

| Geographical Division. | District.      | Station.               | RAINFALL.            |                      |                        |                          |                         |                       |                         | TOTAL.             |                   | Total rainfall since 1st of month. | Average total rainfall from 1st of month. | Total rainfall since 15th May 1887. | Average rainfall from 15th May to date. |       |
|------------------------|----------------|------------------------|----------------------|----------------------|------------------------|--------------------------|-------------------------|-----------------------|-------------------------|--------------------|-------------------|------------------------------------|---|-------------------------------------|---|-------|
|                        |                |                        | Sunday, 8th October. | Monday, 9th October. | Tuesday, 10th October. | Wednesday, 11th October. | Thursday, 12th October. | Friday, 13th October. | Saturday, 14th October. | Number rainy days. | of rainfall week. |                                    |   |                                     |   |       |
| SOUTHERN RAILWAY.      | Noakhali.      | Gournaddi Banphal      | ...                  | 0.15                 | 0.22                   | 0.45                     | 0.10                    | 2.75                  | ...                     | ...                | ...               | ...                                | ...                                       | ...                                 | ...                                     |       |
|                        |                | Noakhali Ferry         | ...                  | ...                  | ...                    | ...                      | 1.10                    | 3.75                  | 2                       | 4.85               | 6.65              | 4.71                               | 67.74                                     | 101.48                              |   |       |
|                        |                | Harikapore Kamganj     | ...                  | 1.58                 | 0.25                   | ...                      | ...                     | 2.83                  | ...                     | ...                | ...               | 3.97                               | 102.82                                    | ...                                 |   |       |
|                        | Dacca.         | Madanipore             | ...                  | 1.18                 | 0.17                   | ...                      | ...                     | 1.11                  | ...                     | 3                  | 2.46              | 3.05                               | 2.43                                      | 34.10                               | 53.93                                   |       |
|                        |                | Furresdipore           | ...                  | ...                  | 0.88                   | ...                      | ...                     | 1.54                  | 0.30                    | 4                  | 2.84              | 2.44                               | 2.05                                      | 31.89                               | 54.16                                   |       |
|                        |                | Gaulundo               | ...                  | ...                  | 2.37                   | ...                      | ...                     | 1.10                  | 0.15                    | 3                  | 4.31              | 4.04                               | 2.70                                      | 34.93                               | 54.23                                   |       |
|                        | Hill Tipperah. | Munshiganj             | ...                  | ...                  | 0.50                   | ...                      | ...                     | 0.94                  | 1.60                    | 3                  | 3.03              | 3.03                               | 3.20                                      | 36.78                               | 68.10                                   |       |
|                        |                | Dacca                  | ...                  | ...                  | 1.18                   | ...                      | ...                     | 1.28                  | 0.41                    | 4                  | 3.73              | 3.80                               | 2.57                                      | 43.57                               | 57.71                                   |       |
|                        |                | Narainkunda            | ...                  | 0.11                 | 0.19                   | ...                      | 0.56                    | 0.05                  | 1.30                    | 4                  | 2.64              | 2.64                               | 2.02                                      | 37.53                               | 58.81                                   |       |
|                        | NORTH RAILWAY. | Pabna.                 | Manickganj           | ...                  | ...                    | 0.56                     | ...                     | ...                   | 0.70                    | 1.12               | 3                 | 2.47                               | 2.47                                      | 2.10                                | 33.89                                   | 48.42 |
|                        |                |                        | Joydebpore           | ...                  | ...                    | 0.02                     | 1.76                    | ...                   | 0.81                    | 0.76               | 4                 | 3.25                               | 3.25                                      | ?                                   | 49.33                                   | ...   |
|                        |                |                        | Agartala             | ...                  | ...                    | ...                      | ...                     | ...                   | 0.90                    | ...                | ...               | ...                                | ...                                       | 3.08                                | 45.72                                   | 59.54 |
| Mymensingh.            |                | Comilla                | ...                  | 0.60                 | ...                    | ...                      | ...                     | 1.18                  | 1.80                    | 3                  | 3.58              | 3.58                               | 2.81                                      | 74.41                               | 74.41                                   |       |
|                        |                | Chandpore              | ...                  | 0.80                 | 0.35                   | ...                      | ...                     | 1.15                  | 1.35                    | 4                  | 3.65              | 4.02                               | 4.34                                      | 36.77                               | 78.50                                   |       |
|                        |                | Brahmunbaria           | ...                  | 0.07                 | 0.03                   | ...                      | ...                     | 0.79                  | ...                     | ...                | ...               | 2.95                               | ?   | 35.15                               | 59.79                                   |       |
| Maidat.                |                | Ramchandrapore.        | ...                  | ...                  | ...                    | ...                      | 0.47                    | 0.14                  | 1.02                    | 5                  | 2.13              | 2.13                               | ?   | ?                                   | ?                                       |       |
|                        |                | Nasirabad.             | ...                  | ...                  | 0.30                   | ...                      | ...                     | 2.20                  | 0.35                    | 3                  | 2.45              | 2.45                               | ?   | 31.84                               | ?                                       |       |
|                        |                | Daudkandi              | ...                  | 0.00                 | 1.02                   | ...                      | ...                     | 0.34                  | 0.96                    | 4                  | 2.38              | 2.38                               | ?   | 34.56                               | ?                                       |       |
| NORTH BRANCH.          |                | Dinagopore.            | Kasba                | ...                  | ...                    | 0.04                     | ...                     | ...                   | 0.85                    | 1.18               | 3                 | 2.07                               | 2.07                                      | ?                                   | 40.50                                   | ?     |
|                        |                |                        | Laksham              | ...                  | 0.16                   | ...                      | ...                     | ...                   | 1.80                    | 3.22               | 3                 | 5.18                               | 5.79                                      | ?                                   | 29.16                                   | ?     |
|                        |                |                        | Kishoreganj          | ...                  | ...                    | ...                      | ...                     | ...                   | 2.21                    | 0.36               | 2                 | 2.60                               | 2.61                                      | 3.06                                | 55.00                                   | 67.50 |
|                        | Dinagopore.    | Atia (Tangail)         | ...                  | 0.15                 | ...                    | 0.11                     | ...                     | 0.75                  | 2.54                    | 4                  | 3.55              | 3.55                               | 2.43                                      | 39.22                               | 53.91                                   |       |
|                        |                | Mymensingh             | 0.09                 | 0.27                 | 0.80                   | ...                      | 0.08                    | 0.62                  | 2.08                    | 6                  | 3.94              | 3.94                               | 3.11                                      | 60.35                               | 70.81                                   |       |
|                        |                | Jamaliore              | ...                  | ...                  | 0.84                   | ...                      | 1.18                    | 0.97                  | 0.90                    | 4                  | 2.69              | 2.69                               | 2.43                                      | 60.26                               | 61.78                                   |       |
|                        | Dinagopore.    | Netrokona              | ...                  | ...                  | 0.22                   | ...                      | ...                     | 1.32                  | 0.80                    | 3                  | 2.34              | 2.39                               | 1.83                                      | 40.52                               | 68.50                                   |       |
|                        |                | Suhorakhali            | ...                  | 0.50                 | ...                    | ...                      | ...                     | 1.00                  | 2.40                    | 3                  | 3.90              | 3.90                               | ?   | ?                                   | ?                                       |       |
|                        |                | Durgapore              | ...                  | ...                  | ...                    | ...                      | ...                     | 0.70                  | ...                     | ...                | ...               | ?                                  | ?   | ?                                   | ?                                       |       |
|                        | Dinagopore.    | Dewanganj              | 1.90                 | ...                  | 0.60                   | ...                      | 1.00                    | 0.14                  | 1.00                    | 5                  | 4.78              | 4.79                               | ?   | 78.77                               | ?                                       |       |
|                        |                | Pabna                  | ...                  | ...                  | 0.24                   | ...                      | 0.13                    | 0.20                  | 1.36                    | 4                  | 2.06              | 2.10                               | 2.75                                      | 36.53                               | 52.09                                   |       |
|                        |                | Seraganj               | ...                  | ...                  | 0.03                   | ...                      | ...                     | 0.18                  | 2.82                    | 3                  | 3.01              | 4.00                               | 2.07                                      | 49.08                               | 49.78                                   |       |
| NORTH BRANCH.          | Dinagopore.    | Sherpore               | 0.18                 | 0.65                 | 0.27                   | ...                      | ...                     | 0.38                  | 1.37                    | 5                  | 2.81              | 2.81                               | 2.10                                      | 44.82                               | 53.70                                   |       |
|                        |                | Nowshilla              | ...                  | 0.20                 | 5.17                   | ...                      | ...                     | 0.31                  | 0.61                    | 5                  | 4.47              | 4.47                               | 2.70                                      | 57.54                               | 60.89                                   |       |
|                        |                | Bogra                  | 0.20                 | 0.70                 | 0.65                   | 0.06                     | 0.17                    | 0.10                  | 0.02                    | 7                  | 2.98              | 2.98                               | 1.89                                      | 60.81                               | 57.35                                   |       |
|                        | Dinagopore.    | Panchbibi              | 1.60                 | 0.48                 | 2.10                   | ...                      | ...                     | 0.26                  | ...                     | 4                  | 4.51              | 4.51                               | 2.71                                      | 68.01                               | 52.52                                   |       |
|                        |                | Bemulsh                | ...                  | 0.35                 | 2.25                   | 0.22                     | ...                     | 0.08                  | 1.56                    | 5                  | 4.46              | 4.54                               | 2.66                                      | 51.57                               | 50.45                                   |       |
|                        |                | Natore                 | ...                  | 1.32                 | ...                    | ...                      | ...                     | ...                   | 1.32                    | 1                  | 1.32              | 1.32                               | 2.52                                      | 46.00                               | 42.31                                   |       |
|                        | Dinagopore.    | Naogaon                | ...                  | ...                  | 1.60                   | 0.10                     | ...                     | ...                   | 0.92                    | 3                  | 2.08              | 2.08                               | ?   | 60.93                               | ?                                       |       |
|                        |                | Lalpor                 | ...                  | ...                  | 0.14                   | ...                      | 0.10                    | 0.75                  | 1.30                    | 4                  | 2.65              | 2.65                               | ?   | 33.22                               | ?                                       |       |
|                        |                | Mando                  | ...                  | ...                  | 0.24                   | ...                      | ...                     | 0.23                  | 0.28                    | 3                  | 0.75              | 0.75                               | ?   | 61.52                               | ?                                       |       |
|                        | Dinagopore.    | Maldah                 | ...                  | 0.02                 | 0.17                   | 0.51                     | ...                     | ...                   | 0.43                    | 4                  | 1.18              | 1.13                               | 2.60                                      | 49.21                               | 49.13                                   |       |
|                        |                | Chanchal               | ...                  | 0.94                 | 0.54                   | ...                      | ...                     | 0.31                  | 1.22                    | 4                  | 3.01              | 3.01                               | 2.12                                      | 42.00                               | 50.35                                   |       |
|                        |                | Gajol                  | ...                  | 0.30                 | 0.70                   | ...                      | ...                     | 0.30                  | ...                     | 3                  | 1.30              | 1.30                               | ?   | 60.10                               | ?                                       |       |
| NORTH BRANCH.          | Dinagopore.    | Sibganj                | ...                  | ...                  | 0.01                   | ...                      | ...                     | ...                   | 2.11                    | 12                 | 3.02              | 3.02                               | ?   | 52.52                               | ?                                       |       |
|                        |                | Mohadebpore            | 0.06                 | 1.28                 | 0.70                   | ...                      | ...                     | 0.75                  | ...                     | ...                | ...               | 2.14                               | 50.00                                     | 50.00                               |   |       |
|                        |                | Ohramon                | ...                  | 0.51                 | 0.80                   | ...                      | ...                     | 0.60                  | 0.35                    | 4                  | 2.94              | 2.94                               | 1.87                                      | 57.50                               | 51.77                                   |       |
|                        | Dinagopore.    | Bakunke                | ...                  | 1.81                 | 0.12                   | ...                      | ...                     | 2.0                   | 1.39                    | 4                  | 6.02              | 6.02                               | 2.72                                      | 72.40                               | 55.81                                   |       |
|                        |                | Dinagopore             | 0.20                 | 0.40                 | 0.11                   | ...                      | ...                     | 0.19                  | 6.40                    | 5                  | 1.18              | 1.18                               | 2.86                                      | 50.08                               | 59.51                                   |       |
|                        |                | Balorokhat             | ...                  | 1.57                 | 0.67                   | ...                      | ...                     | ...                   | 0.17                    | 3                  | 2.41              | 2.41                               | 1.65                                      | 60.48                               | 48.27                                   |       |
|                        | Dinagopore.    | Chawaniganj (Gyabanda) | ...                  | ...                  | 0.28                   | 0.10                     | 2.37                    | ...                   | 0.20                    | 4                  | 2.95              | 2.95                               | 2.80                                      | 64.14                               | 53.42                                   |       |
|                        |                | Dinagopore             | ...                  | 0.02                 | 0.07                   | ...                      | 1.55                    | 0.01                  | 0.05                    | 5                  | 1.70              | 1.70                               | 3.20                                      | 73.64                               | 71.98                                   |       |
|                        |                | Kurigram               | ...                  | ...                  | 0.05                   | ...                      | ...                     | 0.15                  | 0.40                    | 4                  | 1.56              | 1.56                               | 3.40                                      | 97.06                               | 81.25                                   |       |
|                        | Dinagopore.    | Bagdola                | ...                  | 0.08                 | ...                    | ...                      | ...                     | ...                   | ...                     | ...                | ...               | ?                                  | 50.73                                     | ?                                   |   |       |
|                        |                | (Ailphawari)           | ...                  | ...                  | ...                    | 0.30                     | ...                     | ...                   | ...                     | 2                  | 0.90              | 0.90                               | ?   | ?                                   | ?                                       |       |
|                        |                | Utopore                | ...                  | ...                  | ...                    | ...                      | ...                     | ...                   | ...                     | ...                | ...               | ...                                | ?   | ?                                   | ?                                       |       |
| Dinagopore.            | Julpigore      | ...                    | 0.27                 | ...                  | 0.57                   | 0.78                     | 0.46                    | 0.61                  | 5                       | 2.60               | 2.67              | 2.07                               | 123.29                                    | 112.06                              |   |       |
|                        | Alipore Doar   | ...                    | ...                  | ...                  | 0.74                   | 1.39                     | 0.84                    | ...                   | 2                       | 2.97               | ...               | ?                                  | 138.35                                    | ?                                   |   |       |
|                        | Fallacotta     | ...                    | 0.05                 | ...                  | ...                    | 0.17                     | 0.20                    | 0.40                  | 4                       | 0.88               | 1.05              | ?                                  | 151.51                                    | ?                                   |   |       |
| NORTH BRANCH.          | Dinagopore.    | Debiganj               | ...                  | ...                  | ...                    | 0.51                     | ...                     | 0.30                  | 0.48                    | 1                  | 1.31              | 0.83                               | 4.15                                      | 100.10                              | 91.45                                   |       |
|                        |                | Dubai                  | ...                  | ...                  | ...                    | 0.08                     | ...                     | ...                   | 0.19                    | 3                  | 0.80              | 0.85                               | 121.24                                    | 115.70                              | ...                                     |       |
|                        |                | Goach Bohar            | ...                  | 0.32                 | ...                    | ...                      | 0.55                    | 0.03                  | 0.10                    | 4                  | 1.50              | 1.50                               | 2.90                                      | 120.71                              | 103.68                                  |       |
|                        | Dinagopore.    | Mickiganj              | ...                  | 0.11                 | ...                    | ...                      | ...                     | 0.33                  | ...                     | 2                  | 0.44              | 0.44                               | 5.85                                      | 116.03                              | 116.23                                  |       |
|                        |                | Matsham                | ...                  | 0.57                 | ...                    | ...                      | ...                     | ...                   | 0.48                    | 2                  | 1.05              | 1.05                               | ?   | ?                                   | ?                                       |       |
|                        |                | Buz                    | 0.80                 | 0.05                 | 0.15                   | 0.04                     | 0.40                    | 0.03                  | 0.33                    | 7                  | 1.54              | 2.74                               | 6.18                                      | 164.18                              | 185.88                                  |       |
|                        | Dinagopore.    | Silliguri              | ...                  | 0.11                 | ...                    | 0.49                     | 4.60                    | 0.80                  | 1.13                    | 5                  | 7.13              | 7.13                               | 3.58                                      | 100.76                              | 100.16                                  |       |
|                        |                | Darjeling Hill         | ...                  | 0.03                 | 0.00                   | 0.19                     | 0.18                    | 1.03                  | 1.02                    | 6                  | 3.14              | 3.18                               | 2.72                                      | 1.3.92                              | 104.45                                  |       |
|                        |                | Kalimpong              | ...                  | 0.06                 | 0.52                   | 0.16                     | 0.46                    | 0.78                  | 1.06                    | 6                  | 3.03              | 3.16                               | 2.40                                      | 79.87                               | 77.75                                   |       |
|                        | Dinagopore.    | Kumargunge             | ...                  | 0.78                 | 0.56                   | ...                      | ...                     | 0.51                  | 1.40                    | 4                  | 3.24              | 3.24                               | 1.01                                      | 81.32                               | 67.19                                   |       |
|                        |                | Arinash                | ...                  | ...                  | 0.12                   | ...                      | 0.00                    | 1.32                  | 0.85                    | 4                  | 2.35              | 2.35                               | 2.23                                      | 65.45                               | 61.52                                   |       |
|                        |                | Parman                 | 0.03                 | 0.26                 | 0.01                   | ...                      | ...                     | 0.58                  | 0.30                    | 5                  | 1.25              | 1.25                               | 2.28                                      | 65.91                               | 68.04                                   |       |
| NORTH BRANCH.          | Dinagopore.    | Gondwara               | ...                  | 0.30                 | 0.01                   | ...                      | ...                     | 0.50                  | 0.01                    | 4                  | 2.36              | 2.36                               | ?   | ?                                   | ?                                       |       |
|                        |                | Balarampore            | ...                  | ...                  | 0.34                   | ...                      | ...                     | 1.02                  | 0.51                    | 3                  | 1.87              | 1.87                               | ?   | 64.06                               | ?                                       |       |
|                        |                | Naiari                 | ...                  | ...                  | ...                    | ...                      | ...                     | 2.14                  | 0.85                    | 2                  | 2.99              | 2.99                               | ?   | 70.92                               | ?                                       |       |
|                        | Dinagopore.    | Kaliganj               | ...                  | ...                  | ...                    | 1.78                     | ...                     | 0.63                  | 1.06                    | 3                  | 3.32              | 3.32                               | ?   | 77.44                               | ?                                       |       |
|                        |                | Madanpore              | ...                  | ...                  | ...                    | ...                      | ...                     | 1.87                  | 0.41                    | 2                  | 2.28              | 2.28                               | 2.85                                      | 53.23                               | 47.08                                   |       |
|                        |                | Soojool                | ...                  | ...                  | ...                    | ...                      | ...                     | 3.22                  | 0.14                    | 2                  | 3.36              | 3.36                               | 1.70                                      | 52.79                               | 45.94                                   |       |
|                        | Dinagopore.    | Protoganj              | ...                  | 0.10                 | ...                    | 0.27                     | 0.40                    | 1.70                  | 0.85                    | 5                  | 3.05              | 3.08                               | ?   | 63.81                               | ?                                       |       |
|                        |                | Tajpore                | ...                  | ...                  | ...                    | ...                      | ...                     | 0.45                  | 0.90                    | 2                  | 1.35              | 1.35                               | 2.29                                      | 40.34                               | 41.61                                   |       |
|                        |                | Darbhanga              | ...                  | ...                  | ...                    | ...                      | ...                     | 1.15                  | 0.49                    | 2                  | 1.64              | 1.64                               | 2.11                                      | 50.73                               | 43.35                                   |       |
|                        | Dinagopore.    | Madhubani              | ...                  | ...                  | 0.20                   | ...                      | ...                     | 1.35                  | 0.55                    | 2                  | 2.17              | 2.17                               | 1.78                                      | 53.16                               | 42.81                                   |       |
|                        |                | Nahara                 | ...                  | ...                  | ...                    | ...                      | ...                     | 1.32                  | 0.25                    | 2                  | 1.57              | 1.57                               | ?   | 51.94                               | ?                                       |       |
|                        |                | Kochera                | ...                  | ...                  | ...                    | ...                      | ...                     | 0.85                  | 0.70                    | 2                  | 1.55              | 1.55                               | ?   | 40.08                               | ?                                       |       |
| NORTH BRANCH.          | Dinagopore.    | Stamari                | ...                  | 2.00                 | ...                    | ...                      | ...                     | 2.10                  | 0.90                    | 3                  | 3.00              | 3.00                               | 1.81                                      | 58.04                               | 40.55                                   |       |
|                        |                | Madanpore              | ...                  | ...                  | ...                    | ...                      | ...                     | 1.70                  | 0.81                    | 2                  | 2.57              | 2.57                               | 2.07                                      | 42.33                               | 43.30                                   |       |
|                        |                | Hajipore               | ...                  | ...                  | 0.08                   | ...                      | ...                     | 1.18                  | 1.12                    | 3                  | 2.33              | 2.38                               | 3.17                                      | 56.50                               | 40.53                                   |       |
|                        | Dinagopore.    | Pore                   | ...                  | ...                  | ...                    | ...                      | ...                     | 1.40                  | 1.04                    | 2                  | 2.44              | 2.44                               | ?   | 39.71                               | ?                                       |       |
|                        |                | Nahua                  | ...                  | ...                  | ...                    | ...                      | ...                     | 1.70                  | 0.95                    | 2                  | 2.71              | 2.71                               | ?   | 54.36                               | ?                                       |       |
|                        |                | Bihar                  | ...                  | ...                  | ...                    | ...                      | ...                     | 2.40                  | 2.75                    | 2                  | 5.15              | 5.15                               | ?   | 4.61                                | ?                                       |       |
|                        | Dinagopore.    | Patni                  | ...                  | 0.43                 | ...                    | ...                      | ...                     | 1.60                  | 0.88                    | 3                  | 2.71              | 2.71                               | ?   | 30.08                               | ?                                       |       |
|                        |                | Mothari                | ...                  | 0.96                 | ...                    | ...                      | ...                     | 2.30                  | 1.45                    | 3                  | 4.71              | 4.71                               | 3.88                                      | 58.95                               | 48.46                                   |       |
|                        |                | Bethah                 | ...                  | 0.00                 | ...                    | ...                      | ...                     | 4.00                  | 1.20                    | 3                  | 5.19              | 5.19                               | 3.00                                      | 38.12                               | 48.08                                   |       |
|                        | Dinagopore.    | Beghat                 | ...                  | 0.70                 | ...                    | ...                      | ...                     | 2.7                   | 2.60                    | 3                  | 5.77              | 5.77                               | ?   | 61.70                               | ?                                       |       |
|                        |                | Burkura                | ...                  | 0.20                 | ...                    | ...                      | ...                     | 3.38                  | 1.03                    | 3                  | 4.66              | 4.66                               | ?   | 34.63                               | ?                                       |       |

Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 14th of October 1887—*conold.*

| Meteorological Division. | District.          | Station.            | RAINFALL.              |                      |                       |                        |                          |                         |                       | Total.                |                   | Total rain-fall since 1st of month. | Average total rain-fall from 1st of month. | Total rain-fall since 15th May 1887. | Average rain-fall from 15th May to date. |
|--------------------------|--------------------|---------------------|------------------------|----------------------|-----------------------|------------------------|--------------------------|-------------------------|-----------------------|-----------------------|-------------------|-------------------------------------|--|--------------------------------------|--|
|                          |                    |                     | Saturday, 8th October. | Sunday, 9th October. | Monday, 10th October. | Tuesday, 11th October. | Wednesday, 12th October. | Thursday, 13th October. | Friday, 14th October. | Number of rainy days. | Rainfall of week. |                                     |  |                                      |  |
| NORTH BENGAL—continued.  | Narail             | Gopalgange ...      | 0'00                   | 0'50                 | .....                 | .....                  | .....                    | 3'32                    | 1'05                  | 4                     | 4'93              | 4'93                                | 0'87                                       | 41'29                                | 48'21                                    |
|                          |                    | Sowan ...           | .....                  | 0'39                 | .....                 | .....                  | .....                    | 4'55                    | 0'85                  | 3                     | 5'78              | 5'78                                | 0'76                                       | 38'73                                | 42'20                                    |
| SOUTH BENGAL             | Shahabad           | Chaurah ...         | .....                  | .....                | .....                 | .....                  | .....                    | 1'01                    | 1'70                  | 2                     | 2'71              | 2'71                                | 0'24                                       | 35'60                                | 34'73                                    |
|                          |                    | Buxar ...           | .....                  | .....                | 0'08                  | .....                  | .....                    | 2'44                    | 2'18                  | 3                     | 4'74              | 4'74                                | 0'08                                       | 33'56                                | 36'50                                    |
|                          |                    | Deoria ...          | .....                  | .....                | 0'27                  | .....                  | .....                    | 0'86                    | 1'50                  | 3                     | 2'62              | 2'62                                | ?  | 37'78                                | ?  |
|                          |                    | Bhuboah ...         | .....                  | .....                | .....                 | .....                  | .....                    | 2'45                    | 2'50                  | 2                     | 4'95              | 4'95                                | 2'03                                       | 40'74                                | 38'04                                    |
|                          |                    | Sasaram ...         | .....                  | .....                | 1'50                  | .....                  | .....                    | 0'98                    | 1'85                  | 3                     | 4'43              | 4'43                                | 2'25                                       | 35'44                                | 34'40                                    |
|                          |                    | Arrah ...           | .....                  | .....                | .....                 | .....                  | .....                    | 0'95                    | 2'37                  | 2                     | 3'32              | 3'32                                | 2'17                                       | 37'78                                | 35'30                                    |
|                          |                    | Mohania ...         | .....                  | .....                | .....                 | .....                  | .....                    | 2'10                    | 1'10                  | 2                     | 3'20              | 3'20                                | ?  | ?                                    | ?  |
|                          |                    | Aurungabad ...      | .....                  | .....                | .....                 | .....                  | .....                    | 0'02                    | 0'36                  | 2                     | 0'38              | 0'38                                | 2'33                                       | 20'23                                | 41'46                                    |
|                          |                    | Gya ...             | .....                  | .....                | .....                 | .....                  | .....                    | 0'38                    | 0'12                  | 2                     | 0'70              | 0'70                                | 1'52                                       | 42'10                                | 40'54                                    |
|                          |                    | Kowdah ...          | 0'08                   | .....                | 0'15                  | .....                  | .....                    | 0'21                    | 0'07                  | 4                     | 0'51              | 0'51                                | 1'48                                       | 33'96                                | 39'25                                    |
|                          |                    | Jehanabad ...       | .....                  | .....                | 0'31                  | .....                  | .....                    | 0'84                    | 0'50                  | 3                     | 2'07              | 2'07                                | 2'19                                       | 44'94                                | 38'41                                    |
|                          |                    | Arwal ...           | .....                  | .....                | .....                 | 0'04                   | .....                    | 0'87                    | 3'05                  | 3                     | 4'56              | 4'56                                | ?  | 30'14                                | ?  |
|                          |                    | Bandanagar ...      | .....                  | .....                | .....                 | .....                  | .....                    | 0'50                    | 1'50                  | 3                     | 2'50              | 2'50                                | ?  | 27'51                                | ?  |
|                          |                    | Sherephali ...      | .....                  | .....                | .....                 | .....                  | .....                    | 0'87                    | .....                 | 1                     | 0'87              | 0'87                                | ?  | 3'76                                 | ?  |
|                          |                    | Rajauli ...         | .....                  | .....                | .....                 | .....                  | .....                    | 0'10                    | 0'10                  | 2                     | 0'20              | 0'20                                | ?  | 27'43                                | ?  |
|                          |                    | Pakri Barawan ...   | .....                  | .....                | 0'09                  | .....                  | .....                    | .....                   | .....                 | 1                     | 0'09              | 0'09                                | ?  | 21'43                                | ?  |
|                          | Patna              | Patna ...           | .....                  | .....                | 0'74                  | .....                  | .....                    | 0'38                    | 0'09                  | 3                     | 2'68              | 2'68                                | 2'02                                       | 36'84                                | 40'19                                    |
|                          |                    | Dumapora ...        | .....                  | .....                | .....                 | .....                  | .....                    | 0'36                    | 1'53                  | 2                     | 2'25              | 2'25                                | 2'04                                       | 37'08                                | 39'54                                    |
|                          |                    | Behar ...           | .....                  | .....                | 0'06                  | .....                  | .....                    | 0'20                    | 0'15                  | 3                     | 1'01              | 1'01                                | 2'00                                       | 54'31                                | 39'80                                    |
|                          |                    | Barth ...           | .....                  | .....                | .....                 | .....                  | .....                    | 0'30                    | 0'60                  | 2                     | 0'90              | 0'90                                | 1'06                                       | 33'31                                | 37'35                                    |
|                          |                    | Bickram ...         | .....                  | .....                | .....                 | .....                  | .....                    | 5'00                    | 3'70                  | 2                     | 9'00              | 9'00                                | ?  | 30'45                                | ?  |
|                          | Munshyr            | Begoonrai ...       | .....                  | .....                | 0'10                  | .....                  | .....                    | 0'00                    | 0'15                  | 3                     | 1'11              | 1'11                                | 1'79                                       | 47'46                                | 37'19                                    |
|                          |                    | Monkhyi ...         | .....                  | .....                | 0'10                  | .....                  | .....                    | 0'38                    | 0'16                  | 3                     | 0'64              | 0'64                                | 2'05                                       | 43'44                                | 41'57                                    |
|                          |                    | Jamun ...           | .....                  | .....                | .....                 | .....                  | .....                    | 0'27                    | 0'24                  | 2                     | 0'51              | 0'51                                | 1'71                                       | 37'44                                | 41'57                                    |
|                          |                    | Goyi ...            | .....                  | .....                | .....                 | .....                  | .....                    | 0'35                    | 0'25                  | 2                     | 0'60              | 0'60                                | ?  | 42'03                                | ?  |
|                          |                    | Sheikpara ...       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | Nil                                 | ?  | 21'13                                | ?  |
|                          | South Bhagal-pore. | Manikul-pore ...    | .....                  | .....                | 0'03                  | .....                  | .....                    | 0'48                    | 0'28                  | 3                     | 1'28              | 1'28                                | 2'29                                       | 40'85                                | 40'45                                    |
|                          |                    | Barua ...           | .....                  | .....                | .....                 | 0'01                   | 0'02                     | 1'15                    | 0'21                  | 4                     | 2'01              | 2'01                                | 1'88                                       | 30'34                                | 41'08                                    |
|                          |                    | Kolung ...          | 0'27                   | .....                | .....                 | .....                  | .....                    | .....                   | 0'00                  | 2                     | 0'87              | 0'87                                | ?  | 4'97                                 | ?  |
|                          |                    | Rajmonai ...        | .....                  | 1'03                 | 0'53                  | .....                  | .....                    | 0'44                    | 0'44                  | 4                     | 3'58              | 3'58                                | 1'90                                       | 48'09                                | 50'16                                    |
|                          |                    | Godda ...           | .....                  | .....                | .....                 | .....                  | .....                    | 0'15                    | 0'25                  | 3                     | 0'90              | 0'90                                | 1'08                                       | 43'06                                | 43'06                                    |
| CHUTIA NAG-PUR.          | Hasaribagh         | Passour ...         | .....                  | 0'09                 | 0'08                  | 2'05                   | .....                    | 0'35                    | .....                 | 4                     | 4'07              | 4'07                                | 2'72                                       | 75'43                                | 51'33                                    |
|                          |                    | Nya Doomba ...      | .....                  | .....                | .....                 | 0'00                   | .....                    | 0'12                    | .....                 | 2                     | 0'21              | 0'21                                | 2'73                                       | 43'08                                | 51'39                                    |
|                          |                    | Deoghar ...         | .....                  | .....                | 0'78                  | .....                  | .....                    | 0'05                    | .....                 | 3                     | 0'94              | 0'94                                | 2'27                                       | 45'05                                | 47'28                                    |
|                          |                    | Juniora ...         | .....                  | .....                | 0'29                  | .....                  | 0'51                     | .....                   | 0'06                  | 3                     | 0'76              | 1'00                                | 2'15                                       | 38'17                                | 47'75                                    |
|                          |                    | Sinra ...           | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | ?                     | ?                 | ?                                   | ?  | ?                                    | ?  |
|                          |                    | Nankhat ...         | 0'12                   | .....                | .....                 | 0'12                   | .....                    | 0'82                    | .....                 | 3                     | 1'06              | 1'06                                | ?  | 35'85                                | ?  |
|                          |                    | Pachamba ...        | .....                  | .....                | .....                 | .....                  | .....                    | 0'10                    | 0'50                  | 2                     | 0'60              | 0'60                                | 1'82                                       | 40'07                                | 45'51                                    |
|                          |                    | (Girdi), ...        | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | ?                     | ?                 | ?                                   | ?  | ?                                    | ?  |
|                          |                    | Hasaribagh ...      | .....                  | .....                | 0'00                  | 0'41                   | 0'20                     | 1'26                    | 1'26                  | 4                     | 2'40              | 2'40                                | 2'21                                       | 45'43                                | 45'06                                    |
|                          |                    | Santugurua ...      | .....                  | .....                | 0'31                  | 0'75                   | 0'82                     | 0'20                    | 0'20                  | 4                     | 2'14              | 2'14                                | 2'53                                       | 30'32                                | 44'09                                    |
|                          |                    | Nandul Hills ...    | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | ?                     | ?                 | ?                                   | ?  | ?                                    | ?  |
|                          |                    | Jhokmrah Hills ...  | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | ?                     | ?                 | ?                                   | ?  | ?                                    | ?  |
|                          |                    | Barh ...            | .....                  | .....                | 0'44                  | .....                  | 0'22                     | 0'50                    | 0'50                  | 3                     | 1'16              | 1'16                                | ?  | 38'27                                | 40'34                                    |
|                          |                    | Chitra ...          | .....                  | .....                | .....                 | 0'31                   | 0'17                     | 0'83                    | .....                 | 3                     | 0'82              | 0'82                                | ?  | 47'72                                | ?  |
|                          |                    | Aaragdeha ...       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | ?                     | ?                 | ?                                   | ?  | ?                                    | ?  |
|                          |                    | Kamghar ...         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | ?                     | ?                 | ?                                   | ?  | ?                                    | ?  |
|                          | Lohardugga         | Lohardugga ...      | 0'48                   | .....                | .....                 | 0'20                   | 0'24                     | 0'12                    | 0'18                  | 2                     | 1'22              | 1'22                                | ?  | 53'50                                | ?  |
|                          |                    | Kanoni ...          | .....                  | .....                | .....                 | 0'75                   | .....                    | 0'15                    | .....                 | 2                     | 0'90              | 0'90                                | 1'76                                       | 55'70                                | 40'27                                    |
|                          |                    | Paimow ...          | .....                  | .....                | .....                 | 0'45                   | 0'22                     | 0'80                    | 0'72                  | 4                     | 2'19              | 2'19                                | 2'02                                       | 48'25                                | 40'78                                    |
|                          |                    | Silli ...           | .....                  | .....                | .....                 | .....                  | .....                    | 0'40                    | .....                 | 1                     | 0'40              | 0'40                                | ?  | 42'00                                | ?  |
|                          |                    | Balunat ...         | .....                  | .....                | .....                 | .....                  | .....                    | 1'15                    | 0'00                  | 2                     | 1'24              | 1'24                                | ?  | 34'08                                | ?  |
|                          | Singbhoom          | Hosonabad ...       | .....                  | 0'40                 | .....                 | .....                  | 1'44                     | 2'05                    | .....                 | 3                     | 4'00              | 4'00                                | ?  | 62'09                                | ?  |
|                          |                    | Garwah ...          | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | ?                     | ?                 | ?                                   | ?  | ?                                    | ?  |
|                          |                    | Chayusa ...         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | ?                     | ?                 | ?                                   | ?  | ?                                    | ?  |
|                          |                    | Chakradhar-pore ... | .....                  | .....                | .....                 | .....                  | 0'13                     | 0'06                    | .....                 | 2                     | 0'19              | 0'10                                | 1'80                                       | 49'49                                | 48'07                                    |
|                          |                    | Ghatilla ...        | .....                  | .....                | .....                 | .....                  | 0'10                     | 0'58                    | .....                 | 2                     | 0'68              | 0'08                                | ?  | 36'09                                | ?  |
|                          | Manubhoom          | Baharagura ...      | .....                  | 1'16                 | .....                 | .....                  | 0'27                     | 0'53                    | .....                 | 2                     | 0'80              | 0'80                                | ?  | 53'40                                | ?  |
|                          |                    | Purulia ...         | .....                  | .....                | 0'03                  | .....                  | .....                    | 0'12                    | .....                 | 2                     | 0'15              | 2'15                                | 1'81                                       | 45'44                                | 60'07                                    |
|                          |                    | Gobindpore ...      | .....                  | .....                | .....                 | .....                  | .....                    | 0'05                    | 0'16                  | 3                     | 0'29              | 0'30                                | 2'82                                       | 24'02                                | 43'06                                    |
|                          |                    | Kaghunath-pore ...  | 0'40                   | .....                | .....                 | .....                  | .....                    | 0'70                    | 0'08                  | 4                     | 1'18              | 1'18                                | ?  | 35'00                                | ?  |
|                          |                    | Barrabhoom ...      | 0'07                   | .....                | .....                 | .....                  | .....                    | 0'60                    | 0'30                  | 3                     | 0'97              | 0'97                                | ?  | 40'62                                | ?  |
|                          |                    | Jhalda ...          | .....                  | .....                | .....                 | .....                  | .....                    | 0'29                    | .....                 | 2                     | 1'06              | 1'06                                | ?  | ?                                    | ?  |
|                          |                    | Chas ...            | 0'40                   | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | ?                     | ?                 | ?                                   | ?  | ?                                    | ?  |

*Explanation.*—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 18th October 1887.



**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS  
TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY THE 14TH OF  
DECEMBER 1887.**

THE meteorology of the present week has been extremely important, probably more important to the province than any period since the commencement of the rainy season. At the close of the previous week the conditions in Bengal were those of the transition period between the rainy season and the setting in of the cold weather monsoon. Light northerly winds, with low humidity, but rather high temperature, and with almost cloudless skies, obtained over almost the whole province. In the centre and south of the Bay the south-west monsoon was still blowing, and for the last day or two of the previous week conditions became somewhat disturbed as evidenced by the strengthening of the winds at Galle. On Friday, the 7th, in addition to moderately strong winds, which were blowing at Galle and at Diamond Island, there was a well marked cyclonic circulation of winds over the centre and south of the Bay, though there was still no distinct evidence to show that any cyclonic storm had formed. On Saturday, the 8th, or the first day of the present week, pressure fell slightly at Madras, though it was rising at all other stations in the south of the Bay; the cyclonic circulation of winds over this area became more strongly marked, and winds strengthened considerably, particularly at Diamond Island.

It was therefore evident that a small cyclonic storm had formed to the west of the centre of the Bay, and immediately on receipt of the 10 A.M. observations on this day, the following telegram was despatched to the Port Officers at Madras and Masulipatam, and to all the important coast stations as far north as Gopalpore—"Barometric depression formed west of centre of Bay, probably off Masulipatam and Madras coasts. It may develop, or may only bring heavy rain and squally weather to west coast. Please telegraph any important changes." The storm was on this day apparently not very far from the coast to the east of Madras, for it reached the land early on Sunday morning, the 9th instant, the centre crossing the coast probably at 7 or 8 A.M. about 30 to 40 miles to the north of Madras and between this station and Masulipatam, and at 10 A.M. of this day the centre was well inland and about this distance to the north-west of Madras. So far as the observations which have been received up to the present time show, the lowest pressure recorded at Madras by the Port Officer during the passage of the storm was about 29.4 inches. The storm was not a very violent one, though it gave strong winds or perhaps a gale of wind at Madras and as far north as Coconada and perhaps Vizagapatam, and it also gave heavy rain along the coast, Madras receiving 6.23 inches on the morning of the 9th.

As the storm was evidently crossing the Peninsula the following telegram was sent off on receipt of the 10 A.M. observations of the 9th to the Meteorological Reporter to the Government of Bombay to the following effect:—"Small cyclonic storm crossed coast near Madras; movement westerly," and the Port Officers at the stations previously named, except Madras, were informed that the storm was passing inland north of Madras.

The storm then travelled slowly in a north-westerly or west-north-westerly direction, and on the morning of the 10th it had almost crossed the peninsula, and the centre of the cyclonic wind circulation was a little to the south-east of Belgaum. The storm therefore advanced along almost precisely the same track as that of the storm of the second week of November 1886, which passed over the Western Ghâts and advanced by a curved track over the Arabian Sea to the Beluchistan coast. On the 11th the storm had crossed the coast and had passed into the Arabian Sea, and it had practically ceased to affect the land area.

As stated previously, the storm gave heavy rain to the Madras coast as it passed over the land, and with the indraught towards the retreating storm rather strong humid winds set in along the west coast of the Bay. From the reports received on the morning of the 10th, the area of heavy rainfall then appeared to extend along the coast from Gopalpore down to Madras, but on the following day the humid winds advanced somewhat in a northerly direction, and on the morning of the 11th the reports showed that the area of heavy rainfall had advanced to False Point, while the southern limit was at Coconada. On the 12th the reports again showed that the moisture laden current had advanced further northward, and the area of heavy rain extended from Saugor Island down to Coconada. The moist current having thus reached South Bengal, it then commenced to spread slowly over the interior of the province. The wind system blowing over Bengal became first strongly easterly, and then the northerly element gradually disappeared. On the 12th winds had become easterly and south-easterly over the greater part of the province, and by the close of the week scarcely any stations reported northerly winds.

The effect of the formation and movement of the cyclonic storm above described has therefore been to cause the south-west monsoon winds to again temporarily establish themselves over the whole of Bengal, and thus good general rain has again been reported over the whole of the province. During the formation and advance of the storm conditions in Bengal as usual became somewhat disturbed, and rain showers, more or less local, were reported from many districts, but the actual monsoon current came up later, and the heavy rainfall commenced in the Orissa Division from about the 10th; in South-West Bengal and Chutia Nagpur the general rain commenced on the 11th and 12th, and finally in East and North Bengal, and in Behar, the general heavy rainfall usually commenced on the 13th and 14th instant.

*Pressure.*—At the commencement of the week pressure was above the normal in all districts. For the first two days pressure continued to increase rather largely, until the excess pressure was considerably more than a tenth of an inch over a large part of the province; a moderate fall of pressure then set in, which lasted for about four days, and which was contemporaneous with the advance of the disturbed conditions over Bengal, and finally on the last day of the week pressure again commenced to rise

rather rapidly. The mean pressure for the whole week has therefore been in excess of the normal; and taking only those stations into consideration from which observations have been received for many years, and which therefore yield reliable averages, the mean pressure of the province has been in excess of the normal by 0.078 inch. The excess pressures are largest at the eastern stations, where Chittagong reports an excess of 0.104 inch, and smallest at the western stations, where Hazaribagh records an excess of only 0.044 inch.

*Temperature.*—Owing to the considerable rainfall during the week, temperature fell rather rapidly. During the earlier part of the week it was generally in excess of the normal, but for the second half it has been in defect. The mean temperature for the week has been lower than the normal in Orissa and in South-West, East and North Bengal and in Assam, while it has been in excess in Behar and Chutia Nagpur. Both excess and defective temperatures are usually about one degree in amount. For the whole of Bengal, therefore, the mean temperature has been about 0.2° in defect of the normal, while in Assam the defect has been 0.8°.

*Rainfall.*—The causes which brought about the rainfall of the week and the period of commencement have already been described, and it therefore only remains to state its amount. The heaviest falls have taken place in North Behar, which shows an average rainfall of 3.29 inches. In all other districts, except Chutia Nagpur, the average falls have ranged from 2 to about 2½ inches, but in Chutia Nagpur the fall has only equalled 1.10 inches. The number of rainy days during the week has also been decidedly large, and in most districts rain has fallen on three or in some cases four days. The actual falls of rain have far exceeded the normal amount for the week, and in most districts they have been so heavy that, though there was practically no rain in the earlier part of October, the falls now recorded almost bring up the rainfall during this month to the average amount up to the middle of October. Compared with the normal fall for the week, and expressed as a percentage of that amount, the actual rainfalls during the past week in each of the large meteorological districts have equalled—in Orissa 144 per cent., in South-West Bengal 202 per cent.; in East Bengal 174 per cent.; in North Bengal 240 per cent.; in North Behar 317 per cent.; in South Behar 251 per cent.; and in Chutia Nagpur 121 per cent., or taking each of these districts as having an equal value in the calculation, the rainfall of the province may be said to have equalled 207 per cent.

Taking up the rainfall rather more in detail, the following appear to have been the average rainfalls during the week in each of the smaller districts into which the province is divided so far as the reports have been received, but the returns from Orissa and some of the districts of East Bengal are not complete:—Above five inches Chumpraun, between four and five inches part of the Shahabad district as represented by Buxar, Bhuboah, Sasseram, and Sarun, between three and four inches Nuddea, Khoorna, Jessore, Burrisal, Furzedpore, Mymensingh, Bogra, Dinagepore, Darjeeling and Mozufferpore, between two and three inches Midnapore, 24-Pergunnahs, Howrah, Hooghly, Moorshedabad, Dacca, Pubna, Rajshahye, Maldah, Purneah and North Bhagulpore and Gya, between one and two inches Burdwan, Beerbhoom and West Burdwan, Rungpore, Julpigoree and Cooch Behar, Durbhunga, Patna South Bhagulpore and Monghyr and Sonthal Pergunnahs. In the following districts the average rainfall has been decidedly scanty: first, where the falls have only averaged from half to one inch as in Bankoora, Chittagong Hill Tracts, Lohardugga and Manbhoom, and last, where the falls have been less than half an inch as in Singbhoom. Out of about two hundred and fifty rain-recording stations dealt with in this summary, the only station which reports to have received no rain during the week is Sheikpura, in the Monghyr district.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 14th of October 1887:—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          |                 | RAINFALL.  |                         |                                |            |                     |                 |                      |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 18th May 1887. |                 |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. | Average.             | Normal average. |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |                 |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |                 |
| Orissa ... ..                | 94.4                          | 72.3                         | 80.7                    | 76.2                   | 81.4                  | -0.8   | 2.40     | 1.07            | +0.73      | 4.2                     | 2.2                            | +2.0       | 2.40                | 3.32            | 240.80               | 42.11           |
| South-West Bengal ... ..     | 94.5                          | 72.0                         | 88.0                    | 74.9                   | 81.5                  | -0.8   | 2.36     | 1.17            | +1.10      | 3.7                     | 2.0                            | +1.7       | 2.68                | 2.22            | 45.88                | 49.08           |
| East Bengal ... ..           | 91.1                          | 70.8                         | 86.8                    | 74.3                   | 80.6                  | -1.0   | 2.70     | 1.55            | +1.15      | 3.3                     | 2.2                            | +1.1       | 3.00                | 3.24            | 51.88                | 70.35           |
| North Bengal ... ..          | 92.8                          | 67.8                         | 87.6                    | 73.0                   | 80.3                  | -1.1   | 2.45     | 1.08            | +1.43      | 3.9                     | 1.8                            | +2.3       | 2.46                | 2.77            | 73.40                | 67.37           |
| North Behar ... ..           | 94.0                          | 67.8                         | 88.0                    | 72.9                   | 80.5                  | +0.4   | 2.29     | 1.01            | +2.28      | 3.1                     | 1.1                            | +2.0       | 3.29                | 2.51            | 80.67                | 46.68           |
| South Behar† ... ..          | 95.4                          | 70.3                         | 88.0                    | 74.1                   | 81.5                  | +0.8   | 2.23     | 0.89            | +1.34      | 2.8                     | 1.1                            | +1.7       | 2.28                | 2.00            | 40.97                | 41.89           |
| Chutia Nagpur ... ..         | 89.5*                         | 66.4*                        | 84.7*                   | 68.9*                  | 76.8*                 | +1.3*  | 1.10     | 0.91            | +0.19      | 3.0                     | 1.4                            | +1.6       | 1.35                | 3.11            | 44.44                | 47.16           |
| Assam ... ..                 | 93.0                          | 69.5                         | 85.2                    | 72.9                   | 79.5                  | -0.8   |          |                 |            |                         |                                |            |                     |                 |                      |                 |

\* Only chutia not included.

† Dehra not included.

METEOROLOGICAL OFFICE, BENGAL;  
The 19th October 1887.

A. PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal.

## Results of the Meteorological Observations taken at the Alipore Observatory from 9th to 15th October 1887.

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 59° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain.   | WEATHER.                    |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|-----------------------------|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |         |                             |
| 1887.  |       | °               |                                     | Inches.                              | °            | °        | °      | °        | °              | Inches.         | °          | %         |                       |                 | Inches. |                             |
| Oct.   | 9th   | 150.5           | 8.3                                 | 29.906                               | 81.8         | 88.5     | 12.2   | 76.3     | 77.9           | 0.907           | 76.3       | 84        | SSS and variable ]... | 54              | Nil     | Partially cloudy, t, p.     |
| "      | 10th  | 148.5           | 7.7                                 | .867                                 | 81.1         | 87.6     | 11.7   | 75.9     | 77.4           | .801            | 75.7       | 84        | E and SSE ...         | 69              | "       | Partially cloudy, p.        |
| "      | 11th  | 154.2           | 4.0                                 | .853                                 | 79.5         | 86.1     | 9.7    | 76.4     | 76.3           | .864            | 74.8       | 6         | E by S and SSE ...    | 106             | "       | Chiefly cloudy, o, g, t, p. |
| "      | 12th  | 118.6           | 0.8                                 | .856                                 | 77.0         | 81.5     | 8.3    | 73.2     | 74.6           | .824            | 73.4       | 89        | SSE and E ...         | 119             | 0.06    | Chiefly cloudy, o, g, d, p. |
| "      | 13th  | 119.7           | 0.1                                 | .861                                 | 78.3         | 80.4     | 6.4    | 74.0     | 76.1           | .873            | 75.1       | 90        | E and SSE ...         | 121             | 0.06    | Cloudy, o, d.               |
| "      | 14th  | 142.8           | 2.2                                 | .908                                 | 79.1         | 83.9     | 9.5    | 74.4     | 76.9           | .899            | 76.0       | 90        | S and SSW ...         | 127             | 0.93    | Chiefly cloudy o, g, p.     |
| "      | 15th  | 148.2           | 5.9                                 | 912                                  | 80.3         | 86.4     | 10.4   | 76.0     | 77.5           | .908            | 76.3       | 88        | SSE and WSW ...       | 108             | Nil     | Chiefly cloudy, o, g, t, p. |

The mean pressure of the seven days ...

The average pressure of the corresponding period for 24 years, S. G.'s Office ...

Inches.  
29.881  
29.827

The total number of hours of bright sunshine ...

The maximum possible number of hours of sunshine ...

Hours.  
29.0  
81.7

The mean temperature of the seven days ...

The average temperature of the corresponding period for 24 years, S. G.'s Office ...

The extreme variation of temperature ...

The maximum temperature ...

°

79.6

82.5

15.3

88.5

The highest velocity of the wind in one hour ...

Miles.

12

The highest pressure of wind on one square foot ...

lbs.

... Not measureable.

The mean relative humidity ...

The average relative humidity of the corresponding period for 24 years, S. G.'s Office ...

%

87

80

The total fall of rain from 9th to 15th October 1887 ...

The average fall of the corresponding period for 24 years, S. G.'s Office ...

The total fall from 1st January to 15th October 1887 ...

The average fall of the corresponding period for 24 years, S. G.'s Office ...

Inches.

1.05

1.12

57.66

61.87

The mean pressure, temperature, &amp;c., are deduced from the traces of the Barograph and Thermograph.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 26, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers, t thunder, p dew.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 17th October 1887.

Results of the Thermometrical Observations taken at the Meteorological Office,  
Chowringhee, from 9th to 15th October 1887.

| MONTH.  | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|---------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|         |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.   |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| October | 9th   | 81.1         | 91.0     | 14.7   | 76.3     | 78.3           | .833            | 77.1       | 90        | 0.19    |
| "       | 10th  | 80.0         | 90.2     | 14.3   | 75.9     | 77.1           | .893            | 75.8       | 87        | —       |
| "       | 11th  | 79.4         | 88.0     | 11.4   | 76.6     | 76.3           | .866            | 74.9       | 87        | —       |
| "       | 12th  | 76.9         | 83.0     | 9.4    | 73.8     | 75.3           | .857            | 74.0       | 93        | 0.36    |
| "       | 13th  | 77.6         | 81.0     | 7.0    | 74.0     | 76.3           | .891            | 75.7       | 94        | 0.10    |
| "       | 14th  | 78.2         | 85.3     | 10.5   | 74.3     | 76.6           | .896            | 75.9       | 93        | 0.76    |
| "       | 15th  | 80.1         | 87.5     | 11.2   | 76.3     | 78.4           | .950            | 77.7       | 92        | —       |

|  |     |     |     |         |
|--|-----|-----|-----|---------|
| The mean temperature of the seven days | ... | ... | ... | 79.0    |
| The extreme variation of temperature   | ... | ... | ... | 17.4    |
| The maximum temperature                | ... | ... | ... | 91.0    |
|  |     |     |     | %       |
| The mean relative humidity             | ... | ... | ... | 91      |
|  |     |     |     | Inches. |

The total fall of rain from 9th to 15th October 1887      ...      1.47

The mean temperature and humidity are obtained by applying to the mean of the 10a, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ;

A. PEDLER,

The 17th October 1887.

for Offg. Meteorological Reporter to the Govt. of India.

MEMORANDUM.

During the week ending 24th September 1887, births and deaths were registered in the principal Municipalities in Bengal (excluding Howrah, from which return has not yet been received) at the rates respectively of 19 and 23·6 per 1,000 of population, against 19·9 and 25·8 per 1,000, respectively, in the preceding week ending 17th September, indicating a falling off in the registration of both the events, particularly of deaths.

2. The highest proportions of births and deaths were returned from the following Municipalities :—

| Births. |     |     |                  | Deaths.             |     |     |                  |
|---------|-----|-----|------------------|---------------------|-----|-----|------------------|
|         |     |     | Ratio per mille. |                     |     |     | Ratio per mille. |
| Gya     | ... | ... | 47·8             | Serampore           | ... | ... | 53·0             |
| Monghyr | ... | ... | 35·3             | Gya                 | ... | ... | 45·8             |
|         |     |     |                  | Puri                | ... | ... | 44·1             |
|         |     |     |                  | Beaulah             | ... | ... | 39·4             |
|         |     |     |                  | Suburbs of Calcutta | ... | ... | 36·2             |
|         |     |     |                  | Monghyr             | ... | ... | 35·3             |

3. The following table denotes that, as compared with the results of the preceding week, there was a sensible diminution of mortality from fever, but no important differences in the casualty rates from the other diseases, *vide* figures given below :—

|                  |     |     |     | Ratio per mille during the weeks ending— |                      |
|------------------|-----|-----|-----|--|----------------------|
|                  |     |     |     | 24th September 1887.                     | 17th September 1887. |
| Cholera.         | ... | ... | ... | 1·4                                      | 1·8                  |
| Small-pox        | ... | ... | ... | ...                                      | 1                    |
| Fever            | ... | ... | ... | 9·7                                      | 11·4                 |
| Bowel-complaints | ... | ... | ... | 4·0                                      | 3·9                  |
| Injury           | ... | ... | ... | ·4                                       | ·5                   |
| Other causes     | ... | ... | ... | 8·1                                      | 8·1                  |

4. Eliminating small-pox, from which no death was reported to have occurred, fever and bowel-complaints which proved notably fatal, the former only in the Beaulah town, viz., at the rate of 26·2 per 1,000 of population, and the latter in the Serampore Municipality, viz., 25·5 per 1,000, and injury, the casualties from which were nowhere large, cholera and the maladies coming under the head of "Other causes" caused the greatest loss of life in the following Municipalities :—

| Cholera.            |     |     |                  | Other Causes.       |     |     |                  |
|---------------------|-----|-----|------------------|---------------------|-----|-----|------------------|
|                     |     |     | Ratio per mille. |                     |     |     | Ratio per mille. |
| Arrah               | ... | ... | 6·0              | Gya                 | ... | ... | 23·9             |
| Patna               | ... | ... | 2·6              | Puri                | ... | ... | 23·1             |
| Suburbs of Calcutta | ... | ... | 2·3              | Naraingunge         | ... | ... | 16·5             |
|                     |     |     |                  | Serampore           | ... | ... | 15·7             |
|                     |     |     |                  | Suburbs of Calcutta | ... | ... | 13·6             |

5. That the death-rates under the heads of *Sex*, *Class* and *Age* stood as noted below :—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |     |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |     | Ratio per mille. |
| Males   | ... | 23·8             | Christians          | ... | 36·1             | Under 1 year         | ... | 193·2            |
| Females   | ... | 23·3             | Hindus              | ... | 25·2             | 1 and under 5 years  | ... | 41·9             |
| Ratio of male deaths to every 100 female deaths | 113 |                  | Mahomedans          | ... | 19·7             | 5 " " 10 "           | ... | 15·0             |
|   |     |                  |                     |     |                  | 10 " " 15 "          | ... | 10·6             |
|   |     |                  |                     |     |                  | 15 " " 20 "          | ... | 13·6             |
|   |     |                  |                     |     |                  | 20 " " 30 "          | ... | 14·9             |
|   |     |                  |                     |     |                  | 30 " " 40 "          | ... | 12·9             |
|   |     |                  |                     |     |                  | 40 " " 50 "          | ... | 16·0             |
|   |     |                  |                     |     |                  | 50 " " 60 "          | ... | 23·2             |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 54·9             |

R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner or Bengal.

The 12th October 1887.

| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10   | 11   | 12   |  |  |  |  |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                         |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------------------|
| DISTRICTS.                                       | NAMES OF MUNICIPALITIES.                         | POPULATION.                                      |  | BIRTHS.  |  |  | MORTALITY ACCORDING TO—                          |  |  |  |  |  |  |  |  |  | Ratio of male deaths to every 100 female deaths. |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                         |
|  |  | Males.   | Females.   | Total.   | NUMBER OF—                                       |  | DISEASE.   |  |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM.         |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                         |
|  |  |  |  |  | Males.   | Females.   | DEATHS FROM—                                     |  |  |  |  |  |  |  |  |  |  | Males.   | Females.   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                         |
|  |  |  |  |  |  |  | Cholera.   | Small-pox.                                       | Pox.   | Bowel-complaints.                                | Injury.  | Other diseases.                                  | All causes.                                      | Typhoid.   | Small-pox.                                       | Kever.   |  |  |  | Bowel-complaints.                                | Injury.  | Other diseases.                                  | All causes.                                      | Ratio of deaths per 1,000 of population per annum in the previous week. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                         |
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\* A special census of the Europeans in the Darjiling Municipality was recently taken, as the census of this section of the community taken in February 1881 was not reliable owing to the Europeans being at a minimum in that month. The number of the natives enmasse at before, as it was not necessary to re-census them. The ratios have consequently been calculated on the revised population for all but the "Europeans" column, the ratios under which have been omitted, inasmuch as the census of the Europeans was not taken on the same basis of calculation as the census of the natives.

|               |                          | 13                      | 14          | 15                                       | 16             |             |         |  |            |                 |
|---------------|--------------------------|-------------------------|-------------|--|----------------|-------------|---------|--|------------|-----------------|
|               |                          | MORTALITY ACCORDING TO— |             |  |                |             |         |  |            |                 |
|               |                          | Age.                    |             |  |                |             |         |  |            |                 |
| DISTRICTS.    | NAMES OF MUNICIPALITIES. | DEATHS AMONG—           |             | RATIO PER 1,000 OF POPULATION PER ANNUM. |                | DEATHS.     |         | RATIO PER 1,000 OF POPULATION PER ANNUM. |            |                 |
|               |                          | Christians.             | Mahomedans. | Buddhists.                               | Other classes. | Christians. | Hindus. | Mahomedans.                              | Buddhists. | (Other classes. |
|               |                          | 6                       | 3           | ...                                      | ...            | 1           | ...     | ...                                      | ...        | ...             |
| Burdwan       | Burdwan                  | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Midnapore     | Midnapore                | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Bugli         | Bugli and Chinsurah      | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Serampore     | Serampore                | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Utterpara     | Utterpara                | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Kowrah        | Kowrah                   | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Bali          | Bali                     | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| 24-Pergunnahs | Suburbs of Calcutta      | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Kishnagar     | Kishnagar                | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Ranaghat      | Ranaghat                 | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Santipore     | Santipore                | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Jessore       | Jessore                  | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Rajahahye     | Rajahahye                | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Darjiling     | Darjiling                | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Dacca         | Dacca                    | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Naralingones  | Naralingones             | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Chittagong    | Chittagong               | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Tipperah      | Tipperah                 | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Pasna         | Pasna City               | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Gya           | Gya                      | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Shahabad      | Arrah                    | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Monterpore    | Monterpore               | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Durbhanga     | Durbhanga                | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Barua         | Chupra                   | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Bhagalpore    | Bhagalpore               | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Monohyr       | Monohyr                  | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Purneah       | Purneah                  | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| Puri          | Puri                     | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |
| TOTAL         |                          | ...                     | ...         | ...                                      | ...            | ...         | ...     | ...                                      | ...        | ...             |

B. LIDDELL, M.D., Deputy Surgeon-General.

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,  
The 12th October 1887.

**PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.**  
**SOUTH-WESTERN CIRCLE.**

**NUDDRA RIVERS.**

*Statement showing Quantities of Goods carried during the month of August 1887.*

| Number of boats or rafts.                              | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |                          |                          |  | PRIVATE.                 |              | REMARKS.  |
|--|-----------------------------------|-------------------------------|--------------------------|--------------------------|--|--------------------------|--------------|-----------|
|  |                                   | Quantity—Tons.                |                          |                          | Value.   | Quantity.                | Value.       |           |
|  |                                   | Up.                           | Down.                    | Total.                   | Rupees.  | Tons.                    | Rupees.      |           |
| 805  | 1. Grain ...                      | 478                           | 13,706                   | 14,184                   | 7,13,849   | 14,184                   | 7,13,849     |           |
| 1  | 2. Cotton ...                     | .....                         | 18                       | 18                       | 5,000  | 18                       | 5,000        |           |
| 411  | 3. Oil-seeds ...                  | 126                           | 8,330                    | 8,456                    | 7,70,204   | 8,456                    | 7,70,204     |           |
| 656  | 4. Salt ...                       | 7,023                         | 653                      | 7,676                    | 6,00,240   | 7,676                    | 6,00,240     |           |
| 2  | 5. Piece-goods ...                | 1                             | .....                    | 1                        | 3,400  | 1                        | 3,400        |           |
| 88   | 6. Metal ...                      | 607                           | 23                       | 630                      | 1,02,040   | 630                      | 1,02,040     |           |
| 50   | 7. Building materials ...         | 226                           | 164                      | 390                      | 3,577  | 390                      | 3,577        |           |
| 2,011  | 8. Miscellaneous ...              | 7,199                         | 24,877                   | 32,076                   | 31,20,800  | 32,076                   | 31,20,800    |           |
| 100  | 9. Fuel ...                       | 3,398                         | 94                       | 3,492                    | 6,51,209   | 3,492                    | 6,51,209     |           |
| 3 rafts  | 10. Timber ...                    | 47 c. ft.                     | 215 c. ft.               | 262 c. ft.               | 700  | 262 c. ft.               | 700          |           |
| 14 "   | 11. Bamboos ...                   | .....                         | 9,900 "                  | 9,900 "                  | 989  | 9,900 "                  | 989          |           |
| 4,124 & 17 rafts.                                      | 12. Total ...                     | { 19,058 & 47 c. ft.          | { 47,865 & 10,115 c. ft. | { 66,923 & 10,162 c. ft. | 59,72,008  | { 66,923 & 10,162 c. ft. | 59,72,008    |           |
| 4,005 & 16 rafts                                       | 13. Total of same month last year | { 24,532 & 231 c. ft.         | { 56,506 & 10,500 c. ft. | { 81,038 & 10,731 c. ft. | 55,20,333  | { 81,038 & 10,731 c. ft. | 55,20,333    |           |
| 14. Total number of boats plying cargo                 | No.                               | 1,593                         | 2,531                    | 4,124                    | Total tollage of month—<br>24 + 25 + 26          | ...                      | 34,075 13 2  | Rs. A. P. |
| 14a. Total number of empty boats and steamers, &c. ... |                                   | 1,217                         | 227                      | 1,444                    |  |                          |              |           |
| 15. Total number of boats plying passenger             | No.                               | 1,412                         | 1,637                    | 3,049                    | Total tollage of same month last year            | ...                      | 32,339 8 6   |           |
| 16. Total registered tonnage, cargo                    | ...                               | 540,719                       | 479,157                  | 1,019,876                |  |                          |              |           |
| 17. Total registered tonnage, passenger                | ...                               | 1,242                         | 1,824                    | 3,066                    | Memorandum of Tollage.                           |                          |              |           |
| 18. Ton-mileage  | ...                               | .....                         | .....                    | .....                    |  |                          |              | Rs. A. P. |
| 19. Estimated value of cargo                           | Rs.                               | 26,00,647                     | 33,69,672                | 59,70,319                | 1. Balance not recovered on the 1st of the month | ...                      | 3,764 14 8   |           |
| 20. Number of passengers                               | ..                                | 2,384                         | 1,644                    | 4,028                    |  |                          |              |           |
| 21. Rafts, bamboos                                     | c ft                              | .....                         | 9,900                    | 9,900                    |  |                          |              |           |
| 22. Do., bullahs                                       | "                                 | 47                            | 215                      | 262                      | 2. Tollage per month                             | ...                      | 34,075 13 2  |           |
| 23. Estimated value of rafts                           | Rs.                               | 55                            | 1,634                    | 1,689                    |  |                          |              |           |
| 24. Tollage on boats                                   | "                                 | 13,132-15-8                   | 20,930-0-0               | 34,062-15-8              | 3. Total   | ...                      | 37,840 11 10 |           |
| 25. Compounded tollage on boats                        | Rs.                               | .....                         | .....                    | .....                    |  |                          |              |           |
| 26. Tollage on rafts                                   | "                                 | 0-9-0                         | 12-4-6                   | 12-13-6                  | 4. Amount paid into treasury during the month    | ...                      | 31,315 6 8   |           |
| 27.* Total tollage on boats per ton-mile               | ...                               | .....                         | .....                    | .....                    |  |                          |              |           |
| 28. Total tollage on rafts per 100 cubic feet          | ...                               | .....                         | .....                    | 0-2-0                    | 5. Balance due at the end of the month           | ...                      | 6,525 5 2    |           |

\* Boats in these rivers do not pay per mile.

CALCUTTA,  
The 14th October 1887. }

A. D. McARTHUR, Major, R.E.,  
Under-Secretary to the Government of Bengal.



## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

## CALCUTTA AND EASTERN CANAL.

Statement showing quantities of Goods carried during the month of August 1887.

| Number of boats or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |               |                  |  | PRIVATE.         |           | REMARKS.                |
|---------------------------|---|-------------------------------|---------------|------------------|--|------------------|-----------|-------------------------|
|                           |   | Quantity—Tons.                |               |                  | Value.   | Quantity.        | Value.    |                         |
|                           |   | Up.                           | Down.         | Total.           | Rupees.  | Tons.            | Rupees.   |                         |
| 638                       | 1. Grain ...                                  | 9,353                         | .....         | 9,353            | 7,65,278   | 9,353            | 7,65,278  |                         |
| 1                         | 2. Cotton ...                                 | 2                             | .....         | 2                | 1,200  | 2                | 1,200     |                         |
| 34                        | 3. Oilseeds ...                               | 364                           | 19            | 383              | 28,290   | 383              | 28,290    |                         |
| 291                       | 4. Salt ...                                   | 500                           | 4,314         | 4,814            | 4,04,400   | 4,814            | 4,04,400  |                         |
| .....                     | 5. Piece-goods ..                             | .....                         | .....         | .....            | .....  | .....            | .....     |                         |
| 13                        | 6. Metal ...                                  | 29                            | 22            | 51               | 19,260   | 51               | 19,260    |                         |
| 125                       | 7. Building materials                         | 3,441                         | 108           | 3,549            | 57,530   | 3,549            | 57,530    |                         |
| 1,298                     | 8. Miscellaneous ...                          | 6,932                         | 282           | 7,214            | 8,98,631   | 7,214            | 8,98,631  |                         |
| 602                       | 9. Fuel ...                                   | 10,293                        | 2,273         | 12,566           | 1,05,301   | 12,566           | 1,05,301  |                         |
| .....                     | 10. Timber ...                                | .....                         | .....         | .....            | .....  | .....            | .....     |                         |
| 6 rafts                   | 11. Bamboos ...                               | 945 No.                       | .....         | 945 No.          | 118  | 945 No.          | 118       |                         |
| 3,002 & 6 rafts.          | 12. Total ...                                 | 30,914 & 945 No.              | 7,018         | 37,932 & 945 No. | 22,80,008  | 37,932 & 945 No. | 22,80,008 |                         |
| 2,231 & 1 raft            | 13. Total of same month last year             | 26,000 & 300 No.              | 6,05 & 70 No. | 32,051 & 370 No. | 17,04,666  | 32,051 & 370 No. | 17,04,666 |                         |
|                           |   | Up.                           | Down.         | Total.           |  |                  |           |                         |
| 14.                       | Total number of boats plying cargo No.        | 2,623                         | 379           | 3,002            | Total tollage of month—<br>24 + 25 + 26 ...          |                  |           | Rs. A. P.<br>23,367 1 9 |
| 14a.                      | Ditto empty ditto ..                          | 2,034                         | 411           | 2,455            |  |                  |           |                         |
| 15.                       | Total number of boats plying passenger No.    | 118                           | 9             | 127              | Total tollage of same month last year                |                  |           | 18,548 11 0             |
| 16.                       | Total registered tonnage, cargo ...           | 92,282                        | 17,139        | 109,721          | Memorandum of Tollage.                               |                  |           |                         |
| 17.                       | Total registered tonnage, passenger ...       | 11,100                        | 1,200         | 12,300           |  |                  |           |                         |
| 18.                       | Ton-mileage ..                                | .....                         | .....         | .....            |  |                  |           | Rs. A. P.               |
| 19.                       | Estimated value of cargo Rs.                  | 18,53,984                     | 4,25,906      | 22,79,890        | 1. Balance not recovered on the 1st of the month ... |                  |           | 1,266 7 6               |
| 20.                       | Number of passengers No.                      | 465                           | 34            | 499              | 2. Tollage per month ...                             |                  |           | 23,367 1 9              |
| 21.                       | Rafts, bamboos c. ft.                         | 945                           | .....         | 945              |  |                  |           |                         |
| 22.                       | Do., bullahs ..                               | .....                         | .....         | .....            |  |                  |           |                         |
| 23.                       | Estimated value of rafts Rs.                  | 118                           | .....         | 118              | 3. Total ...   |                  |           | 24,633 9 3              |
| 24.                       | Tollage on boats ..                           | 19,091-12-9                   | 4,272-14-0    | 23,364-10-9      |  |                  |           |                         |
| 25.                       | Compounded tollage on boats Rs.               | .....                         | .....         | .....            | 4. Amount paid into treasury during the month ...    |                  |           | 23,594 8 0              |
| 26.                       | Tollage on rafts ..                           | 2-7-0                         | .....         | 2-7-0            |  |                  |           |                         |
| 27.                       | Total tollage on boats per ton-mile*          | .....                         | .....         | .....            |  |                  |           |                         |
| 28.                       | Total tollage on rafts per 100 cubic feet ... | .....                         | .....         | 0 4-1            | 5. Balance due at the end of the month ...           |                  |           | 1,039 1 3               |

\* Boats in this canal do not pay per mile.

**ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).  
CALCUTTA AND EASTERN CANALS.**

| Number of<br>boats or rafts. | DESCRIPTION.                     | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE.  |          | REMARKS. |
|------------------------------|----------------------------------|-------------------------------|-------|--------|----------|-----------|----------|----------|
|                              |                                  | Quantity—Tons.                |       |        | Value.   | Quantity. | Value.   |          |
|                              |                                  | Up.                           | Down. | Total. | Rupees.  | Tons.     | Rupees.  |          |
| 159                          | (a) Jute ...                     | 2,294                         | ..... | 2,294  | 2,56,964 | 2,294     | 2,56,964 |          |
| 45                           | (b) Jaggery ...                  | 354                           | 1     | 355    | 49,750   | 355       | 49,750   |          |
| 8                            | (c) Sugar ...                    | 50                            | ..... | 50     | 11,200   | 50        | 11,200   |          |
| 2                            | (d) Tobacco ...                  | .....                         | 5     | 5      | 1,200    | 5         | 1,200    |          |
| 189                          | (e) Fish ...                     | 49                            | ..... | 49     | 13,718   | 49        | 13,718   |          |
| 6                            | (f) Hides ...                    | 10                            | ..... | 10     | 2,300    | 10        | 2,300    |          |
| 96                           | (g) Poultry ...                  | 24                            | ..... | 24     | 19,650   | 24        | 19,650   |          |
| 27                           | (h) Hay and straw ...            | 206                           | ..... | 206    | 4,368    | 206       | 4,368    |          |
| 26                           | (j) Oil ...                      | .. ..                         | 233   | 233    | 32,550   | 233       | 32,550   |          |
| 37                           | (k) Earthenware ...              | 78                            | ..... | 78     | 1,094    | 78        | 1,094    |          |
| 703                          | (m) Other miscella-<br>neous ... | 3,867                         | 43    | 3,910  | 5,05,937 | 3,910     | 5,05,937 |          |
| 1,298                        | Total Miscellaneous...           | 6,932                         | 282   | 7,214  | 8,98,631 | 7,214     | 8,98,631 |          |

**PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.**  
**SOUTH-WESTERN CIRCLE.**

**TOLLY'S NULLAH.**

*Statement showing quantities of Goods carried during the month of August 1887.*

| Number of boats or rafts.                             | DESCRIPTION.                             | TOTAL GOVERNMENT AND PRIVATE. |                 |                     | PRIVATE.   |                     | REMARKS.  |
|---|--|-------------------------------|-----------------|---------------------|--|---------------------|-----------|
|   |  | Quantity—Tons.                |                 |                     | Value.   | Quantity.           |           |
|   |  | Up.                           | Down.           | Total.              | Rupees.  | Tons.               |           |
| 2,564   | 1. Grain ...                             | 9,271                         | .....           | 9,271               | 6,92,222   | 9,271               | 6,92,222  |
| 9   | 2. Cotton ...                            | 32                            | .....           | 32                  | 17,800   | 32                  | 17,800    |
| 17  | 3. Oilseeds ...                          | 285                           | 7               | 292                 | 32,500   | 292                 | 32,500    |
| 121   | 4. Salt ...                              | 552                           | 772             | 1,324               | 1,11,225   | 1,324               | 1,11,225  |
| .....   | 5. Piece-goods ...                       | .....                         | .....           | .....               | .....  | .....               | .....     |
| .....   | 6. Metal ...                             | .....                         | .....           | .....               | .....  | .....               | .....     |
| 331   | 7. Building materials ...                | 2,975                         | .....           | 2,975               | 14,760   | 2,975               | 14,760    |
| 940   | 8. Miscellaneous ...                     | 2,855                         | 75              | 2,930               | 3,10,507   | 2,930               | 3,10,507  |
| 209   | 9. Fuel ...                              | 3,016                         | .....           | 3,016               | 25,628   | 3,016               | 25,628    |
| 2 rafts   | 10. Timber ...                           | .....                         | 40 No.          | 40 No.              | 3,000  | 40 No.              | 3,000     |
| 8 "   | 11. Bamboos ...                          | 125 No.                       | .....           | 125 No.             | 28   | 125 No.             | 28        |
| 4,191<br>& 10 rafts                                   | 12. Total ...                            | 18,986 &<br>125 No.           | 854 &<br>40 No. | 19,840 &<br>165 No. | 12,07,670  | 19,840 &<br>165 No. | 12,07,670 |
| 2,774<br>& 14 rafts                                   | 13. Total of same<br>month last year ... | 12,075 &<br>574 No.           | 994             | 13,069<br>574 No.   | 6,81,185   | 13,069 &<br>574 No. | 6,81,185  |
|   |  | Up.                           | Down.           | Total.              |  |                     | Rs. A. P. |
| 14. Total number of boats plying<br>cargo ... No.     |  | 4,985                         | 106             | 4,191               | Total tollage of month—<br>24+25+26 ...                    |                     | 9,701 5 0 |
| 14a. Empty boats ... No.                              |  | 1,314                         | 160             | 1,474               | Total tollage of same month<br>last year ...               |                     | 6,977 6 3 |
| 15. Total number of boats plying<br>passenger ... No. |  | 300                           | 12              | 312                 | <i>Memorandum of Tollage.</i>                              |                     |           |
| 16. Total registered tonnage,<br>cargo ...            |  | 53,264                        | 2,783           | 56,047              |  |                     |           |
| 17. Total registered tonnage,<br>passenger ...        |  | 19,175                        | 825             | 20,300              | Rs. A. P.  |                     |           |
| 18. Ton-mileage ...                                   |  | .....                         | .....           | .....               | 1. Balance not recovered<br>on the 1st of the<br>month ... |                     |           |
| 19. Estimated value of cargo Rs.                      |  | 11,27,447                     | 77,195          | 12,04,642           | 478 7 6  |                     |           |
| 20. Number of passengers No.                          |  | 1,984                         | 61              | 2,045               | 2. Tollage per month ...                                   |                     |           |
| 21. Rafts, bamboos c. ft.                             |  | 125                           | .....           | 125                 |  |                     |           |
| 22. Do., bullahs ...                                  |  | .....                         | .....           | .....               |  |                     |           |
| 23. Estimated value of rafts Rs.                      |  | 28                            | 3,000           | 3,028               | 3. Total ...   |                     |           |
| 24. Tollage on boats Rs.                              |  | 9,001-14-6                    | 682-6-6         | 9,684-5-0           | 10,179 12 6  |                     |           |
| 25. Compounded tollage on<br>boats ... Rs.            |  | .....                         | .....           | .....               |  |                     |           |
| 26. Tollage on rafts "                                |  | 2-0-0                         | 15 0 0          | 17-0-0              | 4. Amount paid into<br>treasury during the<br>month ...    |                     |           |
| 27. Total tollage on boats per<br>ton-mile* ...       |  | .....                         | .....           | .....               | 9,794 15 0   |                     |           |
| 28. Ditto on rafts per 100<br>cubic feet ...          |  | .....                         | .....           | 0-8-9               | 5. Balance due at the end<br>of the month ...              |                     |           |
|   |  |                               |                 |                     | 384 13 6   |                     |           |

\* Boats in this canal do not pay per mile.

ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).  
TOLLY'S NULLAH.

| Number of<br>boats or<br>rafts. | DESCRIPTION.                     | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE.  |          | REMARKS. |
|---------------------------------|----------------------------------|-------------------------------|-------|--------|----------|-----------|----------|----------|
|                                 |                                  | Quantity—Tons.                |       |        | Value.   | Quantity. | Value    |          |
|                                 |                                  | Up.                           | Down. | Total. | Rupees.  | Tons.     | Rupees.  |          |
| 7                               | (a) Jute ...                     | 90                            | ..... | 90     | 10,100   | 90        | 10,100   |          |
| 124                             | (b) Jaggery ..                   | 680                           | 3     | 683    | 95,690   | 683       | 95,690   |          |
| 1                               | (c) Sugar ...                    | 2                             | ..... | 2      | 400      | 2         | 400      |          |
| 22                              | (d) Tobacco ...                  | 141                           | 20    | 161    | 36,000   | 161       | 36,000   |          |
| 94                              | (e) Fish ...                     | 17                            | 1     | 18     | 4,965    | 18        | 4,965    |          |
| .....                           | (f) Hides ...                    | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| 9                               | (g) Poultry ...                  | 2                             | ..... | 2      | 1,143    | 2         | 1,143    |          |
| 388                             | (h) Hay and straw...             | 564                           | ..... | 564    | 11,850   | 564       | 11,850   |          |
| 49                              | (j) Oil ...                      | 468                           | 3     | 468    | 65,475   | 468       | 65,475   |          |
| 144                             | (k) Earthenware ...              | 228                           | 3     | 228    | 3,194    | 228       | 3,194    |          |
| 102                             | (m) Other miscellane-<br>ous ... | 698                           | 16    | 714    | 81,690   | 714       | 81,690   |          |
| 940                             | Total Miscellaneous...           | 2,855                         | 75    | 2,930  | 3,10,507 | 2,930     | 3,10,507 |          |

ABSTRACT FOR THE MONTH OF AUGUST 1887, AS COMPARED WITH THE  
CORRESPONDING MONTH OF THE PREVIOUS YEAR.

|                                 | TRAFFIC, 1887-88. |                      | TRAFFIC, 1886-87. |                      |
|---------------------------------|-------------------|----------------------|-------------------|----------------------|
|                                 | During the month. | To end of the month. | During the month. | To end of the month. |
|                                 | Rs. A. P.         | Rs. A. P.            | Rs. A. P.         | Rs. A. P.            |
| Calcutta and Eastern Canals ... | 23,367 1 9        | 1,07,042 1 0         | 18,548 11 0       | 93,816 13 9          |
| Tolly's Nullah ...              | 9,701 5 0         | 42,237 14 0          | 6,977 6 3         | 32,551 10 6          |
| Total ...                       | 33,068 6 9        | 1,49,279 15 0        | 25,526 1 3        | 1,26,368 8 3         |

CALCUTTA,  
The 14th October 1887. }

A. D. McARTHUR, Major, R.E.,  
Under-Secretary to the Government of Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 15th October 1887,  
compared with the corresponding week of the previous year.

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>15TH OCTOBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>16TH OCTOBER 1886. |                     |          |
|--------------------|---|---------------------|----------|---|---------------------|----------|
|                    | Number of<br>boats.                             | Weight of<br>cargo. | Tollage. | Number of<br>boats.                             | Weight of<br>cargo. | Tollage. |
|                    | No.   | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy ... | 805   | 1,16,435            | 1,769    | 510   | 63,475              | 999      |
| Jute ...           | 187   | 76,775              | 1,329    | 156   | 70,795              | 1,294    |
| Firewood ...       | 161   | 75,275              | 1,077    | 210   | 94,810              | 1,394    |
| Other articles ... | 961   | 2,58,225            | 3,878    | 930   | 1,80,120            | 2,611    |
| Total ...          | 2,114   | 5,26,710            | 8,053    | 1,806   | 4,09,200            | 6,298    |

## EAST INDIAN RAILWAY.

Statement of Goods Traffic in Staples carried during the 4 weeks ended 27th August 1887, as compared with the same period of 1886.

| STAPLES.   | 1887.     |           | 1886.     |           | Increase. |          | Decrease. |          |
|--|-----------|-----------|-----------|-----------|-----------|----------|-----------|----------|
|  | Weight.   | Freight.  | Weight.   | Freight.  | Weight.   | Freight. | Weight.   | Freight. |
|  | Mds.      | Rs.       | Mds.      | Rs.       | Mds.      | Rs.      | Mds.      | Rs.      |
| ANIMALS, LIVING, FOR SALE.   | No. 4     | 10        | No. 102   | 1,602     | .....     | .....    | No. 98    | 1,592    |
| Horses, ponies, and mules  | 70        | 1,481     | 77        | 1,353     | .....     | 128      | 7         | .....    |
| Cattle   | 5,324     | 3,416     | 1,506     | 1,446     | No. 3,768 | 1,069    | .....     | .....    |
| Sheep and goats  | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Other kinds  | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| BORAX  | 204       | 246       | 608       | 403       | .....     | .....    | 234       | 217      |
| Canes and rattans  | 84        | 40        | 34        | 37        | 50        | 13       | .....     | .....    |
| Caoutchouc (Indian-rubber)   | 10        | 32        | 10        | 23        | 3         | 4        | .....     | .....    |
| Chinese and Japanese ware  | 48        | 108       | 40        | 109       | .....     | .....    | .....     | .....    |
| Coal and coke, up  | 3,94,207  | 1,35,834  | 4,39,807  | 1,68,004  | .....     | .....    | 45,000    | 1        |
| Ditto, down  | 16,03,783 | 2,27,042  | 14,12,073 | 1,05,672  | 1,90,810  | 31,410   | 32,170    | .....    |
| Cotton, raw  | 17,708    | 19,780    | 20,810    | 28,654    | .....     | .....    | 9,031     | 8,945    |
| COTTON, MANU-FACTURED.   | 8,841     | 12,852    | 9,836     | 14,290    | .....     | .....    | 906       | 1,444    |
| Twist and yarn (European)  | 10,091    | 6,527     | 10,162    | 6,193     | .....     | 334      | 71        | .....    |
| Ditto (Indian)   | 61,091    | 60,180    | 60,610    | 60,605    | .....     | .....    | 8,519     | 21,485   |
| Piece-goods (European)   | 13,430    | 9,811     | 14,870    | 10,410    | .....     | .....    | 1,531     | 890      |
| Ditto (Indian)   | 40        | 21        | 102       | 56        | .....     | .....    | 62        | 35       |
| Drugs and Medicines.   | 980       | 1,204     | 1,040     | 1,189     | 105       | .....    | 51        | .....    |
| Other sorts, not intoxicating  | 714       | 261       | 1,045     | 611       | .....     | .....    | 331       | 350      |
| Intoxicating drugs (other than opium, &c., arsenic, blang, ganja, and churus, &c.) | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| DYEING MATERIALS.  | 4,128     | 948       | 1,249     | 443       | 2,879     | 505      | .....     | .....    |
| Indigo   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Madder or manjiti  | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Safflower  | 39        | 13        | 51        | 10        | .....     | .....    | .....     | .....    |
| Turnerie   | 5,452     | 3,091     | 7,369     | 7,144     | .....     | 5        | .....     | .....    |
| Other kinds  | 2,076     | 2,634     | 6,124     | 5,763     | .....     | .....    | 2,117     | 4,710    |
| Earthenware and porcelain  | 676       | 1,664     | 610       | 1,444     | 66        | 100      | 4,048     | 3,129    |
| FIBROUS PRODUCTS.  | 32,198    | 5,101     | 5,948     | 3,416     | 26,250    | 1,750    | .....     | .....    |
| Do., manufactured (gunny bags and cloths)  | 42,901    | 20,895    | 73,599    | 37,874    | .....     | .....    | 30,698    | 10,979   |
| Other fibres, raw  | 875       | 512       | 1,161     | 262       | .....     | 260      | 284       | .....    |
| Ditto, manufactured  | 2,124     | 1,170     | 1,470     | 648       | .....     | 676      | .....     | .....    |
| FRUITS & NUTS.   | 7,325     | 4,853     | 1,053     | 1,492     | 5,072     | 3,341    | .....     | .....    |
| Coconuts   | 21,229    | 15,864    | 18,269    | 14,284    | 2,960     | 1,680    | .....     | .....    |
| All other kinds  | 3,23,596  | 65,404    | 12,04,396 | 3,75,114  | .....     | .....    | 9,70,810  | 3,09,710 |
| GRAIN & PULSES.  | 2,03,825  | 60,722    | 2,53,975  | 73,002    | 42,400    | .....    | .....     | .....    |
| Cereals and pulses   | 3,49,536  | 98,152    | 2,48,306  | 62,005    | 1,00,630  | 46,930   | .....     | 12,280   |
| Rice, husked   | 16,402    | 2,770     | 17,012    | 2,550     | 2,160     | 230      | .....     | .....    |
| Do., unhusked  | 1,50,078  | 26,433    | 73,598    | 18,803    | 77,370    | 8,130    | .....     | .....    |
| Other grain and spring crops   | 2,781     | 1,367     | 4,086     | 1,029     | .....     | .....    | .....     | .....    |
| Gums and resins  | 12,154    | 6,189     | 24,148    | 11,415    | .....     | .....    | 1,500     | 639      |
| HIDES & SKINS.   | 18,251    | 9,878     | 15,086    | 8,180     | 3,165     | 1,698    | 11,189    | 5,626    |
| Skins of sheep, goats, and small animals   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Horns  | 1,001     | 738       | 901       | 481       | 700       | 257      | .....     | .....    |
| LAC  | 9,810     | 7,047     | 12,513    | 9,245     | .....     | .....    | .....     | .....    |
| Do, shell  | 15,573    | 3,751     | 18,301    | 4,780     | .....     | .....    | 3,403     | 2,230    |
| Do, stick and other kinds  | 1,700     | 3,610     | 1,506     | 3,049     | 224       | 461      | 2,818     | 1,029    |
| LEATHER  | 1,744     | 2,840     | 1,624     | 1,977     | 129       | 303      | .....     | .....    |
| Ditto, manufactured  | 13,822    | 11,724    | 10,022    | 10,688    | 2,900     | 1,036    | .....     | .....    |
| Liquors  | 284       | 134       | 424       | 249       | .....     | .....    | .....     | .....    |
| METALES AND MANUFACTURES OF  | 32,044    | 22,370    | 31,392    | 27,527    | 52        | .....    | 140       | 115      |
| Brass and copper   | 61,037    | 40,897    | 61,144    | 39,700    | .....     | 1,197    | 167       | 5,157    |
| Iron   | 5,766     | 5,212     | 9,581     | 6,745     | .....     | .....    | 3,825     | 633      |
| Other metals   | 27,970    | 13,700    | 16,918    | 10,245    | 11,052    | 3,455    | .....     | .....    |
| Oil  | 473       | 326       | 675       | 763       | .....     | .....    | 202       | 437      |
| Opium  | 1,391     | 1,220     | 1,139     | 983       | 163       | 237      | .....     | .....    |
| Paints and colours   | 18,400    | 16,727    | 21,450    | 10,410    | .....     | .....    | 2,027     | 2,602    |
| PROVISIONS   | 4,952     | 2,390     | 5,810     | 3,620     | 1,112     | 1,176    | .....     | .....    |
| Ghee   | 60,812    | 2,390     | 1,54,747  | 4,303     | .....     | .....    | 93,925    | 1,923    |
| Other kinds  | 68,708    | 25,978    | 70,255    | 73,009    | .....     | .....    | 11,487    | 47,631   |
| Railway materials, Construction Account  | 2,38,910  | 62,377    | 4,13,978  | 78,248    | .....     | .....    | 1,54,068  | 25,865   |
| Ditto ditto, Foreign   | 24,803    | 11,319    | 30,473    | 15,745    | .....     | .....    | 6,070     | 2,300    |
| Salt   | 13,393    | 4,275     | 21,536    | 6,644     | .....     | .....    | 8,143     | 2,300    |
| SALTPETRE, &C.   | 5,18,380  | 1,54,197  | 7,23,716  | 2,11,177  | .....     | .....    | 2,10,380  | 56,980   |
| Other saline substances  | 1,00,333  | 30,690    | 1,04,333  | 28,600    | 5,000     | 2,000    | .....     | .....    |
| Linseed  | 7,097     | 2,152     | 2,467     | 582       | 5,239     | 1,670    | .....     | .....    |
| Mustard and rape   | 1,16,730  | 38,837    | 1,74,320  | 67,027    | .....     | .....    | .....     | .....    |
| Til or kinjelly  | 16,118    | 6,720     | 12,028    | 6,459     | 3,190     | 270      | 57,590    | 28,190   |
| Other oilseeds   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| SEEDS  | 17,770    | 9,673     | 10,060    | 4,373     | 6,520     | 5,300    | .....     | .....    |
| Indigo seed  | 1,859     | 1,692     | 1,710     | 1,622     | 140       | .....    | .....     | .....    |
| Tea seed   | 44        | 484       | 150       | 500       | .....     | .....    | .....     | .....    |
| Other kinds  | 272       | 625       | 365       | 365       | .....     | .....    | .....     | .....    |
| SILK   | 5,231     | 3,227     | 5,066     | 3,348     | .....     | .....    | .....     | .....    |
| Silk, raw  | 67,451    | 4,176     | 60,821    | 7,044     | 630       | .....    | 445       | .....    |
| Do., manufactured (European)   | 50,327    | 10,736    | 62,029    | 13,463    | .....     | .....    | 12,303    | 2,727    |
| Do., ditto (Indian)  | 26,065    | 5,053     | 28,717    | 5,715     | .....     | .....    | 1,762     | 668      |
| Do., Foreign   | 1,278     | 1,200     | 2,415     | 2,521     | .....     | .....    | 1,137     | 1,264    |
| Spices   | 558       | 18        | 630       | 17        | 22        | 1        | .....     | .....    |
| Stone and marble   | 84,980    | 11,353    | 43,712    | 17,274    | .....     | .....    | 8,732     | 5,843    |
| SUGAR  | 12,801    | 4,481     | 10,350    | 3,030     | .....     | 1,612    | 3,629     | .....    |
| Sugar, refined   | 6,759     | 350       | 9,633     | 638       | .....     | .....    | 2,790     | 182      |
| Do., unrefined   | 790       | 674       | 1,344     | 1,188     | .....     | .....    | 465       | 514      |
| Tea, Indian  | 1,264     | 3,145     | 820       | 2,478     | 444       | 697      | .....     | .....    |
| Do., Foreign   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Tobacco  | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| WOOD   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Timber   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Firewood   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Wool, raw  | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Do., manufactured (European)   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Do., manufactured (Indian)   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Wool, Shawls   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| All other articles of merchandise  | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Government stores  | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Minerals   | .....     | .....     | .....     | .....     | .....     | .....    | .....     | .....    |
| Total  | 52,82,796 | 14,82,190 | 64,70,210 | 20,02,526 | 4,93,302  | 1,19,580 | 16,60,777 | 6,30,010 |

**General remarks on the fluctuation of principal staples carried over the East India Railway during the month ended 27th August 1887.**

**INCREASES.**

**Jute, raw.**—This increase is due to the new traffic booked *via* Naihati to Howrah and the neighbourhood.

**Rice (husked and unhusked).**—This increase is in continuation of that reported throughout the year.

**Other grains.**—This was chiefly in despatches from Meja road, Allahabad, Jasra, and Aligarh to Indore, Agra, Dholpure Bhurutpur and Gwalior to supplement poor crops.

**Oil.**—Due to improved despatches in kerosine oil from Howrah.

**DECREASES.**

**Coal and coke.**—There was an increase in the downward despatches and decrease in the upward traffic, resulting in a net increase in the weight carried and a slight decrease in the earnings.

**Cotton.**—Due to the period being always a dull one for this traffic.

**Piece-goods, European.**—This decrease is reported to be due to second and third hands being unable to dispose of their stocks up-country.

**Turmeric.**—This was entirely in the despatches from Howrah.

**Gunny.**—This decrease follows that in the export traffic.

**Wheat.**—This was owing to partial exhaustion of stocks up-country and to the small quantities available being either damaged by the early rains when lying in the open, or to Calcutta merchants being unable to give the prices asked by sellers.

**Grain and Pulses.**—There was an increase in the weight carried attended with a decrease in the earnings; the increases were in the despatches from Cawnpore and Manhar to Dholpur and the neighbourhood, while the traffic of the corresponding period of 1886 was of much longer lead, resulting in the decrease in the freight earned.

**Government stores.**—The decrease was chiefly in despatches from Howrah.

**Hides.**—Due to the Calcutta market being dull and to the supplies up-country being shorter than in 1886.

**Railway Materials, Foreign.**—Following the busy month of July, there was a lull in the despatches of railway materials both from Howrah and Bombay.

**Salt.**—The decrease in this commodity was chiefly in the despatches *via* Agra, due to diversion of the staple by the Bombay Baroda and Central India Railway from Agra to Cawnpore.

**Seeds.**—The decrease was almost entirely in Jinsced and poppy-seed, and was due to the very weak state of the market; the crop in poppy-seed was a partial failure.

**Sugar, refined and unrefined.**—Due to scanty supplies from the Oudh and Rohilkhand Railway and our stations in the Dinapore district having continued to show the decreases of previous months.

**Tobacco.**—Due to poor crops.

ALLEN MEARS, *Dy. Traffic Manager.*

TRAFFIC MANAGER'S OFFICE, JAMALPUR, the 13th October 1887.

Eastern Bengal State Railway.

Abstract of principal commodities carried over the Eastern Bengal State Railway during the month of June 1887, as compared with the same month of the previous year.

| STAPLES.  | 1887.  |        | 1886.  |        | TOTAL. |        | Increase. | Decrease. |
|---|--------|--------|--------|--------|--------|--------|-----------|-----------|
|   | Up.    | Down.  | Up.    | Down.  | 1887.  | 1886.  |           |           |
|   | Tons.  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.     | Tons.     |
| Betelnuts ... ..                                    | 63     | 122    | 25     | 64     | 185    | 80     | 96        | .....     |
| Coal and coke ... ..                                | 7,750  | 1,937  | 3,872  | 1,679  | 9,627  | 5,551  | 4,136     | .....     |
| Cotton, raw ... ..                                  | 4      | 210    | 14     | 231    | 214    | 236    | .....     | 21        |
| Cotton, manufactured—                               |        |        |        |        |        |        |           |           |
| 1.—Twist and yarn (European) ... ..                 | 1,953  | 85     | 1,097  | 109    | 2,038  | 1,859  | 179       | .....     |
| 2.—Ditto do. (Indian) ... ..                        |        |        |        |        |        |        |           |           |
| 3.—Piece-goods (European) ... ..                    |        |        |        |        |        |        |           |           |
| 4.—Ditto do. (Indian) ... ..                        |        |        |        |        |        |        |           |           |
| Fibrous Products—                                   |        |        |        |        |        |        |           |           |
| 1.—Jute (screwed) ... ..                            | .....  | 264    | .....  | 15     | 264    | 15     | 249       | .....     |
| 2.—Jute (unscrewed) ... ..                          | 1      | 3,556  | .....  | 2,095  | 3,557  | 2,095  | 1,462     | .....     |
| 3.—Jute manufactured (gunny-bags and cloths) ... .. | 168    | 1,000  | 141    | 221    | 1,163  | 962    | 201       | .....     |
| Grain and Pulse—                                    |        |        |        |        |        |        |           |           |
| 1.—Grain and pulse ... ..                           | 1,167  | 6,607  | 881    | 4,372  | 7,824  | 4,703  | 3,121     | .....     |
| 2.—Rice, husked ... ..                              | 2,116  | 1,859  | 754    | 3,313  | 3,973  | 4,067  | .....     | 92        |
| Hides and Skins—                                    |        |        |        |        |        |        |           |           |
| 1.—Hides of cattle ... ..                           | 7      | 568    | 5      | 609    | 575    | 674    | .....     | 99        |
| 2.—Skins of sheep, goats and small animals          |        |        |        |        |        |        |           |           |
| Metals and manufactures of—                         |        |        |        |        |        |        |           |           |
| 1.—Brass and copper ... ..                          | 912    | 703    | 508    | 99     | 1,015  | 467    | 948       | .....     |
| 2.—Iron ... ..                                      |        |        |        |        |        |        |           |           |
| 3.—Other metals ... ..                              |        |        |        |        |        |        |           |           |
| Oils  | 390    | 44     | 450    | 3      | 344    | 462    | .....     | 118       |
| Kerosine oil ... ..                                 | 573    | 23     | .....  | .....  | 596    | .....  | 596       | .....     |
| Provisions—   |        |        |        |        |        |        |           |           |
| 1.—Ghee ... ..                                      | 292    | 773    | 188    | 528    | 1,065  | 716    | 349       | .....     |
| 2.—Other kinds ... ..                               |        |        |        |        |        |        |           |           |
| Railway materials ... ..                            | 2,680  | 1,340  | 1,291  | 344    | 4,020  | 1,635  | 2,385     | .....     |
| Salt ... ..   | 5,569  | 42     | 3,111  | 17     | 5,611  | 3,129  | 2,483     | .....     |
| Seeds—  |        |        |        |        |        |        |           |           |
| 1.—Oilseeds—  |        |        |        |        |        |        |           |           |
| a.—Linseed ... ..                                   | 447    | 3,044  | 277    | 2,791  | 4,091  | 3,068  | 1,023     | .....     |
| b.—Mustard and rape ... ..                          |        |        |        |        |        |        |           |           |
| c.—Til or gingelly ... ..                           |        |        |        |        |        |        |           |           |
| d.—Other oilseeds ... ..                            |        |        |        |        |        |        |           |           |
| Sugar—  |        |        |        |        |        |        |           |           |
| 1.—Refined ... ..                                   | 392    | 831    | 228    | 753    | 1,223  | 991    | 242       | .....     |
| 2.—Unrefined ... ..                                 |        |        |        |        |        |        |           |           |
| Tea—  |        |        |        |        |        |        |           |           |
| 1.—Indian ... ..                                    | 1      | 1,091  | .....  | 1,375  | 1,092  | 1,375  | .....     | 283       |
| 2.—Foreign ... ..                                   |        |        |        |        |        |        |           |           |
| Tobacco ... ..                                      | 79     | 2,193  | 54     | 1,683  | 2,245  | 1,737  | 508       | .....     |
| Wood—   |        |        |        |        |        |        |           |           |
| 1.—Timber ... ..                                    | 104    | 176    | .....  | .....  | 280    | .....  | 280       | .....     |
| 2.—Firewood ... ..                                  | 894    | 64     | 1,010  | 31     | 958    | 1,041  | .....     | 83        |
| All other articles of merchandise—                  |        |        |        |        |        |        |           |           |
| 1.—Unmanufactured ... ..                            | 1,907  | 3,691  | 1,794  | 1,418  | 4,498  | 3,212  | 1,786     | .....     |
| 2.—Manufactured ... ..                              |        |        |        |        |        |        |           |           |
| Hay, straw, and wooloo (C. & S. E. Section) ...     | 531    | .....  | 522    | 2      | 531    | 524    | 7         | .....     |
| Total ... ..  | 27,985 | 30,166 | 10,341 | 22,455 | 58,161 | 38,796 | 20,051    | 696       |

INCREASES.

|   |       |
|---|-------|
|   | Tons. |
| Coal and coke ... ..  | 4,136 |
| For Railway and Steamer Company's purposes.                   | ..... |
| Jute ... ..   | 1,711 |
| Favourable market at the past.                                | ..... |
| Grain and Pulse ... ..  | 3,121 |
| Good crops and a favourable market.                           | ..... |
| Metals ... ..   | 948   |
| For manufactures.   | ..... |
| Kerosine oil ... ..   | 596   |
| For up-country consumption.                                   | ..... |
| Railway materials ... ..                                      | 2,385 |
| For repairs and renewals.                                     | ..... |
| Salt ... ..   | 2,483 |
| Principally for Dacca for the hide trade.                     | ..... |
| Seeds ... ..  | 1,023 |
| Improvement in Home market.                                   | ..... |
| Tobacco ... ..  | 508   |
| A slight falling off in despatches from the Northern Section. | ..... |

DECREASES.

|                            |       |
|----------------------------|-------|
| Tea ... ..                 | 242   |
| Due to lateness of season. | ..... |

CALCUTTA, the 25th August 1887.

F. P. QUINLAN, Examiner of Accounts.



## Bengal Central Railway.

*Abstract of principal commodities carried over the Eastern Bengal State Railway during the month of June 1887, as compared with the same month of the previous year.*

| STAPLES.  | 1887. |       | 1886. |       | Total. |       | Increase. | Decrease. |
|---|-------|-------|-------|-------|--------|-------|-----------|-----------|
|   | Up.   | Down. | Up.   | Down. | 1887.  | 1886. |           |           |
|   | Tons. | Tons. | Tons. | Tons. | Tons.  | Tons. |           |           |
| Betelnuts ... ..                                    | 3     | 69    | 4     | 23    | 71     | 27    | 44        | .....     |
| Coal and coke ... ..                                | 1,037 | ..... | 688   | ..... | 1,037  | 688   | 349       | .....     |
| Cotton, raw ... ..                                  | 1     | 3     | ..... | 10    | 4      | 10    | .....     | 6         |
| Cotton, manufactured—                               |       |       |       |       |        |       |           |           |
| 1.—Twist and yarn (European) ... ..                 | 247   | 2     | 161   | ..... | 240    | 161   | 88        | .....     |
| 2.—Ditto do. (Indian) ... ..                        |       |       |       |       |        |       |           |           |
| 3.—Piece-goods (European) ... ..                    |       |       |       |       |        |       |           |           |
| 4.—Ditto do. (Indian) ... ..                        |       |       |       |       |        |       |           |           |
| Fibrous products—                                   |       |       |       |       |        |       |           |           |
| 1.—Jute (unscrewed) ... ..                          | ..... | 345   | ..... | 4     | 345    | 4     | 341       | .....     |
| 2.—Jute manufactured (gunny-bags and cloths) ... .. | 24    | 29    | 7     | 1     | 53     | 8     | 45        | .....     |
| Grain and Pulse—                                    |       |       |       |       |        |       |           |           |
| 2.—Grain and pulse ... ..                           | 29    | 766   | 43    | 211   | 795    | 254   | 541       | .....     |
| 4.—Rice, husked ... ..                              | 8     | 20    | 20    | 28    | 28     | 48    | .....     | 20        |
| Hides and Skins—                                    |       |       |       |       |        |       |           |           |
| 1.—Hides of cattle ... ..                           | ..... | 26    | ..... | 37    | 28     | 37    | .....     | 11        |
| 2.—Skins of sheep, goats, and small animals         |       |       |       |       |        |       |           |           |
| Metals and manufactures of—                         |       |       |       |       |        |       |           |           |
| 1.—Brass and copper ... ..                          | 61    | 33    | 27    | 14    | 94     | 41    | 53        | .....     |
| 2.—Iron ... ..                                      |       |       |       |       |        |       |           |           |
| 3.—Other metals ... ..                              |       |       |       |       |        |       |           |           |
| Oils ... ..   | 140   | ..... | 87    | ..... | 140    | 87    | 53        | .....     |
| Kerosine oil ... ..                                 | 129   | ..... | ..... | ..... | 129    | ..... | 129       | .....     |
| Provisions—   |       |       |       |       |        |       |           |           |
| 1.—Ghee ... ..                                      | 29    | 151   | 26    | 14    | 180    | 40    | 140       | .....     |
| 2.—Other kinds ... ..                               |       |       |       |       |        |       |           |           |
| Railway materials ... ..                            | 506   | 379   | 122   | 77    | 885    | 199   | 686       | .....     |
| Salt ... ..   | 205   | 9     | 221   | ..... | 214    | 221   | .....     | 7         |
| Seeds—  |       |       |       |       |        |       |           |           |
| 1.—Oilseeds—  |       |       |       |       |        |       |           |           |
| a.—Linseed ... ..                                   | 194   | 535   | 168   | 237   | 729    | 425   | 304       | .....     |
| b.—Mustard and rapo ... ..                          |       |       |       |       |        |       |           |           |
| c.—Til or gingelly ... ..                           |       |       |       |       |        |       |           |           |
| d.—Other oilseeds ... ..                            |       |       |       |       |        |       |           |           |
| Sugar—  |       |       |       |       |        |       |           |           |
| 1.—Refined ... ..                                   | 28    | 681   | 28    | 609   | 709    | 637   | 72        | .....     |
| 2.—Unrefined ... ..                                 |       |       |       |       |        |       |           |           |
| Tobacco ... ..                                      | 36    | 12    | 54    | 15    | 48     | 69    | .....     | 21        |
| Wood—   |       |       |       |       |        |       |           |           |
| 1.—Timber ... ..                                    | 58    | 21    | 11    | 17    | 70     | 28    | 51        | .....     |
| 2.—Firewood ... ..                                  |       |       |       |       |        |       |           |           |
| All other articles of merchandise—                  |       |       |       |       |        |       |           |           |
| 1.—Unmanufactured ... ..                            | 333   | 472   | 201   | 174   | 805    | 375   | 430       | .....     |
| 2.—Manufactured ... ..                              |       |       |       |       |        |       |           |           |
| Total ... ..  | 3,067 | 3,553 | 1,808 | 1,401 | 6,620  | 3,359 | 3,266     | 65        |

## INCREASES.

|  |           |
|--|-----------|
| Coal and Coke ... ..   | 349 Tons. |
| For Railway and Flotilla purposes.   |           |
| Jute ... ..  | 386 ..    |
| There has been a steady increase in the jute traffic in the Central Section. |           |
| Grain and Pulse ... ..   | 541 ..    |
| Good crops and a favourable market.  |           |
| Railway materials ... ..   | 686 ..    |
| For repairs and renewal. Also return of old material to Calcutta for sale.   |           |
| Seeds ... ..   | 304 ..    |
| Improvement in Home market after an extended period of depression.           |           |

## DECREASES.

The decreases under cotton, raw, husked rice, hides, salt, and tobacco are insignificant, and attributable only to ordinary fluctuations.

CALCUTTA, the 13th August 1887.

F. P. QUINLAN, *Examiner of Accounts.*

Nalhati State Railway.

Statement showing Increases and Decreases in tonnage of Staples carried over the Nalhati State Railway during the month of August 1887, as compared with the same month of the previous year.

| STAPLES.                                      | 1886.     |            | 1887.     |            | 1886.     | 1887.     | Increase. | Decrease. |
|---|-----------|------------|-----------|------------|-----------|-----------|-----------|-----------|
|   | Up.       | Down.      | Up.       | Down.      | Total.    | Total.    |           |           |
| I.—Coal ... ..                                | Tons. 379 | Tons. .... | Tons. 635 | Tons. .... | Tons. 379 | Tons. 635 | Tons. 256 | .....     |
| II.—Cotton, raw ... ..                        | 7         | .....      | 13        | .....      | 7         | 13        | 6         | .....     |
| IV.—Cotton twist and yarn—                    |           |            |           |            |           |           |           |           |
| 1.—European—                                  |           |            |           |            |           |           |           |           |
| a.—In bales and bundles ...                   | 40        | .....      | 53        | .....      | 40        | 53        | 13        | .....     |
| 2.—Indian—                                    | 2         | .....      | 1         | .....      | 2         | 1         | .....     | 1         |
| a.—In bales and bundles ...                   |           |            |           |            |           |           |           |           |
| X.—Jute—                                      |           |            |           |            |           |           |           |           |
| 2.—Gunny-bags and cloths ...                  | 1         | 2          | 6         | 7          | 3         | 13        | 10        | .....     |
| VII.—Grains—                                  |           |            |           |            |           |           |           |           |
| 1.—Wheat ... ..                               | 2         | .....      | .....     | .....      | 2         | .....     | .....     | 2         |
| 2.—Rice ... ..                                | 75        | 1          | 21        | 253        | 73        | 274       | 198       | .....     |
| 3.—Gram ... ..                                | 1         | .....      | .....     | .....      | 1         | .....     | .....     | 1         |
| 5.—Others ... ..                              | 10        | .....      | 1         | 14         | 13        | 15        | 2         | .....     |
| VIII.—Hides and skins—                        |           |            |           |            |           |           |           |           |
| 1.—Hides of cattle—                           |           |            |           |            |           |           |           |           |
| a.—Dressed ... ..                             | 2         | .....      | 2         | .....      | 2         | 2         | .....     | .....     |
| b.—Undressed ... ..                           | .....     | .....      | 1         | .....      | .....     | 1         | .....     | 1         |
| XIII.—Liquors—                                |           |            |           |            |           |           |           |           |
| 1.—Beer ... ..                                | 2         | .....      | .....     | .....      | 2         | .....     | .....     | 2         |
| 2.—Wines ... ..                               | .....     | .....      | 2         | .....      | .....     | 2         | .....     | .....     |
| XIV.—Metals—                                  |           |            |           |            |           |           |           |           |
| 4.—Iron ... ..                                | 3         | .....      | 26        | .....      | 3         | 26        | 23        | .....     |
| 6.—Others ... ..                              | 2         | .....      | 2         | 3          | 2         | 5         | 3         | .....     |
| XV.—Oils—                                     |           |            |           |            |           |           |           |           |
| 1.—Castor ... ..                              | 1         | .....      | 1         | .....      | 1         | 1         | .....     | .....     |
| 2.—Kerosine ... ..                            | .....     | .....      | 2         | .....      | .....     | 2         | .....     | .....     |
| 3.—Others ... ..                              | .....     | .....      | 4         | .....      | .....     | 4         | .....     | .....     |
| XIX.—Provisions—                              |           |            |           |            |           |           |           |           |
| 1.—Ghee ... ..                                | 2         | .....      | 8         | .....      | 2         | 8         | 6         | .....     |
| 3.—Others ... ..                              | 3         | .....      | .....     | .....      | 3         | .....     | .....     | 3         |
| XX.—Railway plant and rolling-stock           | 7         | 10         | 32        | .....      | 17        | 32        | 15        | .....     |
| XXI.—Salt ... ..                              | 124       | .....      | 42        | .....      | 124       | 42        | .....     | 82        |
| XVI.—Oil-seeds—                               |           |            |           |            |           |           |           |           |
| 1.—Mustard and rape ... ..                    | 49        | 1          | 24        | .....      | 50        | 24        | .....     | 26        |
| 3.—Others ... ..                              | 33        | .....      | 30        | .....      | 33        | 30        | .....     | 3         |
| XXIII.—Silk, raw—                             |           |            |           |            |           |           |           |           |
| 2.—Indian ... ..                              | 2         | 35         | 1         | 28         | 37        | 29        | .....     | 8         |
| XXIV.—Silk piece-goods—                       |           |            |           |            |           |           |           |           |
| 2.—Indian ... ..                              | 1         | 6          | 7         | .....      | 7         | 7         | .....     | .....     |
| XXVI.—Sugar—                                  |           |            |           |            |           |           |           |           |
| 1.—Drained ... ..                             | 4         | .....      | 12        | .....      | 4         | 12        | 8         | .....     |
| 2.—Undrained ... ..                           | 15        | .....      | .....     | .....      | 15        | .....     | .....     | 15        |
| XXX.—Tobacco ... ..                           | 2         | .....      | 7         | 1          | .....     | 8         | 6         | .....     |
| XXXIII.—All other articles of merchandise ... | 57        | 17         | 36        | 180        | 74        | 96        | 22        | .....     |
| Total ...                                     | 793       | 75         | 909       | 398        | 901       | 1,335     | 577       | 14        |

INCREASE.

Tons.

Coal ... .. 256  
This increase is due partly to steamer service and partly to silk factories being worked by steam-power to greater extent.  
Cotton piece-goods (European) ... .. 13  
The increase in this staple is due to greater demands for Doorga Poojah.  
Gunny bags and cloths ... .. 10  
The increase in this traffic is due to increased grain traffic.  
Grains—(2).—Rice ... .. 198  
The increase in this commodity is due to greater dispatch from intermediate stations owing to good crops this year.  
Iron ... .. 23  
This increase is due to more building materials purchased by the merchants.  
Railway plant and rolling-stock ... .. 15  
This increase is due to more materials carried during the month.

DECREASE.

Salt ... .. 82  
The decrease is due to this being carried by river this year.  
Mustard and rape ... .. 26  
The decrease in this traffic is due to less import on account of bazar being dull this year.  
Sugar—Undrained ... .. 15  
The decrease in this traffic is due to less import on account of bazar being dull this year.

NALHATI, the 11th October 1887.

R. G. MOOKERJEE, Manager.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 8th October 1887, on 1,513½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                | Other earnings (estimated). | Total earnings.   | TRAFFIC TRAIN-MILES RUN. |              |           |
|---|-----------------------|--------------------|----------------------------------|----------------|-----------------------------|-------------------|--------------------------|--------------|-----------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.      |                             |                   | Coaching.                | Merchandise. | Total.    |
|   |                       | Rs. A. P.          | Mds. c.                          | Rs. A. P.      | Rs. A. P.                   | Rs. A. P.         |                          |              |           |
| Total traffic for the week ...                              | 230,917               | 2,68,651 14 6      | 30,62,831 30                     | 4,68,136 5 0   | 15,549 6 0                  | 7,47,337 9 0      | 69,517½                  | 69,045½      | 133,463   |
| Or per mile of railway ...                                  | .....                 | 174 2 9            | .....                            | 309 4 1        | 10 4 4                      | 493 11 2          | .....                    | .....        | .....     |
| For previous 13 weeks of half-year ...                      | 3,302,086             | 32,23,051 5 0      | 2,77,95,583 0                    | 69,59,829 15 2 | 2,24,473 13 9               | 93,06,351 1 11    | 861,508½                 | 1,051,838½   | 1,913,347 |
| Total for 14 weeks ...                                      | 3,433,003             | 34,91,703 3 0      | 2,98,58,424 30                   | 63,26,006 4 2  | 2,40,022 3 9                | 1,00,53,691 10 11 | 925,021½                 | 1,121,883½   | 2,046,905 |
| COMPARISON.   |                       |                    |                                  |                |                             |                   |                          |              |           |
| Total for corresponding week of previous year ...           | 913,334               | 2,24,424 11 10     | 14,39,009 20                     | 3,40,185 9 0   | 16,827 12 5                 | 6,51,438 1 3      | 77,727                   | 71,148       | 148,875   |
| Per mile of railway corresponding week of previous year ... | .....                 | 194 5 5            | .....                            | 224 8 8        | 11 1 9                      | 429 15 10         | .....                    | .....        | .....     |
| Total to corresponding date of previous year ...            | 3,322,327             | 33,86,962 6 4      | 3,05,91,449 30                   | 72,49,542 8 0  | 2,51,422 1 3                | 1,10,56,969 15 7  | 983,626                  | 1,305,759    | 2,289,385 |

\* The coaching figures for the corresponding period of 1886, include earnings on account of several troop extra trains, hence the apparent decrease in the current week.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 9TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 9TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 1,515                                      | 6,51,439  | 430              | 1,513½                                     | 7,47,328  | 494              | 1,515   | 2,38,70,419     | 15,756           | 1,513½  | 2,24,61,339     | 14,838           | .....                   | 14,07,210               |

PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 8th October 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. c.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 12,181                | 6,049 0 0          | 24,631 20                        | 1,493 4 0  | 37 13 0                     | 7,945 1 0       | 1,960                    | 428          | 2,388  |
| Or per mile of railway ...                                  | 213                   | 105 12 0           | 431 0                            | 33 3 0     | 0 19 7                      | 139 9 7         | .....                    | .....        | .....  |
| For previous 13 weeks of half-year ...                      | 191,155               | 1,01,491 1 0       | 4,66,788 0                       | 22,860 5 0 | 400 4 0                     | 1,32,691 10 0   | 23,579½                  | 9,890½       | 33,470 |
| Total for 14 weeks ...                                      | 203,336               | 1,07,450 1 0       | 4,91,439 20                      | 32,738 9 0 | 438 1 0                     | 1,40,616 11 0   | 25,513½                  | 10,318½      | 35,832 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 7,741                 | 4,183 3 9          | 40,575 10                        | 2,463 5 0  | 27 12 6                     | 6,674 5 3       | 1,660                    | 725          | 2,384  |
| Per mile of railway corresponding week of previous year ... | 135                   | 73 2 2             | 709 20                           | 43 1 0     | 0 7 9                       | 116 10 11       | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 290,443½              | 1,32,879 7 3       | 6,05,487 0                       | 36,903 6 0 | 589 6 9                     | 1,70,952 4 0    | 26,208                   | 10,889       | 37,127 |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 9TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 9TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 57½  | 6,674     | 117              | 57½  | 7,985     | 140              | 57½   | 2,06,739        | 5,198            | 57½   | 2,50,906        | 4,514            | .....                   | 30,833                  |

DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 8th October 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching                 | Merchandise. | Total  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 3,159                 | 525 15 0           | 12,602 10                        | 254 12 0   | 3 10 0                      | 784 5 0         | 407½                     | 86           | 493½   |
| Or per mile of railway ...                                  | .....                 | 43 13 3            | .....                            | 21 3 8     | 0 4 10                      | 65 5 9          | .....                    | .....        | .....  |
| For previous 13 weeks of half-year ...                      | 38,286                | 6,529 6 0          | 1,09,901 30                      | 2,527 13 0 | 112 15 0                    | 9,170 3 0       | 5,186½                   | 1,370        | 6,556½ |
| Total for 14 weeks ...                                      | 41,445                | 7,055 5 0          | 1,22,504 0                       | 2,782 9 0  | 116 9 0                     | 9,954 7 0       | 5,594                    | 1,456        | 7,050  |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,105½                | 377 15 0           | 3,009 30                         | 96 0 0     | 5 12 0                      | 479 11 0        | 439                      | 54           | 493    |
| Per mile of railway corresponding week of previous year ... | .....                 | 31 7 11            | .....                            | 8 0 0      | 0 7 8                       | 39 15 7         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 37,647½               | 6,342 15 5         | 1,29,396 0                       | 2,659 4 0  | 109 11 3                    | 9,111 14 8      | 5,735                    | 1,649        | 7,384  |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 9TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 9TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         |                         |
| 12   | 480       | 40               | 12   | 784       | 65               | 12  | 26,384          | 2,190            | 12  | 24,554          | 2,046            | .....                   | 1,830                   |

SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 8th October 1887, on 74½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|-------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 7,909                 | 4,998 2 0   | 77,480 10                        | 4,031 4 0   | 119 2 0                     | 9,138 8 0       | 660                      | 1,940½       | 2,600½  |
| Or per mile of railway ...                                  | .....                 | 66 11 0     | .....                            | 53 14 3     | 1 9 6                       | 122 2 9         | .....                    | .....        | .....   |
| For previous 13 weeks of half-year ...                      | 65,338                | 49,403 9 0  | 12,02,744 10                     | 46,660 5 0  | 1,082 8 0                   | 57,146 6 0      | 9,217                    | 19,649       | 28,866  |
| Total for 14 weeks ...                                      | 73,247                | 54,391 11 9 | 12,80,224 20                     | 50,691 9 0  | 1,201 10 0                  | 1,08,284 14 9   | 9,877                    | 21,598½      | 31,475½ |
| COMPARISON.   |                       |             |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 4,954½                | 3,545 7 3   | 84,204 20                        | 2,714 1 9   | 122 11 9                    | 6,382 4 9       | 671                      | 1,401        | 2,072   |
| Per mile of railway corresponding week of previous year ... | .....                 | 47 6 4      | .....                            | 36 4 7      | 1 10 3                      | 85 5 2          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 69,237                | 50,688 15 1 | 11,45,204 10                     | 39,547 14 9 | 1,341 15 6                  | 91,558 13 4     | 9,972                    | 15,146       | 25,118  |

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 9TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 9TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         |                         |
| 74½  | 6,382     | 85               | 74½  | 9,139     | 122              | 74½   | 1,87,933        | 2,512            | 74½   | 2,20,286        | 2,945            | 32,353                  | .....                   |

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 8th October 1887, on 22½ miles open.*

|  | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|-------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Receipts.   | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.   | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                               | 15,312                | 4,792 12 0  | 6,154 10                         | 179 6 0   | 4 12 0                      | 4,976 14 0      | 937                      | 31           | 968    |
| Or per mile of railway ...                                   | .....                 | 215 6 6     | .....                            | 8 1 0     | 0 3 5                       | 223 10 11       | .....                    | .....        | .....  |
| For previous 13 weeks of half-year ...                       | 213,893               | 58,029 15 0 | 51,196 20                        | 1,777 2 0 | 62 14 0                     | 59,869 15 0     | 12,373½                  | 672½         | 13,046 |
| Total for 14 weeks ...                                       | 229,204               | 62,822 11 0 | 57,350 30                        | 1,956 8 0 | 67 10 0                     | 64,846 13 0     | 13,310½                  | 703½         | 14,014 |
| COMPARISON.  |                       |             |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...            | 17,216                | 4,398 4 3   | 1,891 10                         | 75 1 0    | 5 3 6                       | 4,478 8 9       | 959                      | 9            | 968    |
| Per mile of railway, corresponding week of previous year ... | .....                 | 197 10 9    | .....                            | 3 6 0     | 0 3 9                       | 201 4 6         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...             | 225,248               | 55,551 8 10 | 41,759 19                        | 1,528 9 0 | 75 0 6                      | 57,155 2 4      | 13,767                   | 291          | 14,058 |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 9TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½  | 4,470     | 201              | 22½  | 4,977     | 224              | 22½   | 1,22,859        | 5,838            | 22½   | 1,41,719        | 6,378            | 12,030                  | .....                   |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 8th October 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,031                 | 939 1 6            | 20,792 20                        | 1,493 3 0  | 11 0 0                      | 2,445 10 6      | 406                      | 182          | 588    |
| Or per mile of railway ...                                  | .....                 | 23 5 9             | .....                            | 35 9 7     | 0 4 4                       | 58 3 8          | .....                    | .....        | .....  |
| For previous 13 weeks of half-year ...                      | 27,983                | 12,027 14 9        | 1,11,905 20                      | 7,557 6 0  | 287 4 0                     | 18,872 8 9      | 4,433                    | 3,379        | 7,812  |
| Total for 14 weeks ...                                      | 30,014                | 12,967 0 3         | 1,31,798 0                       | 9,052 9 0  | 298 10 0                    | 22,318 3 3      | 4,839                    | 3,561        | 8,400  |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,285½                | 1,022 1 10         | 9,710 20                         | 684 7 0    | 25 12 9                     | 1,732 5 7       | 197                      | 475          | 672    |
| Per mile of railway corresponding week of previous year ... | .....                 | 24 5 4             | .....                            | 16 4 9     | 0 9 10                      | 41 3 11         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 35,975½               | 15,262 2 10        | 1,49,599 0                       | 15,611 7 0 | 373 13 6                    | 31,247 7 4      | 4,480                    | 4,172        | 8,652  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 9TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 42   | 1,732     | 41               | 42   | 2,446     | 58               | 42  | 57,360          | 1,366            | 42  | 70,110          | 1,669            | 12,750                  | .....                   |

**EASTERN BENGAL STATE RAILWAY.**  
(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)  
*Approximate Return of Traffic for week ended 24th September 1887 on 645 miles open.*

|   | COACHING TRAFFIC.     |                      | MERCHANDISE AND MINERAL TRAFFIC. |                        | Other earnings (estimated), including Steam-boat. | Total earnings.        | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|----------------------|----------------------------------|------------------------|---|------------------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts.   | Weight carried.                  | Receipts.              |   |                        | Coaching.                | Merchandise. | Total.  |
| Total traffic for the week ..                                 | 124,911               | Rs. A. P. 58,940 0 0 | Mds. s. 6,39,850 0               | Rs. A. P. 1,50,300 0 0 | Rs. A. P. 13,440 0 0                              | Rs. A. P. 2,31,740 0 0 | 31,402                   | 24,722       | 46,124  |
| Or per mile of railway ...                                    | 194                   | 93 0 0               | 992 0                            | 247 0 0                | 2 0 0*  | 361 0 0                | .....                    | .....        | .....   |
| For previous 11 weeks of half-year ...                        | 1,290,221             | 5,51,570 0 0         | 66,70,769 0                      | 11,78,400 0 0          | 1,72,420 0 0                                      | 19,02,460 0 0          | 222,030                  | 246,289      | 468,329 |
| Total for 12 weeks ...  | 1,415,132             | 6,10,510 0 0         | 73,10,619 0                      | 13,37,820 0 0          | 1,85,860 0 0                                      | 21,34,100 0 0          | 243,432                  | 270,951      | 514,383 |
| <b>COMPARISON.</b>  |                       |                      |                                  |                        |   |                        |                          |              |         |
| Total for corresponding week of previous year ...             | 100,096               | 5,485 0 0            | 6,30,965 0                       | 1,06,841 0 0           | 10,765 0 0†                                       | 1,70,001 0 0           | 18,409                   | 20,823       | 39,232  |
| Per mile of railway corresponding period of previous year ... | 180                   | 83 0 0               | 1,011 0                          | 180 0 0                | .....   | 263 0 0                | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 1,392,525             | 5,71,942 0 0         | 50,17,710 0                      | 10,93,605 0 0          | 1,30,375 0 0                                      | 17,05,922 0 0          | 217,318                  | 230,265      | 447,583 |

\* Steam-boat earnings, Rs. 12,000, have been excluded from the calculation.

† Includes Rs. 5,723 demurrage on flats.

NOTE.—Dacca and Assam-Bihar approximate returns of traffic are also published separately.

**FINANCIAL YEAR.**

*Approximate Statement of Gross Receipts of the Eastern Bengal State Railway.*

| RECEIPTS FOR WEEK ENDING 25TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 24TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 25TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 24TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 606   | 1,79,691  | 296              | 645   | 2,31,740  | 359              | 606  | 36,39,363       | 240              | 645  | 39,29,813*      | 244              | 2,90,450                | .....                   |

\* Audited up to 30th June 1887.

**EASTERN BENGAL STATE RAILWAY.**

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

*Approximate Return of Traffic for week ended 1st October 1887, on 645 miles open.*

|   | COACHING TRAFFIC.     |                      | MERCHANDISE AND MINERAL TRAFFIC. |                        | Other earnings (estimated), including Steam-boat. | Total earnings.        | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|----------------------|----------------------------------|------------------------|---|------------------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.            | Weight carried.                  | Receipts.              |   |                        | Coaching.                | Merchandise. | Total.  |
| Total traffic for the week ..                                 | 116,177               | Rs. A. P. 40,800 0 0 | Mds. s. 9,59,053 0               | Rs. A. P. 1,05,845 0 0 | Rs. A. P. 25,226 0 0                              | Rs. A. P. 2,67,871 0 0 | 20,874                   | 37,528       | 58,402  |
| Or per mile of railway ...                                    | 180                   | 72 0 0               | 1,487 0                          | 304 0 0                | 22 0 0  | 398 0 0                | .....                    | .....        | .....   |
| For previous 12 weeks of half-year ...                        | 1,415,132             | 6,10,510 0 0         | 73,10,619 0                      | 13,37,820 0 0          | 1,85,860 0 0                                      | 21,34,100 0 0          | 243,432                  | 270,951      | 514,383 |
| Total for 13 weeks ...  | 1,531,309             | 6,57,310 0 0         | 82,69,671 0                      | 15,33,665 0 0          | 2,11,080 0 0                                      | 21,02,061 0 0          | 264,306                  | 308,479      | 572,785 |
| <b>COMPARISON.</b>  |                       |                      |                                  |                        |   |                        |                          |              |         |
| Total for corresponding week of previous year ...             | 120,518               | (a) 60,446 0 0       | 5,67,994 0                       | 1,14,021 0 0           | 14,208 0 0  | 1,97,670 0 0           | 18,150                   | 23,003       | 41,153  |
| Per mile of railway corresponding period of previous year ... | 199                   | 115 0 0              | 937 0                            | 189 0 0                | .....   | 303 0 0                | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 1,513,043             | 6,41,328 0 0         | 64,85,704 0                      | 12,07,626 0 0          | 1,41,578 0 0                                      | 19,93,562 0 0          | 235,468                  | 262,208      | 497,676 |

(a) Doorgah Pooja Holidays.

**FINANCIAL YEAR.**

*Approximate Statement of gross receipts of the Eastern Bengal State Railway.*

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 606  | 1,97,070  | 326              | 645  | 2,67,571  | 415              | 606   | 39,37,033       | 244              | 645   | 41,97,684*      | 250              | 3,60,051                | .....                   |

\* Audited up to 30th June 1887.

## BENGAL CENTRAL RAILWAY.

*Approximate Return of Traffic for week ended 24th September 1887, on 125 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 23,931                | 10,410 0 0         | 42,094 0                         | 3,160 0 0  | 30 0 0                      | 13,540 0 0      | 3,501                    | 1,919        | 5,420  |
| Or per mile of railway ...                                    | 191                   | 84 0 0             | 337 0                            | 25 0 0     | .....                       | 109 0 0         | .....                    | .....        | .....  |
| For previous 11 weeks of half-year ...                        | 263,564               | 85,340 0 0         | 4,01,110 0                       | 29,800 0 0 | 1,470 0 0                   | 1,16,670 0 0    | 30,540                   | 20,876       | 60,426 |
| Total for 12 weeks ...  | 287,495               | 95,750 0 0         | 5,33,204 0                       | 33,010 0 0 | 1,500 0 0                   | 1,30,200 0 0    | 43,050                   | 22,795       | 65,845 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 22,612                | 7,880 0 0          | 35,223 0                         | 3,287 0 0  | 14 0 0                      | 11,181 0 0      | 4,014                    | 1,186        | 5,210  |
| Per mile of railway corresponding period of previous year ... | 181                   | 63 0 0             | 292 0                            | 26 0 0     | .....                       | 80 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 280,460               | 91,835 0 0         | 2,43,201 0                       | 19,266 0 0 | 285 0 0                     | 1,11,389 0 0    | 40,195                   | 18,046       | 67,241 |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Bengal Central Railway.*

| RECEIPTS FOR WEEK ENDING 25TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 24TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 25TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 24TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125   | 11,181    | 89               | 125   | 13,590    | 109              | 125  | 2,80,947        | 92               | 125  | 2,95,295*       | 94               | 8,348                   | .....                   |

\* Audited up to 30th June 1887.

## BENGAL CENTRAL RAILWAY.

*Approximate Return of Traffic for week ended 1st October 1887, on 125 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 25,002*               | 7,037 0 0          | 47,877 0                         | 3,350 0 0  | 65 0 0                      | 10,432 0 0      | 3,786                    | 1,424        | 5,210  |
| Or per mile of railway ...                                    | 207                   | 56 0 0             | 383 0                            | 27 0 0     | .....                       | 83 0 0          | .....                    | .....        | .....  |
| For previous 12 weeks of half-year ...                        | 287,495               | 95,750 0 0         | 5,33,204 0                       | 33,010 0 0 | 1,500 0 0                   | 1,30,200 0 0    | 43,050                   | 22,795       | 65,845 |
| Total for 13 weeks ...  | 313,397               | 1,02,787 0 0       | 5,81,051 0                       | 36,340 0 0 | 1,565 0 0                   | 1,40,692 0 0    | 46,836                   | 24,219       | 71,055 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 21,751                | (a) 9,129 0 0      | 14,855 0                         | 1,164 0 0  | 26 0 0                      | 10,319 0 0      | 3,478                    | 968          | 4,466  |
| Per mile of railway corresponding period of previous year ... | 174                   | 73 0 0             | 119 0                            | 10 0 0     | .....                       | 83 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 308,211               | 1,00,964 0 0       | 2,58,096 0                       | 20,430 0 0 | 314 0 0                     | 1,21,708 0 0    | 52,673                   | 19,034       | 71,707 |

\* Includes 6,000 monthly tickets, (a) Dooarga Pooja Holidays.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Bengal Central Railway.*

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125  | 10,319    | 83               | 125  | 10,432    | 83               | 125   | 2,97,207        | 91               | 125   | * 3,06,727      | 94               | 8,461                   | .....                   |

\* Audited up to 30th June 1887.

## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 24th September 1887, on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 11,379                | 5,200 0 0          | 16,360 0                         | 1,200 0 0  | 60 0 0                      | 6,580 0 0       | 2,181                    | 783          | 2,964  |
| Or per mile of railway ...                                    | 131                   | 61 0 0             | 190 0                            | 14 0 0     | 1 0 0                       | 70 0 0          | .....                    | .....        | .....  |
| For previous 11 weeks of half-year ...                        | 194,016               | 40,535 0 0         | 1,40,804 0                       | 12,100 0 0 | 1,185 0 0                   | 53,880 0 0      | 24,508                   | 11,250       | 35,758 |
| Total for 12 weeks ...  | 155,295               | 45,795 0 0         | 1,60,164 0                       | 13,420 0 0 | 1,245 0 0                   | 60,400 0 0      | 26,689                   | 12,033       | 38,722 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 10,517                | 3,114 0 0          | 12,475 0                         | 1,512 0 0  | 1,122 0 0                   | 6,018 0 0       | 2,156                    | 714          | 2,870  |
| Per mile of railway corresponding period of previous year ... | 123                   | 40 0 0             | 145 0                            | 17 0 0     | .....                       | 57 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 117,834               | 36,410 0 0         | 85,030 0                         | 9,925 0 0  | 4,010 0 0                   | 50,354 0 0      | 17,147                   | 8,636        | 25,983 |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 25TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 24TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 25TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 24TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 86  | 6,043     | 70               | 86  | 6,580     | 70               | 86   | 1,10,754        | 54               | 86   | 1,25,186*       | 58               | 8,452                   | .....                   |

\* Audited up to 30th June 1887.

## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 1st October 1887, on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 8,572                 | 3,070 0 0          | 40,737 0                         | 2,701 0 0  | 685 0 0                     | 6,456 0 0       | 2,161                    | 1,803        | 3,964  |
| Or per mile of railway ...                                    | 100                   | 36 0 0             | 474 0                            | 31 0 0     | 8 0 0                       | 75 0 0          | .....                    | .....        | .....  |
| For previous 11 weeks of half-year ...                        | 135,205               | 45,795 0 0         | 1,06,168 0                       | 13,420 0 0 | 1,245 0 0                   | 60,400 0 0      | 26,689                   | 12,033       | 38,722 |
| Total for 12 weeks ...  | 143,867               | 48,805 0 0         | 2,06,905 0                       | 16,121 0 0 | 1,930 0 0                   | 66,916 0 0      | 28,850                   | 13,836       | 42,686 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 11,026                | (a) 4,384 0 0      | 14,918 0                         | 903 0 0    | 541 0 0                     | 5,918 0 0       | 2,156                    | 714          | 2,870  |
| Per mile of railway corresponding period of previous year ... | 128                   | 51 0 0             | 173 0                            | 12 0 0     | .....                       | 63 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 128,880               | 40,803 0 0         | 99,918 0                         | 10,918 0 0 | 4,551 0 0                   | 56,272 0 0      | 19,303                   | 9,550        | 28,853 |

\* Includes 20,000 maunds, 1,000 rupees and 1,000 train miles for ballast trains.  
(a) Durga Poojah Holidays.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 86   | 5,918     | 69               | 86   | 6,456     | 75               | 86  | 1,22,072        | 55               | 86  | 1,31,042*       | 59               | 8,970                   | .....                   |

\* Audited up to 30th June 1887.



## ASSAM-BEHAR STATE RAILWAY.

## PUBNEAH SECTION.

*Approximate Return of Traffic for week ended 24th September 1887, on 39 miles open.*

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                               | 2,539                 | 800 0 0            | 6,700 0                          | 440 0 0    | 10 0 0                      | 1,250 0 0       | 668                      | 410          | 1,078  |
| Or per mile of railway ...                                   | 65                    | 21 0 0             | 172 0                            | 11 0 0     | .....                       | 32 0 0          | .....                    | .....        | .....  |
| For previous 11 weeks of half-year ...                       | 35,790                | 12,380 0 0         | 1,27,016 0                       | 13,570 0 0 | 300 0 0                     | 20,250 0 0      | 7,028                    | 4,538        | 12,166 |
| Total for 12 weeks ...                                       | 38,329                | 13,180 0 0         | 1,33,716 0                       | 14,010 0 0 | 310 0 0                     | 27,500 0 0      | 8,296                    | 4,948        | 13,244 |
| COMPARISON.  |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...            | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year .. | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 25TH SEPTEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 24TH SEPTEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 25TH SEPTEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 24TH SEPTEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.                          | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   |           |                  |   | Rs.       | Rs.              |  |                 |                  |  | Rs.             | Rs.              | Rs.                     |                         |
| .....   | .....     | .....            | 39  | 1,250     | 32               | .....  | .....           | .....            | 39   | 67,735*         | 69               | 67,735                  | .....                   |

\* Audited up to 30th June 1887.

## ASSAM-BEHAR STATE RAILWAY.

## (PUBNEAH SECTION.)

*Approximate Return of Traffic for week ended 1st October 1887, on 39 miles open.*

|   | COACHING TRAFFIC.     |            | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Receipts.  | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.  | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,562                 | 776 0 0    | 6,708 0                          | 443 0 0    | 15 0 0                      | 1,234 0 0       | 728                      | 364          | 1,092  |
| Or per mile of railway ...                                    | 66                    | 20 0 0     | 172 0                            | 11 0 0     | 1 0 0                       | 32 0 0          | .....                    | .....        | .....  |
| For previous 11 weeks of half-year ...                        | 38,329                | 13,180 0 0 | 1,33,716 0                       | 14,010 0 0 | 310 0 0                     | 27,500 0 0      | 8,296                    | 4,948        | 13,244 |
| Total for 12 weeks ...  | 40,891                | 13,956 0 0 | 1,40,424 0                       | 14,413 0 0 | 325 0 0                     | 28,734 0 0      | 9,024                    | 5,312        | 14,336 |
| COMPARISON.   |                       |            |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....      | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....      | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....      | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 2ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 1ST OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 2ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 1ST OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| .....                                      | .....     | .....            | 39   | 1,234     | 32               | .....   | .....           | .....            | 39  | 68,969*         | 68               | 68,969                  | .....                   |

\* Audited up to 30th June 1887.

## NALHATI STATE RAILWAY.

*Approximate Return of Traffic for the week ended 8th October 1887, on 27½ miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching Receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 2,632                 | 962 8 9            | 10,895 10                        | 507 12 0  | 3 10 0                      | 1,493 14 9      | 509                      | 254          | 763     |
| Or per mile of railway ...                                  | 97                    | 36 1 0             | 392 0                            | 18 10 0   | 0 2 0                       | 54 13 0         | .....                    | .....        | .....   |
| For previous 13 weeks of half-year                          | 41,206                | 14,619 7 3         | 1,20,148 30                      | 7,599 4 0 | 236 6 0                     | 22,475 1 3      | 6,799                    | 3,937½       | 10,736½ |
| Total for 14 weeks ...                                      | 43,838                | 15,602 0 0         | 1,30,944 0                       | 8,107 0 0 | 280 0 0                     | 23,009 0 0      | 7,308                    | 4,191½       | 11,499½ |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 2,204½                | 859 3 6            | 1,830 30                         | 173 2 0   | 6 9 0                       | 1,038 14 6      | 509                      | 254          | 763     |
| Per mile of railway corresponding week of previous year ... | 81                    | 31 8 0             | 71 0                             | 6 6 0     | 0 4 0                       | 38 2 0          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 32,338½               | 12,701 0 3         | 90,387 10                        | 7,015 6 0 | 200 14 6                    | 19,923 4 9      | 7,344                    | 3,774        | 11,118  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Nalhati State Railway.*

| RECEIPTS FOR WEEK ENDING 5TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 5TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         |                         |
| 27½  | 1,039     | 38               | 27½  | 1,404     | 55               | 27½   | 44,350          | 60               | 27½   | 40,457          | 67               | 5,198                   | .....                   |

## TIRHOOT STATE RAILWAY.

*Approximate Return of Traffic for the week ended 8th October 1887, on 249 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching Receipts. | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week on 249 miles open ...                | 37,372½               | 12,598 0 1         | 87,659 30                        | 9,851 5 0     | 2,985 15 2                  | 25,435 4 3      | 5,035                    | 4,108        | 9,633   |
| Or per mile of railway ...                                      | 150                   | 50 10 0            | 352 0                            | 39 9 0        | 2 12 0                      | 92 15 0*        | .....                    | .....        | .....   |
| For previous 13 weeks of half-year ...                          | 508,558½              | 1,71,551 15 11     | 14,40,005 16                     | 1,20,616 11 0 | 43,741 0 10                 | 3,44,000 11 0   | 83,620                   | 60,435       | 143,964 |
| Total for 14 weeks ...  | 540,031               | 1,84,150 0 0       | 15,62,304 0                      | 1,30,499 0 0  | 46,727 0 0                  | 3,70,345 0 0    | 89,164                   | 64,638       | 153,797 |
| COMPARISON.   |                       |                    |                                  |               |                             |                 |                          |              |         |
| Total for corresponding week of previous year on 244 miles open | 22,529                | 8,216 13 11        | 78,343 10                        | 7,741 5 0     | 1,919 11 11                 | 17,877 13 10    | 5,297                    | 3,941        | 9,238   |
| Per mile of railway corresponding week of previous year ...     | 92                    | 33 6 0             | 318 0                            | 31 8 0        | 0 9 0                       | 63 7 0*         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...                | 464,244½              | 1,52,523 8 6       | 15,62,452 10                     | 1,35,107 14 9 | 43,114 15 0                 | 3,51,546 6 3    | 72,145                   | 59,906       | 132,051 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

## FINANCIAL YEAR.

*Approximate Statement of Gross Receipts of the Tirhoot State Railway.*

| RECEIPTS FOR WEEK ENDING 5TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 5TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         |                         |
| 249  | 17,878    | 73               | 249  | 25,435    | 102              | 249   | 7,60,073        | 120              | 249½2   | 8,64,378        | 129              | 64,705                  | .....                   |

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|   |     |     |     |           |
|---|-----|-----|-----|-----------|
| Approximate earnings for week ending 1st October 1887 | ... | ... | ... | Rs.       |
| Corresponding week last year                          | ... | ... | ... | 9,036     |
|   |     |     |     | 13,328    |
| Decrease  | ... | ... | ... | 4,292     |
| Receipts from 1st July to 1st October 1887            | ... | ... | ... | 1,20,385  |
| From 1st July to 2nd October 1886                     | ... | ... | ... | 1,32,381  |
| Decrease  | ... | ... | ... | 11,996    |
| Miles open, week ending 1st October 1887              | ... | ... | ... | Miles.    |
| Corresponding week last year                          | ... | ... | ... | 51        |
|   |     |     |     | 51        |
| Receipts per mile open, week ending 1st October 1887  | ... | ... | ... | Rs. A. P. |
| Corresponding week last year                          | ... | ... | ... | 177 2 10  |
|   |     |     |     | 261 5 7   |
| Decrease  | ... | ... | ... | 84 2 9    |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 8th October 1887.

W. STEVENSON, Acting Manager.

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|   |     |     |           |
|---|-----|-----|-----------|
| Approximate earnings for week ending 8th October 1887 | ... | ... | Rs.       |
| Corresponding week last year                          | ... | ... | 10,180    |
|   |     |     | 9,977     |
| Increase  | ... | ... | 203       |
| Receipts from 1st July to 8th October 1887            | ... | ... | 1,31,408  |
| From 1st July to 9th October 1886                     | ... | ... | 1,42,358  |
| Decrease  | ... | ... | 10,950    |
| Miles open, week ending 8th October 1887              | ... | ... | Miles.    |
| Corresponding week last year                          | ... | ... | 51        |
|   |     |     | 51        |
| Receipts per mile open, week ending 8th October 1887  | ... | ... | Rs. A. P. |
| Corresponding week last year                          | ... | ... | 199 12 10 |
|   |     |     | 195 10 1  |
| Increase  | ... | ... | 4 2 9     |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 14th October 1887.

W. STEVENSON, Acting Manager.





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, OCTOBER 26, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## RESOLUTION ON THE REPORT ON THE ADMINISTRATION OF THE POLICE DEPARTMENT FOR THE YEAR 1886.

### RESOLUTION.

#### POLICE.

*Darjeeling, the 24th October 1887.*

#### READ—

The Report on the Administration of the Police Department for the year 1886.

#### Read also—

The Reports for the years 1884 and 1885, and the orders of Government recorded thereon.

#### GENERAL.

**Cost and numbers of Police Force.**—The actual expenditure for the financial year 1886-87 was Rs. 40,33,658 against Rs. 41,95,793 in 1885-86. The total strength of the police (including Railway police) was 23,312. The cost of the force employed on purely police work is estimated at Rs. 26,00,711, or 7·5 pies per head of population, the cost in England and Wales being Rs. 8·11d. per head. The proportion of police to area and population is shown in the following table:—

| PROVINCES.           | Number of police | Area in square miles. | Population. | Proportion of police to square miles. | Proportion of police to population. |
|----------------------|------------------|-----------------------|-------------|---------------------------------------|-------------------------------------|
| Bengal ... ..        | 11,901           | 70,956                | 34,821,373  | 1 to 5·9                              | 1 to 2,903                          |
| Bihar ... ..         | 5,914            | 44,399                | 23,127,104  | 1 to 7·4                              | 1 to 3,910                          |
| Oissa ... ..         | 1,418            | 9,762                 | 3,789,694   | 1 to 6·8                              | 1 to 2,672                          |
| Chota Nagpore ... .. | 1,384            | 26,966                | 4,225,989   | 1 to 19·4                             | 1 to 3,053                          |
| Total ... ..         | 20,707           | 151,823               | 65,964,160  | 1 to 7·3                              | 1 to 3,185                          |

In England and Wales there was one constable for every 772 of the estimated population for 1885 (one for 750·5 in boroughs, one for 1,199·6 in counties, and one for every 396·5 in the metropolitan police district).

2. *Town Police.*—The working of the town police is not altogether satisfactory. Many municipalities are made up of widely scattered rural areas, and are ill able to afford an expensive system of police. For instance, the Commissioner of Dacca points out that the so-called town of Goalundo covers six square miles of country, while Perozepore includes hamlets and rice fields four or five miles away from the small bazar forming the nucleus of the municipality. Again, the Inspector-General remarks that Purneah and Kissengunge are striking examples of the way in which municipalities include purely rural areas. These facts raise a reasonable doubt whether the provisions of section 10 of Act III (B.C.) of 1884 have been strictly adhered to. A copy of paragraph 12 of the Report, and also of paragraph 13, dealing with the subject of street-lighting, will be sent to the Municipal Department of this Government. The Commissioners of the Presidency and Chittagong Divisions consider that the chowkidari system should be reverted to in the rural parts of municipalities; and the question of a partial or total return to a system of local or village police in such areas is one which, in Sir Steuart Bayley's opinion, deserves early consideration. He will, however, await the result of the enquiries which the Inspector-General states he is making into this subject.

3. *Rural Police.*—The Inspector-General apparently does not consider that the amending Act I (B.C.) of 1886 effected much improvement in the working of the village police; but this Act only came into force in June 1886, and, as the Commissioner of Chittagong observed, it is too early yet to write with any finality regarding its effects. It was pointed out in the order of this Government, Nos. 1032-39J, dated the 30th June 1886, that the Magistrate can now appoint any person (including police officers) the thinks fit to pay the chowkidars, but that it is not desirable that police officers should be indiscriminately and invariably employed in every instance. Mr. Veasey states that, so far as he had ascertained up to the date of writing his Report, the police had been employed in disbursement of the chowkidars' pay as a matter of course in Burdwan, Khulna, Midnapore, Mozufferpore, and the districts of the Chittagong Division, and that in these districts they are responsible for the money disbursed. In some other districts they are employed when occasion requires, but not in regular manner. The Inspector-General of Police objects to the responsibility thrown on the force in the first-named districts by requiring them to receive and hold large sums of money until they can be made over to the chowkidars concerned, and the Lieutenant-Governor is inclined to think that the employment of the police as custodians of the money collected has been carried too far in these districts. With regard to the general question of the relation between the regular police and the chowkidars, the Lieutenant-Governor fully agrees in the desirability, if possible, of making the village police, so to speak, the foundation of the regular body; but he is not prepared to undertake any radical change in the law at present, especially as the alterations made by the amending Act of 1886 have avowedly not yet received a fair trial.

4. *Miscellaneous*—The remaining paragraphs of the first portion of the Report (paragraphs 25-52) are principally devoted to matters of a departmental nature, and only call for a few remarks. The percentage of educated men in the police force is as follows:—

|                 |     |     |     |     |      |
|-----------------|-----|-----|-----|-----|------|
| Inspectors      | ... | ... | ... | ... | 99·4 |
| Sub-Inspectors  | ... | ... | ... | ... | 97·7 |
| Head-constables | ... | ... | ... | ... | 76·6 |
| Constables      | ... | ... | ... | ... | 24·3 |

In regard to head-constables the Inspector-General observes that "experience shows that for night-work, and guard or escort duty, an illiterate head-constable is much more to be depended on than one who can read or write."

There were four cases of beating or ill-treatment by the police, but none were, strictly speaking, cases of torture. In the first both the head-constable and the constable accused were acquitted; in the second a constable was convicted, but the Sub-Inspector, who was also sent up for trial, was acquitted; in the third a constable and two other men concerned were sentenced to transportation for life; and in the fourth a Sub-Inspector, with 18 years' service, was fined Rs. 120 for ill-using two bad characters in order to compel them to give information. The Inspector-General remarks that, as regards

the rough treatment of bad characters, "we are not only in advance of public opinion, but that even the courts are not disposed to be more than lukewarm." In the case referred to, the Sub-Inspector was allowed to return to duty, and, having regard to the remarks of the Sessions Judge, before whom the case went on appeal, and to the fact that only a fine was inflicted, the Inspector-General did not think it necessary to interfere. It was urged before the Sessions Judge that, when there were repeated thefts in a locality, the public opinion of the place demanded that the bad characters of the neighbourhood should be intimidated. The Judge remarks in his decision: "There is some practical common sense in these views, and I am prepared to say that, having regard to the actual condition of this country, courts should not be disposed to look with too curious eyes on every small excess committed by an investigating officer of police." Sir Rivers Thompson remarked, in his Resolution on the Report for 1885, that he feared such ill-treatment was by no means confined to the police, but was an ingrained habit of the people. The Lieutenant-Governor recognizes the fact that charges of violence are readily brought against police officers, and that they are sometimes false or grossly exaggerated. He is further inclined to think that, in most parts of Bengal proper, at least, the people are well able to protect themselves against police oppression. At the same time, he thinks it would be most dangerous to show undue leniency in any well-established case of torture. The provisions of the Penal Code may, in point of severity, be in advance of public opinion; but morality has a tendency to follow, however slowly, in the wake of legislation, and if public opinion sympathises with the beating of thieves and rough treatment of known bad characters, it should be the endeavour of Government officers to educate and raise it to a higher level. The withdrawal during the year of the orders requiring outlying stations and outposts to be inspected quarterly, should enable District Superintendents to give more time to the scrutiny of C Forms and examination of special diaries and reports. The system of co-operation between neighbouring districts promises to produce excellent results.

## CRIME.

5. *Criminal statistics.*—The proportion of crime to population and police in various provinces of India is shown in the following statement:—

| PROVINCE.                           | Police. | Population. | Crime (cognizable.) | Proportion of police to population. | Proportion of police to crime (cognizable). | Proportion of crime (cognizable) to population. |
|-------------------------------------|---------|-------------|---------------------|-------------------------------------|---|---|
|                                     |         |             |                     | Police-man.                         | Police-man.                                 | Case. Persons.                                  |
| North-Western Provinces and Oudh .. | 32,528  | 43,268,599  | 153,277             | 1 to 1,330                          | 1 to 4.7                                    | 1 to 282  |
| Punjab ..                           | 20,198  | 18,812,864  | 68,502              | 1 „ 932                             | 1 „ 3.3                                     | 1 „ 275   |
| Central Provinces ..                | 8,741   | 9,833,791   | 21,555              | 1 „ 1,125                           | 1 „ 2.4                                     | 1 „ 456   |
| Bombay, including Sind ..           | 19,110  | 1,677,456   | 40,890              | 1 „ 820                             | 1 „ 2.1                                     | 1 „ 83  |
| Madras ..                           | 22,200  | 10,863,504  | 129,836*            | 1 „ 1,390                           | 1 „ 5.8                                     | 1 „ 237   |
| Assam including Hill Districts† ..  | 4,456*  | 5,969,918   | 10,031              | 1 „ 1,330                           | 1 „ 2.2                                     | 1 „ 595   |
| Bengal ..                           | 24,026  | 15,964,160  | 107,410             | 1 „ 2,745                           | 1 „ 4.4                                     | 1 „ 614   |

\* Special and local laws were not included in the table for the last year.

† Hill Districts were not included in the table for the last year.

These figures show that Bengal employs fewer policemen, and has less serious crime in proportion to its population, than any other part of India, for which statistics are available.

6. *Crime of the Province.*—The following figures show the amount of cognizable and non-cognizable crime as compared with the previous year:—

|                                  | 1885.   | 1886.   |
|----------------------------------|---------|---------|
| Cognizable                       | 107,410 | 105,793 |
| Non-cognizable                   | 105,996 | 112,864 |
| Total                            | 213,406 | 218,657 |
| Decrease in cognizable cases     | .....   | 1,617   |
| Increase in non-cognizable cases | .....   | 6,668   |
| Net increase                     | .....   | 6,051   |

The Burdwan, Chittagong, and Dacca Divisions account for the large increase in non-cognizable offences. The percentage of non-cognizable crime for the whole Province is 51·6, the percentage varying from 23·8 in Darjeeling to 82·7 in Noakhally. The attention of the Commissioner of Chittagong will be called to the amount of frivolous and vexatious litigation in that Division. It is probable that the system, which was found to prevail in the district of Tipperah in 1885, of referring most non-cognizable petitions to panchayets for inquiry, was due to a desire on the part of the District Magistrate to check and repress the institution of petty cases. Sir Steuart Bayley considers it to be somewhat remarkable that in a jungly and backward district, such as the Chittagong Hill Tracts, the percentage of non-cognizable cases should be as high as 58·7.

7. *False cases.*—The percentage of false cases has decreased from 6·0 to 5·5. The steady decrease from 13·4 in 1877 is possibly due to the greater attention now paid to prosecutions for false charges, but Sir Steuart Bayley is not satisfied of this. He considers it equally likely that the orders of Government regarding the disposal of C Forms may have induced a greater hesitation, or at least the exercise of extreme care and caution, in declaring a case false. The orders of this Government that complainants are to have the benefit of any doubt, and that doubtful cases are to be entered as true, may have tended to diminish the number of cases shown as false. But it should be borne in mind by magisterial officers that, if they consider a case to be false, they should not hesitate to show it as false, even though there may not be sufficient grounds for the institution of a prosecution under section 211 of the Penal Code; it is obvious that any other procedure would lead to fictitious entries and give a very false impression as to the real percentage of false cases. From the police and magisterial reports quoted by the Inspector General, there would appear to be some grounds for thinking that the police are beginning to send up more cases in C True Form, knowing that they will not be declared false without the strongest evidence. This certainly gives a very novel aspect to an extremely difficult question, and it furnishes an additional reason why Magistrates should not hesitate to declare a case false, when there are reasonable grounds for believing it to be so. No orders have ever been issued directing a prosecution in *all* cases declared false, but only when the Magistrate considers both that a case is intentionally and maliciously false, and that there is sufficient evidence to bring home to the complainant a charge under section 211, Indian Penal Code. The great variations in the percentages of cases declared false in different districts of the same Division,—for instance, 10·6 and 10·2 in Beerbhoom and Midnapore respectively against 2·7 and 2·1 in Burdwan and Howrah respectively,—indicate that the causes must be sought to some extent, at any rate, in differences of procedure; but the real difficulty appears to the Lieutenant-Governor to be involved in the fact that Magistrates are called upon in every instance to record definitely the brief opinion that a case is either false or true. As regards complaints at the basis of which are disputes of a purely civil nature, there can be no doubt but that a little more care on the part of Magistrates in making preliminary enquiries under section 202 of the Criminal Procedure Code would result in the summary dismissal and elimination of a number of cases which are now reported in an arbitrary manner, and frequently after protracted trials, as false through mistake of law or fact.

8. *Prosecutions for false charges.*—Out of a total of 5,852 cases declared false, prosecutions were instituted in 1,384, and convictions obtained in 412 cases. The percentage of false cases prosecuted was 23·6 against 21·7 in 1885, and that of convictions 29·7 against 25·1. The suggestion is put forward that false charges might, to a great extent, be suppressed by the extension to warrant cases of the power which is given in summons cases by section 250, Criminal Procedure Code, to award compensation for a frivolous or vexatious charge to the accused, and it appears that the Commissioner of Chittagong goes so far as to think that a man who has a true charge of assault to prefer is tempted to add theft to it, as by doing so he escapes all liability to the action of section 250 in case the Court should disbelieve his case. Both the proposal and the conjecture are worthy of consideration, but the Lieutenant-Governor is not prepared to advocate special legislation in this direction, though the point will be brought to the notice of the Government of India in case of any general amendment of the Act being brought forward.



**9. Refusal of inquiry.**—Out of a grand total of 105,793 cases, only 523,

"The Lieutenant-Governor agrees with the Inspector-General that attempts to commit house-breaking are often cases of some importance, but he does not think that all cases should be enquired into; the police must use their judgment in the exercise of the discretion which section 157 gives them. Private persons are not bound to give information in cases of theft or attempts to commit house-breaking, and to make enquiry in very petty case may cause much harassment and hardship to individuals, as well as occupy time which might be more advantageously used by the police in other directions. The law clearly enacts that an officer *need* not investigate on the spot, if the case is not of a serious nature and some particular person is named; and that he *shall* not investigate it, in his opinion, there is no sufficient ground for entering on an investigation. Abstention from investigation in very petty cases admits of more attention being given to more important cases, and enquiry might properly be refused in cases of petty theft of grain, or of some unidentifiable article of little value. Moreover, there are other sorts of petty cognizable crime, in which the people are quite ready enough to resort to the police, and such tendency should not be unduly encouraged."

Inspector-General should take care to disabuse his subordinates of the impression which is said to prevail on the subject of refusal to inquire. "The truth is," says Mr. Veasey, "that, as long as refusals are looked on as something suspicious and to be apologized for, they will continue to be as rare as at present, and their place will be taken by ambiguous entries in the station diary." The Lieutenant-Governor cannot understand why a police officer should be reluctant to record a refusal in cases where he is not bound by law to make an investigation, and he looks to the Inspector-General to make known to his subordinates the views of Government on this question.

**10. Sessions trials.**—The percentage of convictions to the number of persons tried at Sessions trials was 57·8. Having regard to the fact that every case had stood the test of a preliminary inquiry, there can be no doubt that the figures must represent a certain number of failures of justice. In Hooghly the Judge disagreed with several verdicts, but referred only two to the High Court, a conviction following in each instance. As regards the percentages of acquittals in Sessions cases, it is evident to Sir Steuart Bayley, from a comparison of the percentages in the 24-Pergunnahs and Howrah (15·4 and 19·3) with those in Burdwan and Hooghly (68·7 and 41·0) that, even in jury districts, much still depends on the presiding Judge.

**11. Analysis of crime by classes.**—The annexed statement shows the number of true cognizable cases in 1879 and during the past five years:—

|   | 1879.  | 1882.  | 1883.  | 1884.  | 1885.  | 1886.  |
|---|--------|--------|--------|--------|--------|--------|
| Class I.—Offences against the State and public tranquillity.                      | 2,840  | 2,508  | 2,639  | 2,769  | 2,802  | 2,891  |
| „ II.—Serious offences against the person.  | 3,976  | 4,267  | 4,674  | 4,618  | 4,484  | 4,542  |
| „ III.—Serious offences against the person and property or against property only. | 20,602 | 18,520 | 19,609 | 24,221 | 24,103 | 22,803 |
| „ IV.—Minor offences against the person.  | 9,608  | 12,450 | 2,813  | 2,580  | 2,533  | 2,682  |
| „ V.—Minor offences against property.   | 42,442 | 36,301 | 37,690 | 42,630 | 42,206 | 40,020 |
| „ VI.—Other offences not specified above.   | 18,694 | 27,181 | 29,554 | 28,477 | 24,819 | 27,003 |

There is a marked decrease in offences against property, and the Inspector-General thinks that the actual decrease was even larger than appears from

the figures, as crime was better reported last year than heretofore. Class VI is made up for the most part of petty cases of nuisance.

12. *Class I—Offences against the State and public tranquillity.*—There was an increase of 89 cases in this class, the variations calling for no particular notice. Offences relating to coin should not be allowed to make any headway, and in every case in which bad coins are passed, or attempted to be passed, an endeavour should be made to trace the coins to their source, and to bring the coiners to justice. The Lieutenant-Governor notes that a small colony of coiners has been discovered on the borders of Khulna and the 24-Pergunnahs, and this case discloses the absolute necessity for a more cordial co-operation between the police of adjoining districts. The Inspector-General remarks that the police ought to have known about this colony, and probably some of them did, but jealousy between the two districts stopped the way, and could not be beaten down until the matter had been reported to his office. Seven coining cases occurred in the Monghyr district, and in only two were convictions obtained.

There was an increase of 73 cases under the head of rioting, the district of Bogra alone showing an increase from 29 to 92, or 63 cases. The Inspector-General is unable to accept the explanation that these cases partook more of the nature of affrays than of serious riots. It is probable that, as he remarks, either the sentences inflicted are too light, or that preventive measures are not sufficiently resorted to, only 11 persons having been bound over to keep the peace. Bogra, a district without any sub-divisions, now occupies the remarkable position of having more true cases of rioting and unlawful assembly than either Backergunge or Dacca. Further inquiry will have to be made regarding this matter. The delay in deciding disputes concerning possession is said to increase very greatly the difficulties of the police. But the Lieutenant-Governor does not see why there should be any delay in their decision, as such proceedings are to be regarded as summons cases, in which the parties must ordinarily produce their own witnesses, though assistance should not be arbitrarily refused. It has been ruled by the High Court in several cases that, in proceedings under this section, a Magistrate should not hold a lengthened and protracted investigation, but should make a speedy and summary inquiry into the fact of possession, and pass orders with as little delay as possible. The same remarks apply with even greater force to proceedings under section 107 of the Code, and this is well illustrated by a case mentioned by the Inspector-General. On the 26th June the police applied to the Sub-divisional Officer of Perozapore to have certain disputants bound down to keep the peace, and the latter officer fixed the 6th August as the earliest date on which he would take it up. "A delay of six weeks of course overshot the mark, and the result was a fight, which need never have happened." The number of riots attended with loss of life is one of the worst features of the year's administration, being greater in every district than it has been in any year since 1878. Statement A appended to the Report does not show separately the number of proceedings under section 107, Criminal Procedure Code. It was remarked in the Resolution of last year that a serious riot may often be prevented by a judicious resort to the provisions of this section, and Sir Steuart Bayley has no doubt that, had Magistrates resorted to this section in all cases of clear necessity, some of these homicidal riots would not have taken place. On the other hand, there is too much reason to fear that people are bound over to keep the peace in the district of Backergunge wholesale and without discrimination. This is the opinion of the Commissioner, in which the Inspector-General concurs. It is clear that the whole subject needs inquiry, and a return will be called for from all District Magistrates showing the number of proceedings under section 107, Criminal Procedure Code, during the year 1886. The attention of the Commissioner of Bhagulpore will also be called to the serious rioting which has taken place in the districts of Monghyr, Bhagulpore and Purneah. Two cases in Bhagulpore and three in Purneah were attended with loss of life. In one of the Purneah cases, which was a fight about a fishery, one man was shot dead, and four or five others were badly wounded. In another case in the same district, a number of up-country *luttials*, described as notorious fighting men and bullies in the employ of one Chunder Narain Singh, a zemindar,

set upon and beat a European indigo-planter. Fourteen of them were ultimately sentenced to two months' imprisonment each.

13. *Class II.—Serious offences against the person.*—There were 278 murders against 288 in the previous year. Of these, five were committed by dacoits, and 17 were cases of poisoning. The Chota Nagpore Division returns as many as 41 cases, there being "a deep-rooted belief in the necessity for removing persons for practising witchcraft." The percentage of convictions for murder to persons arrested shows a further decrease from 14·4 to 12·1, and that to persons actually tried was only 17·1 against 20·7. The percentage in 1880 was 34·9 and in 1883, 24·4. This steady decrease in the percentage of convictions for murder constitutes a somewhat alarming feature in the police administration, though it is a matter for congratulation that the chances of impunity have not so far resulted in an increase in the number of reported murders. The action of the police can as a rule have little effect in diminishing the ordinary class of murders, that is, those committed in the heat and frenzy of passion; and the larger or smaller number of such murders is no safe criterion of a good or bad police administration. But there can be no doubt that the number of premeditated murders may be directly affected by a sense of impunity, or a feeling of comparative security from conviction; and the remarkable feature in the present report is the number of deliberate and cold-blooded murders as compared with those committed in the heat of passion. Some of these are marked by features of a most unusual, if not an altogether novel, character. In a case which occurred in Midnapore, the deceased was a notorious litigant. "He pleaded hard for his life, but was told that he must die, as he had given offence by his litigious propensities." In the same district "a suspected thief, whose prosecution as a budmash had been applied for, was called out of doors at night and quietly murdered, evidently a piece of lynch law." The body was, moreover, mutilated, in recognition of the fact that the deceased was a man of licentious habits. Much the same fate was met by a "torney," or mukhtar's tout, who had made himself intolerable to his neighbours. In another case an old woman money-lender, who had been pressing her debtors, was murdered. These and other cases evince so deliberate a disregard of, and contempt for, the law, that Sir Steuart Bayley cannot but think that the large percentage of acquittals (82·9) in cases of murder must to some extent account for crimes of this character, which are by no means in harmony with the ordinarily patient and law-abiding character of the people. The Lieutenant-Governor proposes to deal with this subject separately after further consideration and inquiry, but in the meantime Commissioners and Magistrates should carefully study every murder case ending in acquittal with a view to discovering the circumstances leading to this result. At present it is to be feared there is a tendency to accept an acquittal in a murder case as something which, when once reported, need have no further attention paid to it, without regard to the fact that there is no legitimate reason why the law should not be as fully vindicated and justice done in murder cases as it is in offences against property, which are not as a rule in any degree easier of proof.

14. *Cases of murder in different Divisions.*—Mr. Veasey gives a summary of the principal murders in each division and Sir Steuart Bayley would refer to the following cases, some of which bear on the remarks made in the previous paragraph:—In Nuddea, as the result of a drunken squabble about a prostitute, a man was severely beaten, and then placed on the railway line, where a passing train cut off one of his feet. A ryot in arrears with his rent cut down and killed the zemindar's peon who had come to take him before the zemindar. A boy of 12 or 13 was charged with strangling a little girl of seven, who had threatened to report him for indecently assaulting her. As regards this case, the Inspector-General states that the boy was acquitted, although he confessed his guilt and produced the child's ornaments. The District Magistrate will be asked to report why no application was made for an appeal on behalf of Government. A creditor assisted his debtor to murder the latter's brother-in-law, as it was intended that the murdered man's wife should be given in satisfaction of the debt. In Julpaiguri a woman was accused of having poisoned her husband. The Commissioner states that she fully confessed her crime, and her statements were borne out by her neighbours; but she was acquitted by the Sessions Court.

This case also was not reported to Government. In two cases women poisoned their husbands at the instigation of their paramours. In Kungpore, a young girl poisoned her husband at the instigation of her brother-in-law. In Dinagepore, a man who had cut down a tree, belonging to his zemindar, and knew the zemindar's gomasta was about to proceed against him, locked the latter inside his master's cutcherry, and then set fire to it. Two men beat a married woman to death, as they suspected her of having corrupted their wives. In Dacca a zemindar's naib was murdered by discontented ryots. A village mukhtar was murdered by some *latti*als he was engaged in prosecuting for rioting. In Furroedpore, the headman of a faction was murdered by the opposite faction for giving adverse evidence in a case between them. In Tipperah a loose character was beaten and burnt to death. There were ten murders reported in the Chittagong Division, and in only one was a conviction obtained. In Patna an old man was poisoned by his servant at the instigation of his opponent in some civil suits. In Sarun a woman was poisoned by her paramour, who had reason to suspect her fidelity. In Chumparun a woman was poisoned by her husband to clear the way for an intrigue he had with his brother's widow. In Sarun the murder of Chuni Lall, a well known Chuprah banker, by a hired Rajput ruffian named Moti Singh, attracted much attention at the time. In Durbhanga a zemindar's gomasta was murdered, and his body mutilated by the neighbours of a girl he had seduced. In Monghyr a woman, whose husband was away, had her throat cut by five men, who were offended with her for rejecting their advances. In Singbhoon a husband hired an assassin to kill a man who had an intrigue with his wife. In another case a procuress was murdered while asleep. These and other cases clearly demonstrate the necessity for taking some steps with a view to bring about better results than those attained during the year under report.

15. *Class III—Serious offences against the person and property, or against property only.*—There were 22,803 true cases against 24,103 in 1885. The annexed statement shows the number of cases under the principal heads of this class—

|   | 1885.  | 1886.  |
|---|--------|--------|
| Dacoity ... ..                                    | 164    | 103    |
| Robbery ... ..                                    | 176    | 156    |
| Serious mischief and cognate offences ... ..      | 703    | 700    |
| Mischief by killing, &c., any animal ... ..       | 794    | 633    |
| Lurking house-trespass or house-breaking, &c. ... | 22,023 | 20,941 |
| House-trespass, &c. ... ..                        | 235    | 264    |

Almost the whole of the decrease of 1,300 cases is under the head of burglary. That the number is still in advance of the figures for 1883 is no doubt due to the extra pressure put on chowkidars to report. There has been a decrease of as much as 37·2 per cent. in the number of cases of dacoity, and there can be no doubt that the new system of co-operation tends to suppress this crime. The number of true cases of mischief by fire increased from 267 to 374. The difficulty of detection in these cases is manifest from the fact that only 15 persons were convicted, while 144 were discharged or acquitted. The charges at any rate enable the police to find out the names of reputed incendiaries. The Commissioner of Chittagong would proceed against such men under section 110 of the Code of Criminal Procedure. But the present law omits the words "dangerous character," which were in the corresponding section of the Code of 1872. These words would cover professional incendiaries as well as professional cattle poisoners, but it would be now necessary to show the habitual commission of criminal intimidation or extortion, or an attempt to extort.

16. *Class IV—Minor offences against the person.*—This class of offences calls for no remarks.

17. *Class V—Minor offences against property.*—There were 40,020 offences under this class against 42,206 in 1885. The following table shows the increase or decrease under the principal heads:—

| Description of offence.                     | 1885.  | 1886.  |
|---|--------|--------|
| Lurking house-trespass or house-breaking .. | 692    | 689    |
| Theft of cattle ... ..                      | 2,055  | 1,798  |
| Ordinary theft ... ..                       | 27,376 | 25,063 |
| Criminal breach of trust ... ..             | 1,614  | 1,547  |
| Receiving stolen property ... ..            | 1,874  | 1,672  |
| Criminal and house-trespass ... ..          | 8,562  | 9,218  |

The only increase is under the heads of criminal trespass and house trespass, which, as the Inspector-General remarks, are not important crimes from a police point of view. The remarks made by Mr. Veasey in paragraph 254 of his Report, regarding the employment of Domes as municipal mehters in the town of Patna will be referred to the Commissioner for any remarks he may have to make.

18. *Class VI—Other offences not specified above.*—There were 27,003 cases under this class against 24,819 in 1885. The following table shows the figures for the last two years under the principal heads of this class :—

|  | 1885.  | 1886.  |
|--|--------|--------|
| Vagrancy and bad character ... ..                                | 1,117  | 1,210  |
| Offences against Excise Laws ... ..                              | 2,404  | 2,836  |
| "    Opium Act ... ..  | 571    | 390    |
| "    Railway Laws ... ..   | 348    | 350    |
| "    Salt and Customs Laws ... ..                                | 353    | 359    |
| "    Arms Act ... ..   | 938    | 1,061  |
| Public and local nuisances ... ..                                | 18,053 | 19,316 |
| Other special and local nuisances cognizable<br>by police ... .. | 905    | 1,338  |

Out of the total increase of 2,184 cases, as many as 1,696 are accounted for by prosecutions for nuisances of various sorts. It is always difficult to know whether an increase in the number of prosecutions for petty infractions of municipal and conservancy regulations is due to the greater frequency of such delinquencies, or to an increased vigilance and austerity on the part of municipal authorities and the guardians of the peace. The matter is one that depends a good deal from district to district on individual idiosyncrasies, and an increase or a decrease from year to year may be entirely accounted for by a change in the local authorities. As regards those nuisances and offences under special laws, which are cognizable by the police, Sir Steuart Bayley looks to the Inspector-General to discourage any tendency he may observe to award praise or the reverse solely in accordance with figures and returns.

19. *Cases of bad livelihood*—Adjoining districts as usual show remarkable variations in the number of prosecutions for bad livelihood. There was again great delay in disposing of cases in some districts, but the Resolution for 1885 was issued so late in 1886 that it has naturally not had any great effect in putting a stop to delays during the latter year. Sir Steuart Bayley trusts that the report for the present year will exhibit a marked improvement in this respect. It is far better that a case should be taken up at once in Court than that men should have charges hanging over their heads for months and months, because it is not found convenient to depute an officer to the spot. As was remarked in last year's Resolution, there are many cases in which it is no kindness to the suspected person to make the enquiry in his village, and in which no advantage can accrue from such a procedure. When not more than one person in half a lakh of the population is proceeded against for bad behaviour, obviously doubts must arise as to whether a sufficient resort is had to these sections in some districts. The average number of cases during the four years from 1874 to 1877 was 3,426. In the last-mentioned year the attention of Sir Ashley Eden was directed to the abuse of these provisions of the law in some districts and the reaction that ensued on the orders then issued has brought the number down to a very low level. Statistics prove that in Bengal the police have not the same acquaintance with the criminal classes, or the same familiarity with their haunts and movements, as is possessed by the police in England, and the number of persons proceeded against on suspicion in that country, under Vagrancy Acts and the Prevention of Crime Act, is about fifty times as many as those proceeded against in Bengal under sections 109 and 110 of the Code of Criminal Procedure. Sir Steuart Bayley does not advocate a return to the policy which existed prior to 1876; but at the same time he would not have these sections altogether lost sight of, as appears to have been the case in some districts, and those not the least criminal. Some of the Behar districts swarm with criminal castes and unconvicted burglars, and if Sarun had as many as 82 cases, it is not easy to see why there should have been only 16 in Durbhunga, 12 in Mozufferpore, and 9 in Chumparun.

20. *Non-cognizable crime.*—Non-cognizable offences have increased by 6,668, as will be seen from the following table:—

|              |     |     | 1885.   | 1886.   |
|--------------|-----|-----|---------|---------|
| Abetment     | ... | ... | 2       | .....   |
| Class I      | ... | ... | 7,587   | 8,063   |
| " II         | ... | ... | 60      | 72      |
| " III        | ... | ... | 1,126   | 1,048   |
| " IV         | ... | ... | 54,731  | 58,945  |
| " V          | ... | ... | 10,629  | 10,665  |
| " VI         | ... | ... | 10,017  | 10,877  |
| Special laws | ... | ... | 21,844  | 23,014  |
| Total        |     |     | 105,996 | 112,664 |

The increase under class I is chiefly under offences against public justice (227) and false evidence (239); but this does not make up for the decrease of 701 cases in 1885.

*Classes IV and V.*—The increase under criminal force is 3,394, and under hurt 856. This large increase in trivial charges, and the fact that they were not settled out of Court, is not a satisfactory feature. There were 7,999 cases of mischief, an increase of only 26 on 1885, but that year showed an increase of 1,086 on the year before.

*Class VI.*—Offences relating to marriage increased from 3,434 to 4,050, proceedings for taking security to keep the peace from 1,562 to 2,109, while possession cases decreased from 388 to 307. Under "Special laws" there has been an increase of 350 in railway cases, of 242 in stamp cases, and of 295 for non-registration of births and deaths; while pound cases have decreased by 3,516 and salt cases by 271. Out of 4,050 complaints of offences relating to marriage, process was issued in 2,284 cases. Only 1,686 persons appeared before the Court, of whom 455 were discharged after appearance, 903 were acquitted, and 244 convicted; 4,050 institutions and 244 convictions. The number of murders, due to jealousy and illicit intrigues, has been remarked on above, and a number of serious offences against the person have been due to the same causes. There can be no doubt that a judicious enforcement of the provisions of Chapter XX of the Penal Code in *bonâ fide* cases must tend, in an oriental country, to the prevention of much serious and violent crime. The very small percentage of non-cognizable cases in which the police were employed to investigate (4·3 against 4·5 in 1885) indicates that in some districts the police are not sufficiently made use of.

21. *Proceedings under the Code of Criminal Procedure.*—Considering the area and population of the Province, the small number of proceedings under Chapters X and XII of the Criminal Procedure Code (597 and 307) is remarkable. Magistrates should bear in mind that, when a certain state of facts is made out to their satisfaction, action under section 145 of the Procedure Code is obligatory and not optional. Judicious action under this section and under section 107 directly tends to the prevention of unlawful assemblies and homicidal riots. Orders for security on conviction under section 106 are shown under this head, while proceedings under section 107 are lumped together with bad livelihood proceedings under class VI of cognizable crime. In future, the Lieutenant-Governor would like to know the exact number of proceedings under section 107. Serious riots are often prevented by the institution of judicious proceedings, and their speedy disposal under this section. Magistrates should avail themselves of every legal means for the repression of crimes of violence; but it is evident, from the remarks of the Inspector-General, that some Magistrates have shown remissness in this respect. Attention is again directed to this important subject, and officers in whose districts rioting occurs, and who, after this warning, are found to have failed in this respect, will be considered to have incurred a very serious responsibility.

22. *Remands*.—Altogether 37,500 A forms were sent up. They were disposed of as follows :—

|                           |     |     |        | Percentage. |
|---------------------------|-----|-----|--------|-------------|
| At first hearing          | ... | ... | 13,882 | 37·01       |
| Remanded once             | ... | ..  | 7,882  | 21·0        |
| Ditto twice               | ... | ..  | 5,149  | 13·7        |
| Ditto thrice              | ... | ..  | 3,318  | 8·8         |
| Ditto four times          | ... | ..  | 2,217  | 5·9         |
| Ditto five times          | ... | ..  | 1,408  | 3·7         |
| Ditto six times           | ... | ..  | 1,041  | 2·7         |
| Ditto more than six times | ... | ..  | 1,824  | 4·8         |

This is slightly better than the results for 1885 Balasore, Backergunge, Manbhoom, and Pubna are again among the worst districts. The very worst is Bogra, where the percentage of cases decided at the first two hearings was only 15·05. This district also, as has been remarked above, shows the largest number of riots, and these facts together point to laxity on the part of the District Magistrate. Further enquiry will be made on this point. The Inspector-General says that it is his experience that these delays do not occur where Magistrates send for the case registers regularly. As the duty of looking at the registers of their subordinates and scrutinizing their work is imposed on District Magistrates, not only by the orders of Government, but by the High Court circulars and orders, the Lieutenant-Governor will accept no excuse for its non-performance. The attention of Commissioners will be directed to this important matter, and they will be instructed to bring to the notice of Government all cases of neglect on the part of District Magistrates.

23. *Reconvictions*.—The total number of persons reconvicted during the year was 1,442 against 1,577 in 1885 and 1,482 in 1884. Steps are now being taken to index all conviction registers, and to supply all Sub-divisional Officers with copies. When these are complete, the number of reconvictions is likely to increase.

24. The Lieutenant-Governor has to thank Mr. Veasey for his interesting and valuable report. The reports, figures, and returns from different divisions have been dealt with in an intelligent manner, and it is evident that they have been scrutinized with great care. Attention to mere figures has been discouraged, and sustained and steady work is singled out for praise. Sir Stuart Bayley has no doubt that all branches of the police administration have benefited by the interest evinced in it and by the searching supervision exercised by him. The names of the officers favourably mentioned by the Inspector-General in paragraphs 50 and 52 of his Report will be noted in the Appointment Department.

ORDER.—Ordered that a copy of the above Resolution be forwarded to the Inspector-General of Police and the Commissioner of Police, Calcutta.

Ordered also that a copy of the Resolution be forwarded to all Commissioners of Divisions for information.

Ordered also that a copy of the Resolution, and extract paragraphs 50 and 52 from the Report, be forwarded to the Appointment Department of this Office for information.

Ordered also that the Resolution be published in the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

*Offg. Chief Secretary to the Govt. of Bengal.*



## QUARTERLY INSPECTIONS OF THE KIDDERPORE DOCK WORKS.

The sub-joined report is published for general information.

W. B. BESTIC,  
*Under-Secretary to the Govt of Bengal,*  
*P. W. Dept.*

TO THE SECRETARY TO THE GOVERNMENT OF BENGAL,  
PUBLIC WORKS DEPARTMENT.

SIR,

WE have the honour to report that in compliance with the instructions contained in Public Works Department letter No. 1223M.P.I., dated 3rd August last, we made the first inspection of the works in progress at the Kidderpore Docks on the 14th instant.

The delay that has occurred in submitting this report is due to the recent serious illness of one of us (Mr. J. C. Vertannes).

We understand the Kidderpore Dock scheme as at present authorised to be proceeded with to comprise:—(1) the acquisition of all land required for the construction of both Docks Nos. 1 and 2, and for the boat canal to Tolly's Nullah and the construction of the following works:— 2) sixty-foot lock, (3) eighty-foot entrance to tidal basin, (4) tidal basin with 60-ton shears, (5) double passage from basin to Dock No. 1, (6) Dock No. 1 with width of 600 feet, (7) boat canal from docks to Tolly's Nullah, (8) Graving Dock, (9) boat wharves, tramway with lifting bridge over Tolly's Nullah, and (10) the removal and re-construction of the buildings in the Government Dockyard.

The revised estimates relating to these works being under preparation, Mr. Apjohn, the Superintending Engineer in charge of the Dock Works, has not been able to give us definite information regarding the principal items of works which those estimates provide for; he has, however, submitted the accompanying index map and statement, which show the progress made on such works as have been taken in hand up to the end of the quarter under report. The condition of the works on 30th June may be described as below:—

### TEMPORARY WORKS AND PLANT.

We understand that a want of locomotive power was felt, but that more engines and trucks for the removal of spoil were shortly expected, on the arrival of which work would proceed with greater facility.

It must be borne in mind, however, that in starting works of the nature of these under report, a considerable length of time must pass in making preliminary arrangements, collecting plant, &c., before a fair rate of actual progress can be attained. The season up to 30th June was a favourable one, and more work was executed than it was anticipated could have been done: The tramway to Akra, being 5·5 miles in length, was completed and opened for carriage of material in February last. Tramway lines, 9·4 miles in length, have been laid in the vicinity of the docks for the removal of earth, and are in use.

### PERMANENT WORKS.

*Acquisition of Land.*—The land required for Docks Nos. 1 and 2, and for railways to Tolly's Nullah and Akra, had been acquired, but considerable delay to the work had been caused by some of the land required for the boat canal not having been handed over, and some inconvenience has been felt on account of all the buildings in the Government docks not having been vacated.

*Tidal Basin.*—Work of excavation in the foundations for the walls of this work was begun in January 1887, and brickwork started in March. By 30th June 38 lakhs of cubic feet of earthwork had been moved, and 418,000 cubic feet of brickwork executed in a length of 320 running feet of walling on either side of the basin.



*Dock No. 1.*—The diversions of the Garden Reach Road and of some minor roads on this dock site had been made. Of earthwork 202 lakhs of cubic feet had been done, and 1,241 running feet of walls had been founded and raised to a height of 19 feet. In this walling 721,370 cubic feet of brickwork had been executed.

*Boat Canal and Dock.*—The excavation of 18 per cent. of the estimated quantity of earth in the canal had been carried out, and the excavation of the boat dock, comprising 50 lakhs of cubic feet of earth, had been completed. More work in the boat canal could, we understand, have been done, but for the fact that all the land required for this work had not been handed over.

*Boat Wharves, Tramway and Lifting Bridge.*—The Strand Tramway between Calcutta and the docks, a length of 2·70 miles, had been completed, and the lifting bridge over Tolly's Nullah at Hastings constructed and was open.

*Expenditure.*—Up to end of June a total sum of Rs. 55,42,506 had been expended on the works connected with the dock scheme. It should be noticed, however, that Rs. 21,59,000 of this, or 38·9 per cent., represents the cost of acquiring land.

As the works executed during 1886 in connection with the dock scheme were merely of an experimental nature, the month of January 1887 should be taken as the time in which the works were started.

Taking this into consideration, we are of opinion that the progress made up to 30th June 1887 has on the whole been satisfactory, and we have every reason to believe that the character of the work and of the quality of the materials used are of the best description.

We have the honour to be,

SIR,

Your most obedient servants,

J. C. VERTANNES.

H. CLOETE.

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## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 22nd October 1887.

| No.                     | District and date of return.  | Rainfall at Sudder Station in inches.   | Character of the weather, state and prospects of the crops, and state of health at date.  |   |
|-------------------------|---|---|---|---|
| BENGAL.                 |   |   |   |   |
| Western Districts.      |   |   |   |   |
| BURDWAN DIV.            | 1 Burdwan, Oct. 22, '87   | 0.50  | Weather—fine and dry for most part of week; getting cool. Prospects of rice crop now fair, but more rain would benefit it much. <i>Rabbi</i> preparations in progress. Sugarcane good. Price of rice slightly lower in Cutwa and higher in Raneegunge and Burdwan. Fever prevalent. |   |
|                         | Culna   | 1.11  |   |   |
|                         | Cutwa   | 0.30  |   |   |
|                         | Raneegunge  | 0.17  |   |   |
|                         | 2 Bankoora „ 22, '87  | 0.99  |   |   |
|                         | Weather—mornings and evenings cool and cloudy. Last week's rainfall, though light, was almost general, and has considerably improved the prospects of <i>amun</i> rice in the Bishenpur sub-division, but has been of very little benefit in the Sudder. Plants have begun to flower. <i>Kalas</i> rice has been gathered. <i>Noan</i> is ripening. Prices continue stationary. Public health good. |   |   |   |
|                         | 3 Beerbhoom „ 22, '87   | 0.43  |   | Weather—unseasonably warm in the day time with cool nights. More rain is needed for <i>amun</i> paddy on uplands. The crop in other localities is fast ripening and promises well. Every effort is being used to induce the ryots to irrigate this crop where necessary. Prices have fallen slightly. Public health is extremely bad, and fever is rife to a degree unknown since the epidemic years. |
|                         | Rampur Hant   | 1.72  |   |   |
|                         | 4 Midnapur „ 22, '87  | Nil   |   | Weather—rather warm for the time of year. Crops generally doing well. Prospects in Ghatal improved by recent rain.  |
|                         | 5 Hooghly „ 22, „   | 0.16  |   | Weather—getting cooler at night; hot and bright during day. Prospects of winter rice fair. A 10 to 12-anna crop may be expected. More rain wanted. Other crops doing well. Fever generally prevalent.   |
| Serampur                | 1.24  |   |   |   |
| Jehanabad               | 0.67  |   |   |   |
| Howrah „ 22, '87        | Nil   | Weather—bright sun with cool mornings and evenings. Preparation for <i>rabbi</i> going on. Prospect of sugarcane good. <i>Amun</i> looks well, but more rain wanted in the south. Public health fair. |   |   |
| Central Districts.      |   |   |   |   |
| PRESIDENCY DIV.         | 6 24-Perghs. „ 22, '87  | 0.35  | Weather—cool and fine. Prospect of <i>amun</i> paddy fair since the recent rain. Sugarcane continues favourable. Public health generally good, but fever prevalent as usual in this season.   |   |
|                         | 7 Nuddea „ 22, „  | 0.03  |   | Weather—seasonable. State and prospects of <i>amun</i> and sugarcane good. Cultivation for cold-weather crops in progress. Fever prevalent, also some cow-pox.  |
|                         | Kushtea   | 1.84  |   |   |
|                         | Meherpur  | 1.74  |   |   |
|                         | Chudanga  | 1.22  |   |   |
|                         | Ranaghat  | 0.11  |   |   |
|                         | 8 Khoolna „ 22, '87   | Nil   | Weather—seasonable. Prospects of <i>amun</i> favourable. Ploughing for winter crops going on. Some fever prevails. General health good.   |   |
|                         | 9 Jessore „ 22, „   | 0.44  | Weather—hot and dry. Prospects of <i>amun</i> good. Winter crops hopeful, though some will have to be re-sown. Public health generally good.  |   |
|                         | Jhenidah  | 3.06  |   |   |
|                         | Magurah   | 0.92  |   |   |
|                         | Narail  | 0.66  |   |   |
|                         | Bongong   | 1.29  |   |   |
|                         | 10 Moorshedabad „ 22, '87   | 1.04  | Weather—hot during the day and cool at dead of night. <i>Amun</i> paddy in ear. Prospects good. <i>Kalai</i> and <i>moong</i> are still being sown. <i>Til</i> and <i>rahar</i> progressing. Fever reported from Lalbagh.   |   |
|                         | Lalbagh   | 2.38  |   |   |
|                         | Kundi   | 1.10  |   |   |
|                         | Jungipur  | 0.05  |   |   |
|                         | 11 Dinagepur „ 22, '87  | 3.41  | Weather—seasonable. State and prospects of <i>haimanti</i> paddy good. Rice 24 seers per rupee.   |   |
|                         | Thakurgaon  | 1.35  |   |   |
|                         | 12 Rajshahye „ 22, '87  | 0.25  | Weather—fine; getting cool. State and prospects of crops excellent.   |   |
|                         | Nattore   | 2.15  |   |   |
| Nowgong                 | 2.09  |   |   |   |
| 13 Rangpur „ 22, '87    | 1.80  | Weather—fine and clear. Prospects of <i>amun</i> crop favourable. Public health good.   |   |   |
| Nilphamari              | Nil   |   |   |   |
| Kurigram                | 1.42  |   |   |   |
| Gaibanda                | 3.00  |   |   |   |
| 14 Bogra „ 22, '87      | 1.08  | Weather—clear and cool. State and prospects of crops very satisfactory. Public health fair.   |   |   |
| Nowkhilla               | 2.28  |   |   |   |
| 15 Pubna „ 22, '87      | 1.18  | Weather—still warm and cloudy. Prospects of crops good.   |   |   |
| Serajunge               | 3.30  |   |   |   |
| 16 Darjeeling „ 22, '87 | 0.27  | Weather—seasonable. State and prospects of crops good.  |   |   |
| 17 Julpigoree „ 22, „   | 1.42  |   | Weather—seasonable. Prospects of winter rice generally good. Land is being prepared for cold-weather crops. Fever, as usual at this time of year, is making its appearance.   |   |
| Eastern Districts.      |   |   |   |   |
| DACCA DIVISION.         | 18 Dacca, Oct. 22, '87  | 0.47  | Weather—days hot, nights cool. Recent rain has done much good to standing crops. Pulses being sown on high lands. Prospects of crops and public health good.  |   |
|                         | Manickgunge   | 2.21  |   |   |
|                         | Munshigunge   | 3.71  |   |   |
|                         | Nuraingunge   | 3.8   |   |   |
|                         | 19 Furreedpur „ 22, '87   | 1.52  | Weather—seasonable. State of all crops satisfactory. A certain amount of fever prevalent; otherwise public health good.   |   |
|                         | Goalundo  | 0.40  |   |   |
|                         | Madaripore  | 1.17  |   |   |
|                         | 20 Backergunge „ 21, '87  | 2.44  | Weather—days hot; nights a little cold with occasional rain. Prospects of crops promising, but rain wanted in Gaurnadi station. General health good.  |   |
|                         | 21 Mymensingh „ 21, '87   | 4.28  |   | Weather—hot. State and prospects of crops good. Rain has done much good.  |
|                         | Jamalpur  | 4.10  |   |   |
|                         | Kishoregunge  | 4.11  |   |   |
|                         | Attea   | 4.01  |   |   |
|                         | Netrokona   | 6.22  |   |   |

| No.                                    | District and date of return    | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|--|--------------------------------|---------------------------------------|---|
| <b>BENGAL—contd.</b>                   |                                |                                       |   |
| <i><b>Eastern Districts—contd.</b></i> |                                |                                       |   |
| CHITTAGONG DIVN.                       | 22 Chittagong, Oct. 25, '87    | Nil                                   | Weather—seasonable. <i>Amun</i> in ear. Sugarcane doing well. Prospects fair. Lands being prepared for winter crop. Cholera still reported. Public health good. Prices steady.  |
|  | 23 Noakholly „ 25, „           | 0.16                                  | Weather—seasonable. Prospects of <i>amun</i> crop very fair. Public health fair.  |
|  | Fenny „ „                      | 5.25                                  |   |
|  | 24 Tipperah „ 20, „            | 4.49                                  | Weather—seasonable. The late rain has saved the paddy, and a fair average crop of winter rice may now be expected throughout the district.  |
|  | Brahmanbariah „ „              | 2.77                                  |   |
|  | Chandpur „ „                   | 2.70                                  |   |
| CHITTAGONG DIVN.                       | Chittagong Hill Tracts „ 18, „ | 0.14                                  | Weather—cloudy during the latter part of the week. Harvesting of jum paddy nearly over. Cotton doing well and in pod. Lands are being ploughed for mustard and other cold-weather crops. Plough-paddy doing well.   |
|  | 25 Hill Tipperah „ 19, „       | 3.05                                  | Weather—nights and mornings cool; days not so hot as before. Prospects of <i>amun</i> and sugarcane fair. Tobacco and chillies being transplanted. Public health good.  |
| <b>BEHAR.</b>                          |                                |                                       |   |
| PATNA DIVN.                            | 26 Patna Oct. 23, '87          | 0.52                                  | Weather—cool. Recent rain has improved prospects of paddy. <i>Rubbi</i> sowings are being pushed on. Public health good.  |
|  | 27 Gaya „ 22, „                | 0.03                                  | Weather—seasonable. Paddy crop has suffered much for want of rain. It is still withering in uplands. <i>Rubbi</i> being sown. Fever reported from several thanas.   |
|  | 28 Shahabad „ 22, „            | Nil                                   | Weather—seasonable. Paddy crop continues to promise well. <i>Rubbi</i> sowings have commenced. Public health fair; some fever reported from Sasseram.   |
|  | Sasseram „ „                   | 1.85                                  | Weather—mornings cold; days still hot. Prospects of rice crop very favourable. <i>Rubbi</i> sowings commenced. Tobacco coming up well. Prices remain stationary. Public health generally good.  |
|  | 29 Darbhanga „ 22, „           | 1.55                                  | Weather—rainy on 15th; since then rainless, but sky cloudy and weather seems uncertain. Prospects of all crops good. <i>Rubbi</i> cultivation in progress.  |
|  | 30 Mozufferpur „ 22, „         | 0.78                                  | Weather—fine. Prospects of crops very much improved. Public health good.  |
| BHAGULPORE DIVN.                       | Hajipur „ „                    | 1.84                                  |   |
|  | Sitamarhi „ „                  | 3.20                                  |   |
|  | 31 Saran „ 22, „               | 1.62                                  |   |
|  | Sewan „ „                      | 5.62                                  |   |
|  | Gopalgunge „ „                 | 1.65                                  |   |
|  | 32 Chumpran „ 22, „            | 2.50                                  | Weather—nights cool. <i>Rubbi</i> sowings progressing but slowly on account of recent rain. Prospects of rice favourable. Prices stationary. Public health good.  |
| BHAGULPORE DIVN.                       | Bettiah „ „                    | 1.18                                  |   |
|  | 33 Monghyr „ 22, „             | 3.00                                  | Weather—days hot; nights and mornings tolerably cool. Recent rain has much benefited winter rice. <i>Rubbi</i> sowings going on and prospects generally improved. Public health good. Prices show a downward tendency.  |
|  | Begusserai „ „                 | 2.40                                  |   |
|  | Jamui „ „                      | 2.07                                  | Weather—clear and fair. Mornings and evenings cool. <i>Rubbi</i> sowings going on. Prospects of <i>aghani</i> paddy much improved by recent rain.   |
|  | 34 Bhagulpur „ 22, „           | Nil                                   | Weather—hot for the time of year. <i>Aghani</i> crops doing well. <i>Rubbi</i> crops being planted. <i>Tori</i> sowings in progress. <i>Kurti</i> doing well.   |
|  | 35 Purneah „ 22, „             | 2.37                                  |   |
| BHAGULPORE DIVN.                       | Kisengunge „ „                 | 2.45                                  |   |
|  | Arrareah „ „                   | 1.98                                  |   |
|  | 36 Malda „ 22, „               | 0.33                                  | Weather—fine and warm latterly. Prospects of crops generally favourable. Common rice selling at an average of 23 seers per rupee. Fever prevalent.  |
|  | Chunchal „ „                   | 2.17                                  |   |
|  | Shihgunge „ „                  | 2.11                                  |   |
|  | Gazol „ „                      | 1.0                                   |   |
| BHAGULPORE DIVN.                       | 37 Sonthal Pergas „ 22, „      | Nil                                   | Weather—still warm. Sky slightly clouded. Prospects of rice crop materially improved by the rain of last two weeks. More rain wanted in Godda.  |
|  | Deoghar „ „                    | 1.71                                  | Public health fair.   |
|  | Godda „ „                      | 0.66                                  |   |
|  | Rajmehal „ „                   | 1.08                                  |   |
|  | Pakour „ „                     | 2.28                                  |   |
| <b>ORISSA.</b>                         |                                |                                       |   |
| ORISSA DIVN.                           | 38 Cuttack „ 21, „             | 0.60                                  | Nights cool. Sky cloudy to-day (21st). <i>Laghu sarad</i> flowering and in some places ripening. <i>Garu sarad</i> coming into ear. Prospects continue good. Prices remain unchanged. Fever prevails; public health otherwise good.   |
|  | 39 Pooree „ 20, „              | 1.18                                  | Weather—seasonable. Second weeding of <i>sarad</i> crop in progress. <i>Rubbi</i> is being sown. Common rice 20 seers 13 chittacks per rupee in the Sudder sub-division and 20 seers in the Khoorda sub-division. Cases of cholera reported from the interior of the district.                |
|  | 40 Balasore „ 21, „            | 0.74                                  | Weather—seasonable. <i>Sarad</i> paddy coming into ear. Prospects of crops generally good; but a little more rain is wanted in some parts. Public health generally good except some cases of fever.   |
| <b>CHOTA NAGPORE.</b>                  |                                |                                       |   |
| <i>South-West Frontier Agency.</i>     |                                |                                       |   |
| CHOTA NAGPORE.                         | 41 Hazaribagh Oct. 21, '87     | 1.06                                  | Weather—fine. Cloudy again to-day (21st). Recent rain has improved prospects, but more would do good. Up land rice has suffered considerably. General health good.  |
|  | 42 Lohardugga „ 22, „          | 0.53                                  | Weather—cool. Rain has fallen throughout the Palamow sub-division, but very slightly at head-quarters. More rain urgently wanted at head-quarters, where the prospects of crops are not favourable. Prices stationary. Public health good.  |
|  | Palamow „ „                    | 2.19                                  |   |
|  | 43 Singhbhum „ 22, „           | Nil                                   | Cold weather seems to have set in; occasionally cloudy with promise of rain. Rain has fallen in some places, but more rain is wanted. Prospects not absolutely bad. Moderate outturn expected. General health good.   |
| CHOTA NAGPORE.                         | 44 Manbhum „ 22, „             | 0.65                                  | Weather—cool at night, warm by day; clouds still hanging about. Early cessation of the rains has greatly injured the upland paddy, the outturn of which is reported to be from 4 to 8 annas. Prospects of winter paddy on low lands and <i>rubbi</i> crops are excellent. Public health good. |
|  | Govindpore „ „                 | 0.75                                  |   |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 26th October 1887.P. NOLAN,  
Secy. to the Govt. of Bengal.

## PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

| N<br>u<br>m<br>b<br>e<br>r.   | D<br>I<br>S<br>T<br>R<br>I<br>C<br>T<br>S. | Q<br>U<br>A<br>N<br>T<br>I<br>T<br>I<br>E<br>S<br>P<br>E<br>R<br>R<br>U<br>P<br>E<br>E<br>I<br>N |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|   |  | W<br>H<br>E<br>A<br>T.   |  |  | B<br>A<br>R<br>L<br>E<br>Y.  |  |  | R<br>I<br>C<br>E,<br>B<br>E<br>S<br>T<br>S<br>O<br>R<br>T.         |  |  | R<br>I<br>C<br>E,<br>C<br>O<br>M<br>M<br>O<br>N.                   |  |  | J<br>O<br>W<br>A<br>R<br>O<br>R<br>C<br>H<br>O<br>L<br>U<br>M<br><br>( <i>Sorghum Vulgare</i> ). |  |  |  |  |  |
|   |  | P<br>r<br>e<br>s<br>e<br>n<br>t<br><br>r<br>e<br>t<br>u<br>r<br>n.                               | N<br>e<br>x<br>t<br><br>p<br>r<br>e<br>c<br>e<br>d<br>i<br>n<br>g<br><br>r<br>e<br>t<br>u<br>r<br>n. | C<br>o<br>r<br>r<br>e<br>s<br>p<br>o<br>n<br>d<br>i<br>n<br>g<br><br>r<br>e<br>t<br>u<br>r<br>n<br><br>o<br>f<br><br>l<br>a<br>s<br>t<br><br>y<br>e<br>a<br>r. | P<br>r<br>e<br>s<br>e<br>n<br>t<br><br>r<br>e<br>t<br>u<br>r<br>n. | N<br>e<br>x<br>t<br><br>p<br>r<br>e<br>c<br>e<br>d<br>i<br>n<br>g<br><br>r<br>e<br>t<br>u<br>r<br>n. | C<br>o<br>r<br>r<br>e<br>s<br>p<br>o<br>n<br>d<br>i<br>n<br>g<br><br>r<br>e<br>t<br>u<br>r<br>n<br><br>o<br>f<br><br>l<br>a<br>s<br>t<br><br>y<br>e<br>a<br>r. | P<br>r<br>e<br>s<br>e<br>n<br>t<br><br>r<br>e<br>t<br>u<br>r<br>n. | N<br>e<br>x<br>t<br><br>p<br>r<br>e<br>c<br>e<br>d<br>i<br>n<br>g<br><br>r<br>e<br>t<br>u<br>r<br>n. | C<br>o<br>r<br>r<br>e<br>s<br>p<br>o<br>n<br>d<br>i<br>n<br>g<br><br>r<br>e<br>t<br>u<br>r<br>n<br><br>o<br>f<br><br>l<br>a<br>s<br>t<br><br>y<br>e<br>a<br>r. | P<br>r<br>e<br>s<br>e<br>n<br>t<br><br>r<br>e<br>t<br>u<br>r<br>n. | N<br>e<br>x<br>t<br><br>p<br>r<br>e<br>c<br>e<br>d<br>i<br>n<br>g<br><br>r<br>e<br>t<br>u<br>r<br>n. | C<br>o<br>r<br>r<br>e<br>s<br>p<br>o<br>n<br>d<br>i<br>n<br>g<br><br>r<br>e<br>t<br>u<br>r<br>n<br><br>o<br>f<br><br>l<br>a<br>s<br>t<br><br>y<br>e<br>a<br>r. | P<br>r<br>e<br>s<br>e<br>n<br>t<br><br>r<br>e<br>t<br>u<br>r<br>n.                               | N<br>e<br>x<br>t<br><br>p<br>r<br>e<br>c<br>e<br>d<br>i<br>n<br>g<br><br>r<br>e<br>t<br>u<br>r<br>n. | C<br>o<br>r<br>r<br>e<br>s<br>p<br>o<br>n<br>d<br>i<br>n<br>g<br><br>r<br>e<br>t<br>u<br>r<br>n<br><br>o<br>f<br><br>l<br>a<br>s<br>t<br><br>y<br>e<br>a<br>r. |  |  |  |
|   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B<br>E<br>N<br>G<br>A<br>L.   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| W<br>e<br>s<br>t<br>e<br>r<br>n<br>D<br>i<br>s<br>t<br>r<br>i<br>c<br>t<br>s. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1   | Burdwan ...                                | 16 2   | 15 0   | 15 0   | No sale  |  |  | 16 14  | 17 4   | 16 0   | 21 12  | 24 0   | 23 0   | ...  | ...  | ...  |  |  |  |
| 2   | Bankoora ...                               | 15 0   | 15 0   | 19 0   | 20 0   | 20 0   | 25 0   | 16 0   | 18 0   | 22 0   | 18 9½  | 23 2   | 25 0   | ...  | ...  | ...  |  |  |  |
| 3   | Beerbhoom ...                              | 16 8   | 16 8   | 22 0   | ...  | ...  | ...  | 16 8   | 16 8   | 20 0   | 22 8   | 23 8   | 23 0   | ...  | ...  | ...  |  |  |  |
| 4   | Midnapore ...                              | 15 0   | 15 0   | 18 0   | ...  | ...  | ...  | 18 0   | 18 0   | 15 0   | 22 0   | 24 0   | 23 0   | ...  | ...  | ...  |  |  |  |
| 5   | Hooghly ...                                | 14 0   | 14 0   | 16 0   | ...  | ...  | ...  | 10 0   | 10 0   | 10 0   | 16 0   | 16 0   | 16 0   | ...  | ...  | ...  |  |  |  |
|   | Howrah ...                                 | Not available.   |  |  | ...  | ...  | ...  | 13 0   | 13 0   | 12 0   | 17 12  | 17 12  | 16 8   | ...  | ...  | ...  |  |  |  |
| C<br>e<br>n<br>t<br>r<br>a<br>l<br>D<br>i<br>s<br>t<br>r<br>i<br>c<br>t<br>s. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | Calcutta ...                               | 15 4   | 14 4   | 15 0   | 21 8   | 19 14  | 21 4   | 8 14   | 8 12   | 9 14   | 16 14  | 16 4   | 16 9   | 16 6   | 19 12  | 15 0   |  |  |  |
| 6   | 24-Pergunnahs ...                          | 13 4   | 14 0   | 14 8   | 26 8   | 26 8   | 21 4   | 8 0  | 8 0  | 8 0  | 16 13  | 16 0   | 14 8   | ...  | ...  | ...  |  |  |  |
| 7   | Nuddea ...                                 | 16 6   | 16 6   | 15 12  | 36 0   | 36 0   | 26 5½  | 16 0   | 16 0   | 14 12  | 20 8   | 20 8   | 16 14  | ...  | ...  | ...  |  |  |  |
| 8   | Khoolna ...                                | ...  | ...  | ...  | ...  | ...  | ...  | 19 0   | 19 0   | 15 8   | 22 0   | 22 0   | 18 0   | ...  | ...  | ...  |  |  |  |
| 9   | Jessore ...                                | 12 8   | 14 8   | 16 0   | ...  | ...  | ...  | 16 4   | 16 4   | 13 8   | 23 0   | 23 8   | 20 0   | ...  | ...  | ...  |  |  |  |
| 10  | Moorsheadabad ...                          | 16 12  | 16 12  | 17 0   | ...  | ...  | ...  | 13 4   | 13 4   | 13 4   | 22 0   | 22 0   | 20 0   | ...  | ...  | ...  |  |  |  |
| 11  | Dinagapore ...                             | 15 4   | 14 8   | 14 0   | 24 0   | 24 0   | 21 0   | 16 0   | 16 0   | 16 8   | 23 0   | 21 4   | 21 0   | ...  | ...  | ...  |  |  |  |
| 12  | Rajshahye ...                              | 17 4   | 17 4   | 20 0   | 45 0   | 45 0   | 35 0   | 16 10  | 16 8   | 16 0   | 20 4   | 19 8   | 19 8   | ...  | ...  | ...  |  |  |  |
| 13  | Rangpore ...                               | 18 12  | 18 12  | 18 0   | ...  | ...  | ...  | 14 8   | 14 8   | 15 0   | 20 0   | 20 0   | 16 8   | ...  | ...  | ...  |  |  |  |
| 14  | Bogra ...                                  | 15 0   | 15 0   | 18 12  | ...  | ...  | ...  | 16 14  | 15 0   | 15 0   | 25 8   | 24 0   | 21 0   | ...  | ...  | ...  |  |  |  |
| 15  | Pubna ...                                  | 18 0   | 18 0   | 20 0   | ...  | ...  | ...  | 8 0  | 8 0  | 8 0  | 22 8   | 22 8   | 22 8   | ...  | ...  | ...  |  |  |  |
| 16  | Darjeeling ...                             | ...  | 9 8  | 9 0  | 13 0   | 11 0   | 10 0   | 5 0  | 5 0  | 5 0  | 12 0   | 11 0   | 11 0   | ...  | ...  | ...  |  |  |  |
| 17  | Julpigoree ...                             | 12 0   | 12 8   | 12 8   | 16 0   | 20 0   | 20 0   | 13 0   | 13 0   | 12 0   | 20 0   | 20 0   | 22 0   | ...  | ...  | ...  |  |  |  |
| E<br>a<br>s<br>t<br>e<br>r<br>n<br>D<br>i<br>s<br>t<br>r<br>i<br>c<br>t<br>s. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 18  | Dacca ...                                  | 16 0   | 16 0   | 14 0   | 26 0   | 26 0   | 26 0   | 17 0   | 16 12  | 1 0  | 20 0   | 22 4   | 16 0   | ...  | ...  | ...  |  |  |  |
| 19  | Furzedpore ...                             | 14 0   | 14 0   | 21 0   | 24 0   | 24 0   | 25 0   | 19 0   | 19 0   | 16 0   | 22 0   | 22 0   | 17 0   | ...  | ...  | ...  |  |  |  |
| 20  | Backergunge ...                            | ...  | ...  | ...  | ...  | ...  | ...  | 17 0   | 17 0   | 14 0   | 20 0   | 20 0   | 16 0   | ...  | ...  | ...  |  |  |  |
| 21  | Mymensingh ...                             | 13 0   | 13 0   | 12 0   | ...  | ...  | ...  | 13 4   | 13 4   | 18 0   | 18 0   | 18 0   | 15 0   | ...  | ...  | ...  |  |  |  |

A In sub-divisions retail prices of salt per rupee were:—Culina 12 seers, Cutwa 13 seers, and Raneegunge 13½ seers.

B At Bishenpore retail price of salt 12 seers per rupee.

C At Rampore Hat retail price of salt 12½ seers per rupee.

D At Tumlook retail price of salt 11 seers per rupee.

E In sub-divisions retail prices of salt per rupee were:—Serampore 12½ seers and Jehanabad 13 seers.

F In sub-divisions retail prices of salt per rupee were:—Baraset 13 seers, Bussirhat 13 seers, Diamond Harbour (Mugrahat) 10½ seers,

Barrackpore 12½ seers and Dum-Dum 12½ seers.

G In sub-divisions retail prices of salt per rupee were:—Khoosia 13½ seers, Moherpore and Chudanga 12 seers, and Ranaghat 10½ seers.

H At Bathkura and Bagirhat retail price of salt 11 seers per rupee.

I In sub-divisions retail prices of salt per rupee were:—Jhanida and Narail 12 seers, Magura 10½ seers, and Bongong 13 seers.

J In sub-divisions retail prices of salt per rupee were:—Lalbari 13 seers, ... and ... 12 seers.

## SEKRS OF 80 TOLANS.

| BAJRA OR 'UMBU.<br>( <i>Pennisetum typho-</i><br><i>ideum.</i> ) |                        |                                      | MARUA OR RAGI.<br>( <i>Elousine Corocana.</i> ) |                        |                                       |
|--|------------------------|--------------------------------------|---|------------------------|---------------------------------------|
| Present return.  | Next preceding return. | Corresponding return<br>of last year | Present return.                                 | Next preceding return. | Corresponding return<br>of last year. |

| S.  | Ch. | S.  | Ch. | S.  | Ch. | S.  | Ch. |
|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     | "   |     |     | 100 | 100 | 100 |
|     | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
|     | 100 |     | 100 | 100 | 100 | 100 | 100 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
|     | "   |     | 100 | 100 | 100 | 100 | 100 |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

[illegible][illegible]

**1934a**

**Night ending the 15th October 1887.**

| WOOD.                                 |  |  |  | SALT.                                 |  |  |  | WHOLESALE PRICES<br>PER MAUND OF 40.<br>SEERS. |  |  |  | DISTRICTS. |
|---------------------------------------|--|--|--|---------------------------------------|--|--|--|--|--|--|--|------------|
| SALT.                                 |  |  |  | SALT.                                 |  |  |  |  |  |  |  |            |
| Corresponding return<br>of last year. |  |  |  | Present return.                       |  |  |  | Present return.                                |  |  |  |            |
| Next preceding return.                |  |  |  | Next preceding return.                |  |  |  | Next preceding return.                         |  |  |  |            |
| Corresponding return<br>of last year. |  |  |  | Corresponding return<br>of last year. |  |  |  | Corresponding return<br>of last year.          |  |  |  |            |

**BENGAL.**  
*Western District*

| Ch. | S. | Ch. | S. | Ch. | S. | Ch. | S. | A. | P. | S. | A. | P. | S. | A. | P. |   |            |
|-----|----|-----|----|-----|----|-----|----|----|----|----|----|----|----|----|----|---|------------|
|     |    |     |    | A   |    |     |    |    |    |    |    |    |    |    |    |   |            |
| 1   | 0  | 120 | 0  | 13  | 12 | 13  | 12 | 12 | 13 | 6  | 2  | 13 | 6  | 3  | 1  | 9 | Burdwan.   |
|     |    |     |    | B   |    |     |    |    |    |    |    |    |    |    |    |   |            |
| 1   | 0  | 240 | 0  | 12  | 0  | 12  | 0  | 11 | 10 | 8  | 3  | 0  | 3  | 3  | 0  | 3 | Bankoor.   |
|     |    |     |    | C   |    |     |    |    |    |    |    |    |    |    |    |   |            |
| 1   | 0  | 160 | 0  | 12  | 4  | 12  | 12 | 12 | 0  | 3  | 2  | 0  | 3  | 0  | 0  | 3 | Beerbhoom. |
|     |    |     |    | D   |    |     |    |    |    |    |    |    |    |    |    |   |            |
| 1   | 0  | 155 | 0  | 13  | 0  | 13  | 0  | 12 | 8  | 3  | 0  | 0  | 3  | 0  | 0  | 3 | Midnapore. |
|     |    |     |    | E   |    |     |    |    |    |    |    |    |    |    |    |   |            |
| 1   | 0  | 120 | 0  | 13  | 0  | 13  | 0  | 13 | 0  | 2  | 14 | 0  | 2  | 14 | 0  | 3 | Hoochly.   |
| 0   | 0  | 90  | 0  | 12  | 13 | 12  | 13 | 12 | 0  | 2  | 14 | 0  | 2  | 14 | 0  | 3 | Howrah.    |

**Central District.**

|     |     |     |     |    |    |    |    |    |    |     |     |     |     |     |     |                |
|-----|-----|-----|-----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|----------------|
| 10  | 0   | 80  | 0   | 13 | 4  | 13 | 0  | 13 | 0  | 2   | 12  | 0   | 3   | 0   | 0   | Calcutta.      |
| 10  | 0   | 80  | 0   | 12 | 8  | 12 | 4  | 12 | 5  | 2   | 15  | 0   | 2   | 15  | 0   | 24-Pargunnahs. |
| ... | ... | ... | ... | 11 | 10 | 11 | 10 | 11 | 10 | 3   | 0   | 0   | 3   | 0   | 0   | Nudda.         |
| 80  | 0   | 160 | 0   | 10 | 8  | 10 | 8  | 10 | 8  | 3   | 12  | 0   | 3   | 12  | 0   | Khoolna.       |
| 10  | 0   | 120 | 0   | 10 | 12 | 10 | 12 | 10 | 12 | 3   | 2   | 0   | 3   | 2   | 0   | Jessore.       |
| 10  | 0   | 120 | 0   | 12 | 0  | 12 | 0  | 12 | 5  | ... | ... | ... | ... | ... | ... | Moorshedabad.  |
| 80  | 0   | 160 | 0   | 12 | 8  | 12 | 8  | 12 | 0  | 3   | 2   | 0   | 3   | 2   | 0   | Dinapore.      |
| 40  | 0   | 240 | 0   | 12 | 0  | 12 | 0  | 12 | 0  | 3   | 1   | 4   | 3   | 1   | 4   | Rajahahye.     |
| 20  | 0   | 120 | 0   | 10 | 5  | 10 | 5  | 11 | 8  | 3   | 8   | 0   | 3   | 8   | 0   | Murgpore.      |
| 20  | 0   | 90  | 0   | 12 | 0  | 10 | 8  | 10 | 8  | 3   | 4   | 0   | 3   | 5   | 4   | Bogra.         |
| 40  | 0   | 200 | 0   | 12 | 0  | 12 | 0  | 11 | 4  | 3   | 5   | 0   | 3   | 5   | 0   | Pubna.         |
| 20  | 0   | 120 | 0   | 9  | 0  | 9  | 0  | 9  | 0  | 4   | 4   | 0   | 4   | 4   | 0   | Darjeeling.    |
| 120 | 0   | 128 | 0   | 12 | 0  | 11 | 0  | 11 | 8  | 3   | 4   | 0   | 3   | 6   | 0   | Julpigore.     |

**Eastern Districts.**

|     |     |     |     |    |   |    |   |    |    |   |   |   |   |   |   |   |   |   |              |
|-----|-----|-----|-----|----|---|----|---|----|----|---|---|---|---|---|---|---|---|---|--------------|
| 30  | 0   | 120 | 0   | 12 | 8 | 12 | 8 | 10 | 8  | 3 | 3 | 0 | 3 | 3 | 0 | 3 | 8 | 0 | Dacca.       |
| 60  | 0   | 120 | 0   | 12 | 0 | 12 | 0 | 12 | 12 | 3 | 1 | 0 | 3 | 1 | 0 | 3 | 8 | 0 | Farredpore.  |
| 30  | 0   | 120 | 0   | 12 | 8 | 12 | 8 | 11 | 8  | 3 | 2 | 0 | 3 | 2 | 0 | 3 | 6 | 0 | Backergunge. |
| ... | ... | ... | ... | 12 | 4 | 12 | 4 | 11 | 4  | 3 | 4 | 0 | 3 | 4 | 0 | 3 | 8 | 0 | Mymensingh.  |

a price is owing to increased importation.

A price is owing to increased tax  
a price of salt 12 seers per rupee.

or more:—Kurigram 11<sup>4</sup>/<sub>10</sub> seers and Gaibanda 9 seers.  
100 rupees.

Price of salt: 10 seers per rupee.

— Manickgunge 11 seers, Moonsheegunge 10½ seers and Naraingunge 12½ seers.  
— Gualand 12 seers and Madaripora 14½ seers.

— Goalundo 12 acres and Madaripore 12½ acres.

—Patuakhali 9½ seers, Peroxepore 11 seers and Bhola 10½ seers.

—Kishoregunge 12½ seers, Atten 12 seers, Jaisalpore 10½ seers, Sherepore

**PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the**

| Number.   | DISTRICTS.                                   | QUANTITIES PER RUPEE IN |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
|---|--|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--|------------------------|------------------------------------|--|--|--|
|   |  | WHEAT.                  |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLU.<br>( <i>Sorghum Vulgare</i> .) |                        |                                    |  |  |  |
|   |  | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                                | Next preceding return. | Corresponding return of last year. |  |  |  |
| Eastern Districts—concluded.                    |  |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
| 22  | Chittagong ...                               | 14 0                    | 10 0                   | 16 0                               | ...             | ...                    | ...                                | 13 8             | 13 0                   | 9 0                                | 21 0            | 19 0                   | 16 0                               | ...  | ...                    | ...                                |  |  |  |
| 23  | Noakholly ...                                | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 19 0             | 19 0                   | 14 0                               | 21 0            | 21 0                   | 16 0                               | ...  | ...                    | ...                                |  |  |  |
| 24  | Tipperah ...                                 | 13 4                    | 13 5                   | 13 5                               | ...             | ...                    | ...                                | 18 13            | 16 5                   | 13 8                               | 22 1            | 24 13                  | 17 3                               | ...  | ...                    | ...                                |  |  |  |
| 25  | Chittagong Hill Tracts.<br>Hill Tipperah ... | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 12 4             | 13 5                   | 8 11                               | 13 5            | 14 8½                  | 10 5                               | ...  | ...                    | ...                                |  |  |  |
|   |  | 12 0                    | 12 0                   | 12 0                               | ...             | ...                    | ...                                | 12 0             | 12 0                   | 10 0                               | 18 0            | 18 0                   | 14 0                               | ...  | ...                    | ...                                |  |  |  |
| BEHAR.  |  |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
| 26  | Patna ...                                    | 22 0                    | 19 0                   | 21 8                               | 31 0            | 28 0                   | 34 0                               | 11 8             | 11 8                   | 11 8                               | 22 0            | 21 8                   | 20 8                               | 26 0   | 26 0                   | 26 0                               |  |  |  |
| 27  | Gya ...                                      | 16 0                    | 16 0                   | 16 0                               | 27 0            | 35 0                   | 28 0                               | 9 8              | 9 0                    | 9 0                                | 17 0            | 17 8                   | 16 8                               | ...  | ...                    | ...                                |  |  |  |
| 28  | Shahabad ...                                 | 16 8                    | 16 0                   | 18 0                               | 26 0            | 33 0                   | 30 0                               | 9 0              | 9 0                    | 8 0                                | 16 0            | 16 0                   | 18 0                               | 25 0   | 28 0                   | ...                                |  |  |  |
| 29  | Durbhanga ...                                | 22 0                    | 17 9                   | 17 0                               | 39 0            | 38 7                   | 33 8                               | 14 4             | 14 4                   | 12 0                               | 18 10           | 17 9                   | 17 0                               | ...  | ...                    | ...                                |  |  |  |
| 30  | Mounseerpore ...                             | 20 0                    | 22 0                   | 18 0                               | 30 0            | 35 0                   | 30 0                               | 12 0             | 12 0                   | 11 0                               | 22 0            | 22 0                   | 18 0                               | ...  | ...                    | ...                                |  |  |  |
| 31  | Saran ...                                    | 17 0                    | 18 0                   | 18 8                               | 29 0            | 30 0                   | 30 0                               | 9 0              | 9 0                    | 8 0                                | 21 0            | 31 0                   | 20 0                               | ...  | ...                    | ...                                |  |  |  |
| 32  | Chumpana ...                                 | 18 0                    | 22 0                   | 20 0                               | 40 0            | 36 0                   | 29 0                               | 8 0              | 8 0                    | 10 0                               | 16 0            | 18 0                   | 15 0                               | ...  | ...                    | ...                                |  |  |  |
| 33  | Mongnyr ...                                  | 23 1                    | 21 0                   | 20 0                               | 42 0            | 31 8                   | 33 8                               | 13 15            | 13 2                   | 13 12                              | 17 13           | 15 12                  | 16 14                              | ...  | ...                    | ...                                |  |  |  |
| 34  | Bhagulpore ...                               | 20 3                    | 20 3                   | 17 10                              | 31 9            | 31 9                   | 35 5                               | 17 0             | 17 0                   | 15 12                              | 20 3            | 20 3                   | 18 4                               | ...  | ...                    | ...                                |  |  |  |
| 35  | Purneah ...                                  | 22 0                    | 16 0                   | 20 0                               | ...             | 35 0                   | ...                                | 16 0             | 16 0                   | 16 0                               | 20 0            | 20 0                   | 20 0                               | ...  | ...                    | ...                                |  |  |  |
| 36  | Maldah ...                                   | 20 0                    | 18 0                   | 17 0                               | ...             | ...                    | ...                                | 14 0             | 14 0                   | 14 0                               | 26 0            | 24 0                   | 20 0                               | ...  | ...                    | ...                                |  |  |  |
| 37  | Sonthal Perghe ...                           | 16 0                    | 16 0                   | 13 0                               | ...             | ...                    | ...                                | 16 0             | 16 0                   | 16 0                               | 22 0            | 25 0                   | 25 0                               | ...  | ...                    | ...                                |  |  |  |
| ORISSA.   |  |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
| 38  | Cuttack ...                                  | 16 6                    | 17 1                   | 17 1                               | ...             | ...                    | ...                                | 10 8             | 10 8                   | 10 8                               | 18 6            | 18 6                   | 18 6                               | ...  | ...                    | ...                                |  |  |  |
| 39  | Poores ...                                   | 13 2                    | 18 2                   | 14 7                               | ...             | ...                    | ...                                | 11 13            | 11 13                  | 11 13                              | 18 6            | 21 0                   | 15 12                              | ...  | ...                    | ...                                |  |  |  |
| 40  | Balasore ...                                 | 12 8                    | 12 0                   | 13 0                               | 13 0            | 13 0                   | 13 0                               | 14 0             | 15 0                   | 13 0                               | 27 0            | 25 0                   | 24 0                               | ...  | ...                    | ...                                |  |  |  |
| CHOTA NAGPORE<br>South-Western Frontier Agency. |  |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |  |                        |                                    |  |  |  |
| 41  | Hasareebagh ...                              | 17 0                    | 15 0                   | 15 0                               | 24 0            | 25 0                   | 18 0                               | 9 0              | 9 0                    | 10 0                               | 20 0            | 18 0                   | 21 0                               | Not procurable.                                |                        |                                    |  |  |  |
| 42  | Lohardugga ...                               | 22 0                    | 20 0                   | 24 0                               | 32 0            | 32 0                   | 18 0                               | 16 0             | 16 0                   | 16 0                               | 20 0 (old)      | 22 0 (old)             | 22 0 (old)                         |  |                        |                                    |  |  |  |
| 43  | Singhbhoom ...                               | 20 0                    | 20 0                   | 24 0                               | 33 0            | 33 0                   | 24 0                               | 16 0             | 20 0                   | 28 0                               | 24 0 (new)      | 28 0 (new)             | 32 0 (new)                         |  |                        |                                    |  |  |  |
| 44  | Manbhoom ...                                 | 18 0                    | 16 0                   | 17 0                               | ...             | ...                    | ...                                | 16 0             | 16 0                   | 15 0                               | 23 0            | 28 0                   | 26 0                               | ...  | ...                    | ...                                |  |  |  |

T At Cox's Bazar retail price of salt 8 seers per rupee.

U At Panchgatchia Hat in the Fenny sub-division retail price of salt 9 seers per rupee.

V At Chandpore retail price of salt 11½ seers per rupee.

W In sub-divisions retail prices of salt per rupee were:—Buxar 12½ seers, Sansaram 13 seers and Bhabua 10½ seers.

X At Madhubani retail price of salt 11 seers per rupee.

Y In sub-divisions retail prices of salt per rupee were:—Hajipore 12½ seers and Sitamarhi 11½ seers.

Z In sub-divisions retail prices of salt per rupee were:—Sewan 12 seers and Gopalgunge 12½ seers.

Published for general information.

Districts of Bengal during the Fortnight ending 15th October 1887—(concluded.)

|   |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |                        |                                       | DISTRICTS. |
|---|------------------------|---------------------------------------|---|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|---|------------------------|---------------------------------------|------------|
| INDIAN-CORN OR<br>MAISE.<br>(Zea Mays.) |                        |                                       | ARHAR OR TUR.<br>CAJAN PNA.<br>(Cajanus indicus.) |                        |                                       | FIREWOOD.       |                        |                                       | SALT.           |                        |                                       | SALT.   |                        |                                       |            |
| Present return.                         | Next preceding return. | Corresponding return<br>of last year. | Present return.                                   | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return.                               | Next preceding return. | Corresponding return<br>of last year. |            |

*Eastern Districts—concluded.*

| S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | Rs. A. P. | Rs. A. P. | Rs. A. P. |                            |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|-----------|----------------------------|
| ...    | ...    | ...    | 11 0   | 9 0    | 12 0   | 75 0   | 75 0   | 75 0   | 9 0    | 8 8    | 12 0   | 4 6 0  | 4 8 0  | 3 2 0     |           |           | Chittagong.                |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | 10 0   | 10 0   | 9 0    | 3 8 0  | 3 0    | 4 4 0     |           |           | Noakhully.                 |
| ...    | ...    | ...    | 10 2½  | 10 2½  | 9 11   | ...    | ...    | ...    | 12 0   | 12 0   | 11 0   | 3 3 0  | 3 4 0  | 3 9 0     |           |           | Tipperah.                  |
| ...    | ...    | ...    | ...    | ...    | ...    | 320 0  | 320 0  | 320 0  | 8 0    | 8 0    | 8 0    | 4 8 0  | 4 8 0  | 4 8 0     |           |           | Chittagong Hill<br>Tracts. |
| ...    | ...    | ...    | 16 0   | 16 0   | 16 0   | ...    | ...    | ...    | 11 0   | 11 0   | 11 0   | 3 4 0  | 3 4 0  | 3 4 0     |           |           | Hill Tipperah.             |

BEHAR.

|          |       |       |       |       |      |       |       |       |       |       |      |        |        |        |  |  |                 |
|----------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|------|--------|--------|--------|--|--|-----------------|
| 34 0     | 34 0  | 35 0  | 26 0  | 26 0  | 26 0 | 120 0 | 120 0 | 110 0 | 11 12 | 11 12 | 11 8 | 3 1 6  | 3 1 6  | 3 1 6  |  |  | Patna.          |
| ...      | ...   | ...   | 22 0  | 25 0  | 24 0 | 150 0 | 150 0 | 120 0 | 11 0  | 11 0  | 11 0 | 3 5 0  | 3 5 0  | 3 5 0  |  |  | Gya.            |
| ...      | ...   | ...   | 16 0  | 16 0  | 13 8 | 120 0 | 120 0 | 160 0 | 12 8  | 12 8  | 12 0 | 3 3 0  | 3 3 0  | 3 5 0  |  |  | Shahabad.       |
| 30 13    | 38 7  | 25 0  | 19 12 | 18 10 | 21 0 | 176 0 | 176 0 | 160 0 | 12 0  | 12 0  | 11 8 | 3 0 0  | 3 0 0  | 3 4 0  |  |  | Durbhunga.      |
| 33 0     | 40 0  | 26 0  | 20 0  | 20 0  | 21 0 | 200 0 | ...   | 140 0 | 12 0  | 12 0  | 12 0 | 3 4 0  | 3 4 0  | 3 4 0  |  |  | Mosufferpore.   |
| 30 0     | 32 0  | 29 0  | 23 0  | 23 0  | 25 0 | 160 0 | 160 0 | 140 0 | 12 0  | 12 0  | 12 0 | 3 2 6  | 3 2 0  | 3 3 0  |  |  | Saran.          |
| 35 0     | 32 0  | 27 0  | 20 0  | 22 0  | 23 0 | ...   | 160 0 | ...   | 12 0  | 12 0  | 11 0 | 3 4 0  | 3 4 0  | 3 7 0  |  |  | Chumparna.      |
| 36 12    | 37 12 | 42 0  | 23 0  | 21 0  | 22 0 | 126 0 | 126 0 | 126 0 | 12 9  | 13 9  | 12 0 | 2 14 6 | 2 14 6 | 3 4 0  |  |  | Monghyr.        |
| 31 9     | 37 14 | 37 14 | 21 7  | 21 7  | 21 7 | 151 8 | 151 8 | 178 0 | 12 10 | 12 10 | 12 0 | 3 0 0  | 3 0 0  | 3 2 0  |  |  | Rhagulpore      |
| No sale. |       |       | 18 0  | 18 0  | 16 0 | 160 0 | 160 0 | 128 0 | 10 8  | 10 8  | 10 8 | 3 8 0  | 3 8 0  | 3 10 0 |  |  | Purneah.        |
| ...      | ...   | ...   | ...   | ...   | ...  | 120 0 | 120 0 | 140 0 | 12 0  | 12 0  | 11 0 | 3 4 0  | 3 4 0  | 3 6 0  |  |  | Maldah.         |
| 42 8     | 60 0  | 70 0  | 25 0  | 24 0  | 24 0 | 200 0 | 200 0 | 200 0 | 11 8  | 11 8  | 12 0 | 3 4 6  | 3 3 3  | 3 3 0  |  |  | Senthal Pergua. |

ORISSA.

|     |     |     |      |      |       |       |       |      |      |      |      |        |        |        |  |  |           |
|-----|-----|-----|------|------|-------|-------|-------|------|------|------|------|--------|--------|--------|--|--|-----------|
| ... | ... | ... | 18 6 | 17 1 | ...   | 80 0  | 80 0  | 80 0 | 14 0 | 14 0 | 14 0 | 2 12 0 | 2 12 0 | 2 12 0 |  |  | Cuttack.  |
| ... | ... | ... | 13 2 | 13 2 | 15 12 | 70 0  | 70 0  | 80 0 | 13 2 | 13 2 | 14 7 | 2 12 0 | 2 12 0 | 2 10 0 |  |  | Pooree.   |
| ... | ... | ... | 13 0 | 13 0 | 13 0  | 160 0 | 160 0 | ...  | 10 8 | 10 8 | 10 0 | 3 4 0  | 3 4 0  | 3 12 0 |  |  | Balasore. |

CHOTA NAGPORE.

*South-Western Frontier Agency.*

|      |      |      |      |      |      |       |       |       |       |       |       |        |        |       |  |  |              |
|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|--------|--------|-------|--|--|--------------|
| 36 0 | 35 0 | 40 0 | 20 0 | 20 0 | 18 0 | 320 0 | 320 0 | 220 0 | 10 0  | 10 0  | 9 0   | 3 8 0  | 3 8 0  | 4 4 0 |  |  | Hazareebagh. |
| 46 0 | 48 0 | 40 0 | 28 0 | 28 0 | 18 0 | 120 0 | 120 0 | 120 0 | 10 0  | 10 0  | 9 0   | 3 12 0 | 3 12 0 | 4 4 0 |  |  | Lohardugga.  |
| ...  | ...  | ...  | 20 0 | 20 0 | 21 0 | 320 0 | 320 0 | 360 0 | 9 0   | 9 0   | 9 0   | 4 0 0  | 4 0 0  | 4 0 0 |  |  | Singbhoom.   |
| ...  | ...  | ...  | 21 0 | 21 0 | ...  | ...   | 300 0 | 240 0 | 10 10 | 10 10 | 10 10 | 3 6 0  | 3 6 0  | 3 6 0 |  |  | Manbhoom.    |

Z1 At Bettiah retail price of salt 11½ seers per rupee.

Z2 In sub-divisions retail prices of salt per rupee were:—Begusarai 11 seers and Jamui 11½ seers.

Z3 In sub-divisions retail prices of salt per rupee were:—Banka and Bhoopole 11 seers, and Mudhepurah 12 seers.

Z4 At Kishengunge retail price of salt 10 seers per rupee.

Z5 In sub-divisions retail prices of salt per rupee were:—Pakour and Rajmehal 12 seers, Godda 11 seers and Deoghur 13 seers.

Z6 In Khoorda sub-division retail price of salt 14 seers per rupee.

Z7 At Bhuddruck retail price of salt 9½ seers per rupee.

Z8 At Govindpore retail price of salt 12 seers per rupee.

PRICES-CURRENT (wholesale) of Food

| Number | MARKTS.        |                 |                        |                                    |                 |                        |                                    |                 |        |       | OF 40 SHEKRS.                          |                        |                                    |  |                        |                                    |
|--------|----------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|--------|-------|--|------------------------|------------------------------------|--|------------------------|------------------------------------|
|        |                | WHEAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE, BE        |        |       | MARUA OR RASI.<br>(Eleusine Corocana.) |                        |                                    | KANGNI OR KAKUN<br>ITALIAN MILLET.<br>(Setaria italica.) |                        |                                    |
|        |                | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. |        |       | Present return.                        | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. |
|        |                | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R.     |       | R. A. P.                               | R. A. P.               | R. A. P.                           | R. A. P.   | R. A. P.               | R. A. P.                           |
| 1      | Calcutta ...   | 2 7 9           | 2 10 3                 | 2 8 3                              | 1 7 6           | 1 8 0                  | 1 11 0                             | 3 8 3           | 3 1    |       |  |                        |                                    | 2 13 0   | 2 8 0                  | 2 0 1                              |
| 2      | Serajgunge ... | 1 14 0          | 1 12 0                 | 1 12 0                             | ...             | ...                    | ...                                | 3 10 0          | 3 10   |       |  |                        |                                    | ...  | ...                    | ...                                |
| 3      | Dacca ...      | 2 6 0           | 2 6 0                  | 2 9 0                              | 1 8 0           | 1 8 0                  | 1 8 0                              | 2 6 0           | 2 4    |       |  |                        |                                    | ...  | ...                    | ...                                |
| 4      | Narsingunge    | ...             | ...                    | ...                                | ...             | ...                    | ...                                | 2 3 0           | 2 6    |       |  |                        |                                    | ...  | ...                    | ...                                |
| 5      | Chittagong ... | 2 12 0          | 3 7 0                  | 3 6 0                              | ...             | ...                    | ...                                | 2 14 0          | 3 0    |       |  |                        |                                    | ...  | ...                    | ...                                |
| 6      | Patna          | 1 12 0          | 2 0 0                  | 1 12 0                             | 1 4 0           | 1 5 3                  | 1 2 6                              | 3 0 0           | 3 0    | 1 3 0 | 1 6 0                                  | 1 6 0                  | 1 4 0                              | 1 10 0   | 1 14                   |                                    |
| 7      | Balacore ...   | 3 0 0           | 3 4 0                  | 2 12 0                             | 3 0 0           | 3 0 0                  | 3 0 0                              | 2 12 0          | 2 8    |       |  |                        |                                    | ...  | ...                    | ...                                |
| 8      | Pooree ...     | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...             | ...    |       |  |                        |                                    | ...  | ...                    | ...                                |
|        | Cuttack ...    | 2 4 0           | 2 2 0                  | 2 2 0                              | ...             | ...                    | ...                                | 3 10 0          | 3 10 0 |       |  |                        |                                    | ...  | ...                    | ...                                |

CALCUTTA,  
The 25th October 1887.

1938b



dermentioned *Marts* of Bengal during the fortnight ending 15th October 1887.

| AM, CHANA, CHHOLA,<br>ADALAY OR SOKAGA.<br>( <i>Cicer Aristicum</i> .) |                        |                                    | INDIAN-CORN OR MAIZE.<br>( <i>Zea Mays</i> .) |                        |                                    | ARHAR OR TURR<br>CAJAN PRA.<br>( <i>Cajanus indicus</i> .) |                        |                                    | FIREWOOD        |                        |                                    | MALT            |                        |                                    | MARTS. |
|--|------------------------|------------------------------------|---|------------------------|------------------------------------|--|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--------|
| Present return.  | Next preceding return. | Corresponding return of last year. | Present return.                               | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |        |
| A. P.  | R. A. P.               | R. A. P.                           | R. A. P.                                      | R. A. P.               | R. A. P.                           | R. A. P.   | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |        |
| 0 6 1 11 6   | 1 13 0                 | 1 6 6 2 4 0                        | 1 6 0   | 2 2 0                  | 2 0 0                              | 2 0 0  | 0 6 9                  | 0 6 9                              | 0 6 9           | 2 12 0                 | 3 0 0                              | 3 0 0           | Colcutta.              |                                    |        |
| 0 0 2 0 0  | 1 14 0                 | ...                                | ...   | ...                    | ...                                | ...  | ...                    | ...                                | ...             | 3 2 0                  | .....                              | 3 1 6           | Serajgunge.            |                                    |        |
| 0 0 1 12 0   | 2 4 0                  | ...                                | ...   | ...                    | 2 0 0                              | 2 8 0  | ..                     | 0 5 0                              | 0 5 0           | 0 5 0                  | 3 3 0                              | 3 3 0           | Dacca.                 |                                    |        |
| 3 0 1 15 0   | 2 2 0                  | ...                                | ...   | ...                    | 2 4 0                              | 2 5 0  | 2 0 0                  | 0 7 0                              | 0 8 0           | 0 6 0                  | 3 1 0                              | 3 0 0           | Narsingunge.           |                                    |        |
| 6 0 2 4 0  | 2 12 0                 | ...                                | ...   | ...                    | 3 4 0                              | 4 4 0  | 3 4 0                  | 0 8 0                              | 0 8 0           | 0 8 0                  | 4 6 0                              | 4 8 0           | Chittagong.            |                                    |        |
| 4 0 1 4 9 1 3 6  | 1 2 6                  | 1 2 6                              | 1 2 0   | 1 7 0                  | 1 7 0                              | 1 6 0  | 0 5 0                  | 0 5 0                              | 0 5 3           | 3 1 6                  | 3 1 6                              | 3 1 6           | Patna.                 |                                    |        |
| 6 0 2 6 0  | 2 10 0                 | ...                                | ...   | ...                    | 3 0 0                              | 3 0 0  | 3 0 0                  | 0 4 6                              | 0 4 6           | 0 8 0                  | 3 4 0                              | 3 4 0           | Balaore.               |                                    |        |
| ...  | ...                    | ...                                | ...   | ...                    | ...                                | ...  | ...                    | ...                                | ...             | ...                    | 2 12 0                             | 2 12 0          | Pooree.                |                                    |        |
| (Kalmi)<br>2 0 2 2 0   | 2 0 0                  | ...                                | ...   | ...                    | 2 2 0                              | 2 2 0  | ...                    | 0 8 0                              | 0 8 0           | 0 8 0                  | 2 12 0                             | 2 12 0          | Cuttack.               |                                    |        |

Published for general information.  
P. NOLAN,  
Secy. to the Govt. of Bengal.

## Meteorological Report of the Province of Be

| DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                           |                       |                     |                       |                           |                                   |                                 |                                     |  |
|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|---------------------------|-----------------------|---------------------|-----------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|--|
|                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.              |                       |                     |                       |                           |                                   |                                 |                                     |  |
|                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week.      | Date.                 | Lowest during week. | Date.                 | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. |  |
|                        |                         |                                 |                            |                      |                       |                     |                           |                       |                     |                       |                           |                                   |                                 |                                     |  |
| Pooree                 | Gopulpore               | 29.049                          | 29.099                     | +0.074               | NNW                   | 120                 | 80.2                      | 17, 18, 19, 20 Oct.   | 73.8                | 19th Oct.             | 87.6                      | 76.0                              | 81.8                            | -0.3                                |  |
|                        | False Point             | 29.060                          | 29.091                     | +0.043               | Variable              | 141                 | 80.5                      | 18th "                | 71.1                | 17th "                | 86.8                      | 73.2                              | 80.0                            | -1.5                                |  |
| Outtack                | Outtack                 | 29.004                          | 29.090                     | +0.048               | Variable              | 17                  | 84.4                      | 18th "                | 71.3                | 19th "                | 80.3                      | 74.1                              | 81.7                            | -0.5                                |  |
| Balasore               | Balasore                | 29.026                          | 29.086                     | +0.041               | SSW                   | 68.2                | 84.4                      | 16th, 17th Oct.       | 68.0                | 20th & 21st Oct.      | 87.3                      | 71.7                              | 79.5                            | -1.6                                |  |
| South-West Midnapore   | Sangor Island           | 29.065                          | 29.091                     | +0.045               | W                     | 178                 | 88.2                      | 16th "                | 70.5                | 20th "                | 85.6                      | 74.9                              | 80.3                            | -1.1                                |  |
| South 24-Pergunnahs    | Midnapore               | 29.045                          | 29.096                     | +0.038               | N                     | 61.0                | 88.3                      | 17th, 20th Oct.       | 67.2                | 10th, 20th Oct.       | 87.5                      | 70.8                              | 79.2                            | -1.9                                |  |
| Midnapore              | Midnapore               | 29.045                          | 29.096                     | +0.038               | N                     | 61.0                | 88.3                      | 17th, 20th Oct.       | 67.2                | 10th, 20th Oct.       | 87.5                      | 70.8                              | 79.2                            | -1.9                                |  |
| 24-Pergunnahs          | Calcutta                | 29.068                          | 29.080                     | +0.037               | North-Westerly.       | 75                  | 86.5                      | 16th "                | 70.0                | 19th, 20th Oct.       | 84.0                      | 73.1                              | 79.1                            | -1.3                                |  |
| Howrah                 | Calcutta                | 29.068                          | 29.080                     | +0.037               | North-Westerly.       | 75                  | 86.5                      | 16th "                | 70.0                | 19th, 20th Oct.       | 84.0                      | 73.1                              | 79.1                            | -1.3                                |  |
| Hooghly                | Calcutta                | 29.068                          | 29.080                     | +0.037               | North-Westerly.       | 75                  | 86.5                      | 16th "                | 70.0                | 19th, 20th Oct.       | 84.0                      | 73.1                              | 79.1                            | -1.3                                |  |
| Burdwan                | Burdwan                 | 29.078                          | 29.090                     | +0.032               | Westerly              | 38                  | 84.1                      | 21st "                | 70.1                | 19th, 20th Oct.       | 86.7                      | 72.0                              | 79.7                            | -1.9                                |  |
| Bankoora               | Bankoora                | 29.070                          | —                          | —                    | Calm                  | 8.0                 | 89.1                      | 16th "                | 67.6                | 8th "                 | 88.0                      | 71.6                              | 79.8                            | —                                   |  |
| Beerbhoom              | Raneegunge              | 29.043                          | 29.050                     | +0.045               | SE                    | 61.8                | 89.5                      | 21st "                | 67.0                | 18th "                | 87.8                      | 70.8                              | 79.3                            | -3.2                                |  |
| West Burdwan           | Raneegunge              | 29.043                          | 29.050                     | +0.045               | SE                    | 61.8                | 89.5                      | 21st "                | 67.0                | 18th "                | 87.8                      | 70.8                              | 79.3                            | -3.2                                |  |
| Moorsheadabad          | Berhampore              | 29.015                          | 29.093                     | +0.038               | WSW                   | 51.1                | 87.6                      | 21st "                | 71.3                | 19th "                | 85.9                      | 74.0                              | 79.9                            | -1.5                                |  |
| Nuddra                 | Krishnagur              | 29.073                          | 29.080                     | —                    | W.S.W                 | 40.8                | 87.8                      | 16th "                | 68.5                | 19th "                | 86.4                      | 71.5                              | 79.0                            | —                                   |  |
| Jessore                | Jessore                 | 29.035                          | 29.087                     | +0.043               | NW                    | 35.0                | 89.2                      | 21st "                | 72.0                | 19th, 20th Oct.       | 87.6                      | 71.1                              | 81.0                            | -0.7                                |  |
| Khoolna                | Jessore                 | 29.035                          | 29.087                     | +0.043               | NW                    | 35.0                | 89.2                      | 21st "                | 72.0                | 19th, 20th Oct.       | 87.6                      | 71.1                              | 81.0                            | -0.7                                |  |
| Chittagong             | Chittagong              | 29.080                          | 29.084                     | +0.036               | NE                    | 45                  | 87.6                      | 21st "                | 71.0                | 18th, 21st Oct.       | 86.6                      | 73.3                              | 79.9                            | -0.3                                |  |
| Chittagong Hill Tracts | Demagiri                | —                               | —                          | —                    | —                     | —                   | Observations not received |                       |                     |                       |                           |                                   |                                 |                                     |  |
| Backergunge            | Barrisal                | 29.056                          | 29.068                     | +0.060               | NE                    | 36.5                | 88.3                      | 21st "                | 72.4                | 20th "                | 87.1                      | 74.3                              | 80.7                            | +0.2                                |  |
| Noakholly              | Noakholly               | 29.026                          | 29.070                     | —                    | Calm                  | 1.7                 | 87.0                      | 21st "                | 69.9                | 18th "                | 85.0                      | 72.1                              | 79.0                            | —                                   |  |
| Furzedpore             | Furzedpore              | 29.021                          | 29.064                     | +0.031               | Northerly             | 35.0                | 88.3                      | 16th, 20th, 21st Oct. | 72.4                | 19th "                | 85.4                      | 73.6                              | 79.5                            | -1.4                                |  |
| Dacca                  | Dacca                   | 29.050                          | 29.073                     | +0.041               | South-easterly, NE    | 41                  | 88.6                      | 21st "                | 70.1                | 20th "                | 86.2                      | 73.3                              | 79.4                            | -1.6                                |  |
| Commillah              | Commillah               | 29.011                          | 29.040                     | +0.012               | —                     | 36.3                | 89.4                      | 21st "                | 69.8                | 19th "                | 87.4                      | 71.7                              | 79.5                            | -1.3                                |  |
| Mymensingh             | Mymensingh              | 29.081                          | 29.093                     | +0.066               | Calm                  | 67.1                | 86.4                      | 18th, 19th, 21st Oct. | 72.1                | 15, 16, 21, 20th Oct. | 84.8                      | 73.8                              | 78.8                            | -3.7                                |  |
| Bogra                  | Bogra                   | 29.043                          | 29.047                     | —                    | Calm                  | 32.6                | 87.3                      | 20th "                | 70.8                | 17th "                | 84.9                      | 72.2                              | 78.6                            | —                                   |  |
| Pubna                  | Serajgunge              | 29.021                          | 29.074                     | +0.020               | Variable              | 20.5                | 87.6                      | 16th "                | 70.7                | 17, 18, 21 Oct.       | 85.4                      | 71.7                              | 78.6                            | -2.3                                |  |
| Rajshahye              | Rampore Benuleh.        | 29.006                          | 29.067                     | +0.029               | SW                    | 46.2                | 87.3                      | 19th, 20th, 21st Oct. | 68.7                | 19th "                | 86.4                      | 70.5                              | 78.5                            | -1.6                                |  |
| Maldah                 | Maldah                  | 29.000                          | —                          | —                    | Calm                  | —                   | 89.2                      | 20th "                | 69.4                | 19th "                | 89.9                      | 71.6                              | 79.8                            | —                                   |  |
| Dinapore               | Dinapore                | 29.030                          | 29.062                     | +0.021               | Variable              | 5.7                 | 89.6                      | 19th & 21st Oct.      | 70.6                | 18th, 20th Oct.       | 84.2                      | 74.0                              | 79.1                            | -1.6                                |  |
| Rungpore               | Rungpore                | 29.030                          | 29.066                     | +0.011               | ENE                   | 31.6                | 88.8                      | 21st "                | 71.7                | 17th "                | 86.7                      | 74.1                              | 79.9                            | +0.2                                |  |
| Julpigoree             | Julpigoree              | 29.030                          | 29.062                     | +0.022               | NE                    | 38.3                | 87.9                      | 21st "                | 69.8                | 15, 16, 20 Oct.       | 83.6                      | 70.7                              | 77.2                            | -1.9                                |  |
| Cooch Behar            | Julpigoree              | 29.030                          | 29.062                     | +0.022               | NE                    | 38.3                | 87.9                      | 21st "                | 69.8                | 15, 16, 20 Oct.       | 83.6                      | 70.7                              | 77.2                            | -1.9                                |  |
| Darjeeling Hill Tracts | Darjeeling              | 29.002                          | —                          | +0.010               | Calm                  | 35.3                | 69.6                      | 18th "                | 49.1                | 16th "                | 58.3                      | 59.0                              | 54.2                            | +0.6                                |  |
| Purneah                | Purneah                 | 29.055                          | 29.084                     | +0.030               | Calm                  | 13.6                | 86.2                      | 20th, 21st Oct.       | 69.6                | 16, 17, 18, 19 Oct.   | 84.5                      | 70.2                              | 77.3                            | -2.2                                |  |
| North Bhagulpore       | Purneah                 | 29.055                          | 29.084                     | +0.030               | Calm                  | 13.6                | 86.2                      | 20th, 21st Oct.       | 69.6                | 16, 17, 18, 19 Oct.   | 84.5                      | 70.2                              | 77.3                            | -2.2                                |  |
| Mozufferpore           | Mozufferpore            | —                               | —                          | —                    | —                     | —                   | Observations suspended.   |                       |                     |                       |                           |                                   |                                 |                                     |  |
| Durbhunga              | Durbhunga               | 29.011                          | 29.081                     | +0.045               | WSW                   | 103                 | 86.4                      | 21st "                | 72.0                | 15, 16, 18 Oct.       | 83.3                      | 72.6                              | 77.9                            | -1.5                                |  |
| Chumbarun              | Motihari                | 29.024                          | 29.061                     | +0.047               | ESE                   | 134.4               | 86.7                      | 21st "                | 63.8                | 15th "                | 82.5                      | 69.4                              | 76.5                            | -2.7                                |  |
| Saran                  | Chupra                  | 29.070                          | 29.067                     | +0.022               | Westerly              | 15.4                | 86.5                      | 18th, 19th Oct.       | 69.7                | 18th "                | 84.1                      | 71.0                              | 77.5                            | -2.5                                |  |
|                        | Dehree                  | 29.021                          | 29.081                     | +0.036               | SW                    | 134.4               | 86.4                      | 21st Oct.             | 69.0                | 10th "                | 82.0                      | 70.8                              | 78.4                            | -2.1                                |  |
| Shahabad               | Buxar                   | 29.073                          | 29.084                     | +0.033               | W                     | 114.2               | 85.9                      | 18th, 21st Oct.       | 69.3                | 18th "                | 83.8                      | 70.5                              | 77.2                            | -2.0                                |  |
|                        | Arrah                   | 29.058                          | 29.065                     | +0.022               | W                     | 60.0                | 86.8                      | 21st "                | 69.2                | 18th "                | 83.9                      | 70.7                              | 77.3                            | -2.5                                |  |
| Gya                    | Gya                     | 29.066                          | 29.048                     | -0.013               | Variable              | 65                  | 88.4                      | 21st "                | 69.2                | 18th "                | 85.3                      | 71.0                              | 78.2                            | -1.8                                |  |
| Patna                  | Bankipore               | 29.077                          | 29.084                     | +0.031               | W                     | 70                  | 88.9                      | 16th "                | 70.2                | 18th "                | 85.2                      | 71.5                              | 78.4                            | -1.7                                |  |
| South Bhagulpore       | Bhagulpore              | 29.032                          | 29.076                     | +0.044               | W                     | 79.9                | 87.4                      | 21st "                | 69.0                | 18th, 19th Oct.       | 84.6                      | 71.1                              | 77.9                            | -2.0                                |  |
| Monghyr                | Bhagulpore              | 29.032                          | 29.076                     | +0.044               | W                     | 79.9                | 87.4                      | 21st "                | 69.0                | 18th, 19th Oct.       | 84.6                      | 71.1                              | 77.9                            | -2.0                                |  |
| South 24-Pergunnahs    | Doonka                  | 29.040                          | —                          | —                    | Calm                  | 24.4                | 87.3                      | 18th "                | 65.4                | 18th "                | 85.8                      | 70.1                              | 77.9                            | —                                   |  |
| Hazaribagh             | Hazaribagh              | 29.071                          | 29.071                     | +0.042               | WSW, SE               | 189                 | 82.4                      | 18th, 19th, 21st Oct. | 62.4                | 18th "                | 81.2                      | 64.8                              | 73.0                            | -1.9                                |  |
| Lohardugga             | Ranchee                 | 27.8.5                          | 29.074                     | +0.031               | NW                    | 115.3               | 83.0                      | 16th "                | 60.4                | 19th "                | 81.8                      | 63.6                              | 72.6                            | -3.0                                |  |
| Manbhoom               | Ranchee                 | 27.8.5                          | 29.074                     | +0.031               | NW                    | 115.3               | 83.0                      | 16th "                | 60.4                | 19th "                | 81.8                      | 63.6                              | 72.6                            | -3.0                                |  |
| Singbhoom              | Chyabansa               | 29.206                          | —                          | —                    | SSW                   | 20.4                | 89.9                      | 15th "                | 64.7                | 10th "                | 80.0                      | 68.6                              | 78.8                            | —                                   |  |
|                        | Situgar                 | 29.063                          | 30.000                     | +0.018               | S                     | 45                  | 87.0                      | 21st "                | 63.9                | 21st "                | 85.0                      | 71.3                              | 78.4                            | +0.1                                |  |
| Assam                  | Dhubri                  | 29.081                          | 29.083                     | +0.045               | Calm                  | 90                  | 87.3                      | 21st "                | 71.8                | 17th "                | 84.0                      | 72.7                              | 78.3                            | -1.1                                |  |
|                        | Silchar                 | 29.078                          | 29.083                     | +0.007               | SSE                   | 41                  | 90.5                      | 19th "                | 70.3                | 17, 18, 21 Oct.       | 87.2                      | 71.7                              | 79.5                            | -1.0                                |  |

Summary. — The normal means of air pressure and temperature are the arithmetical average or means of the readings during the same period as the actual observations. The humidity of the atmosphere is expressed as percentage, saturated air being represented by 100. The numerical means or average of the rainfall in that district.

the week ending Friday, the 21st October 1887.

| DISTRICT OBSERVATIONS. |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |                  | Representative station. | DISTRICT. | METEOROLOGICAL DIVISION. |
|------------------------|---|--|--------------------|--------------|---------------------|--------------|------------|--------------------|--------------|------------|-------------------------------|------------------------------|------------------|-------------------------|-----------|--------------------------|
| at 10 A.M.             | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | OF WEEK.           |              | RAINFALL.           |              |            |                    |              |            |                               |                              |                  |                         |           |                          |
|                        |   |  | Mean for district. | Normal mean. | Since 1st of month. |              |            | Since May 15th.    |              |            | Average number of rainy days. | Normal number of rainy days. |                  |                         |           |                          |
|                        |   |  |                    |              | Mean for district.  | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. |                               |                              |                  |                         |           |                          |
| 80                     | 2.0                                       | Nil                                    | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | —                | Gopalpore               | Pooras    | ORISSA.                  |
| 89                     | 4.9                                       | 0.7                                    | 0.05               | 1.40         | 0.32                | 5.25         | +1.07      | 41.21              | 50.33        | -9.14      | 0.5                           | 2.0                          | False Point      | Cuttack                 |           |                          |
| 89                     | 4.7                                       | 0.75                                   | 0.06               | 0.81         | 2.21                | 3.73         | -1.52      | 52.53              | 48.55        | -5.98      | 0.2                           | 1.6                          | Cuttack          | Cuttack                 |           |                          |
| 89                     | 1.3                                       | 0.63                                   | 0.22               | 0.77         | 2.84                | 4.08         | -1.24      | 41.38              | 51.14        | -9.76      | 0.7                           | 1.1                          | Balasore         | Balasore                |           |                          |
| 75                     | 3.7                                       | Nil                                    | 0.20               | 1.57         | 4.96                | 4.40         | +0.52      | 50.80              | 57.82        | -7.02      | 1.0                           | 1.3                          | Saugor Island    | South-West Midnapore    |           |                          |
| 34                     | 1.4                                       | 0.05                                   | 0.14               | 1.00         | 2.24                | 3.12         | -0.88      | 50.41              | 49.29        | +1.12      | 0.7                           | 0.7                          | Midnapore        | South 24-Pergunnahs     |           |                          |
| 72                     | 3.4                                       | 0.15                                   | 0.32               | 1.09         | 2.96                | 3.14         | -0.18      | 40.45              | 50.10        | -9.65      | 1.1                           | 1.1                          | Calcutta         | Midnapore               |           |                          |
| 84                     | 2.7                                       | 0.36                                   | 0.15               | 0.03         | 1.40                | 3.05         | -1.50      | 44.44              | 44.81        | -0.40      | 1.0                           | 0.8                          | Burdwan          | 24-Pergunnahs           |           |                          |
| 89                     | 1.6                                       | 0.99                                   | 0.12               | 1.12         | 1.16                | 3.27         | -2.11      | 49.21              | 50.59        | -1.38      | 1.0                           | 1.2                          | Bankura          | Howrah                  |           |                          |
| 83                     | 2.9                                       | 0.13                                   | 0.83               | 1.02         | 2.20                | 2.80         | -0.60      | 47.22              | 51.08        | -3.86      | 1.5                           | 1.0                          | Raneegunge       | Hooghly                 |           |                          |
| 75                     | 3.0                                       | 1.44                                   | 0.37               | 1.43         | 3.1                 | 3.81         | -0.71      | 54.62              | 48.19        | +6.43      | 1.3                           | 1.2                          | Berhampore       | Burdwan                 |           |                          |
| 88                     | 3.4                                       | 0.0                                    | 0.27               | 0.80         | 3.04                | 3.21         | +0.17      | 42.77              | 47.61        | -4.84      | 0.8                           | 1.0                          | Krishnagur       | Bankura                 |           |                          |
| 75                     | 3.1                                       | 0.37                                   | 0.51               | 1.15         | 4.50                | 3.18         | +1.32      | 40.8               | 51.54        | -10.75     | 0.9                           | 1.1                          | Jessore          | Bankoora                |           |                          |
| 76                     | 4.7                                       | 1.14                                   | 1.24               | 0.70         | 4.79                | 4.79         | 0          | 87.39              | 109.81       | -22.42     | 1.5                           | 1.6                          | Chittagong       | Beerbhoom               |           |                          |
| 74                     | 3.3                                       | 0.10                                   | 0.40               | 1.00         | 4.10                | 4.23         | -0.13      | 54.70              | 74.6         | -19.90     | 1.3                           | 1.4                          | Demagiri         | West Burdwan            |           |                          |
| 73                     | 1.6                                       | 0.22                                   | 0.20               | 0.9          | 4.60                | 5.31         | -0.71      | 67.70              | 104.70       | -37.00     | 1.0                           | 1.7                          | Barrisal         | Moorshedabad            |           |                          |
| 76                     | 1.3                                       | 1.70                                   | 0.50               | 1.1          | 4.30                | 3.64         | +0.66      | 35.50              | 54.54        | -19.04     | 1.0                           | 1.2                          | Nonkholly        | Nuddea                  |           |                          |
| 73                     | 5.4                                       | 1.35                                   | 1.4                | 0.7          | 4.10                | 3.34         | +0.76      | 39.18              | 54.30        | -15.12     | 1.5                           | 0.9                          | Dacca            | Jessore                 |           |                          |
| 72                     | 2.7                                       | 1.61                                   | 0.50               | 0.81         | 3.7                 | 4.11         | -0.41      | 40.8               | 68.04        | -27.24     | 1.0                           | 1.2                          | Commillah        | Khoolna                 |           |                          |
| 70                     | 5.3                                       | 2.33                                   | 2.10               | 1.1          | 5.10                | 3.82         | +1.28      | 60.11              | 65.31        | -5.20      | 1.4                           | 1.3                          | Mymensingh       | Chittagong              |           |                          |
| 78                     | 6.4                                       | 0.95                                   | 0.4                | 1.4          | 4.0                 | 3.86         | +0.14      | 60.25              | 55.6         | +4.60      | 0.5                           | 1.2                          | Bogra            | Chittagong Hill Tracts  |           |                          |
| 73                     | 3.1                                       | 1.16                                   | 1.55               | 1.11         | 4.1                 | 3.55         | +0.55      | 43.07              | 52.03        | -8.96      | 1.0                           | 1.2                          | Senagunge        | Backergunge             |           |                          |
| 71                     | 3.3                                       | 0.41                                   | 0.50               | 1.50         | 3.12                | 3.90         | -0.78      | 49.32              | 52.72        | -3.40      | 1.5                           | 1.0                          | Rampore Beaulieu | Nonkholly               |           |                          |
| 72                     | 2.0                                       | 0.33                                   | 0.49               | 0.4          | 2.50                | 2.8          | -0.3       | 46.57              | 53.20        | -6.63      | 1.0                           | 1.0                          | Maldah           | Nonkholly               |           |                          |
| 67                     | 3.0                                       | 1.92                                   | 1.26               | 0.9          | 4.38                | 3.18         | +1.20      | 69.07              | 54.97        | +14.10     | 1.0                           | 0.9                          | Binnagore        | Furzedpore              |           |                          |
| 73                     | 2.3                                       | 2.01                                   | 1.97               | 1.1          | 3.6                 | 4.08         | -0.48      | 80.51              | 71.77        | +8.74      | 1.0                           | 0.8                          | Rungpore         | Furzedpore              |           |                          |
| 81                     | 3.4                                       | 1.26                                   | 1.10               | 1.20         | 2.3                 | 5.08         | -2.78      | 117.40             | 108.80       | +8.60      | 1.2                           | 1.5                          | Julpigoree       | Nonkholly               |           |                          |
| 91                     | 7.1                                       | 0.42                                   | 0.71               | 0.80         | 4.76                | 4.63         | +0.13      | 116.80             | 117.60       | -0.80      | 3.0                           | 1.0                          | Darjeeling       | Nonkholly               |           |                          |
| 77                     | 2.0                                       | 2.37                                   | 1.20               | 0.40         | 3.80                | 2.69         | +1.11      | 65.04              | 50.42        | +14.62     | 1.2                           | 0.6                          | Purneah          | Furzedpore              |           |                          |
| 70                     | 2.0                                       | 1.77                                   | 1.56               | 0.20         | 3.28                | 2.23         | +1.05      | 49.62              | 42.91        | +6.71      | 1.0                           | 0.4                          | Mozufferpore     | Purneah                 |           |                          |
| 69                     | 2.0                                       | 3.30                                   | 1.84               | 0.14         | 7.20                | 3.0          | +4.20      | 49.40              | 55.37        | -5.97      | 1.0                           | 0.2                          | Durbhanga        | North Bhagulpore        |           |                          |
| 80                     | 1.7                                       | 1.98                                   | 1.81               | 0.10         | 5.40                | 3.75         | +1.65      | 39.35              | 41.58        | -2.23      | 1.0                           | 0.5                          | Chupra           | Mozufferpore            |           |                          |
| 60                     | 1.1                                       | 1.50                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Dohre            | Durbhanga               |           |                          |
| 68                     | 2.9                                       | 1.37                                   | 0.04               | 0.30         | 5.00                | 3.48         | +1.52      | 37.15              | 38.31        | -1.16      | 0.2                           | 0.6                          | Buxar            | Chumpran                |           |                          |
| 70                     | 2.0                                       | 1.93                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Arrah            | Sarun                   |           |                          |
| 82                     | 2.6                                       | 0.04                                   | 0.51               | 0.32         | 2.08                | 2.20         | -0.12      | 38.00              | 40.65        | -2.65      | 0.8                           | 0.8                          | Gya              | Sarun                   |           |                          |
| 89                     | 4.4                                       | 0.64                                   | 0.89               | 0.35         | 2.62                | 2.38         | +0.24      | 36.04              | 39.74        | -3.70      | 1.0                           | 0.8                          | Bankipore        | Gya                     |           |                          |
| 74                     | 1.4                                       | 0.07                                   | 1.19               | 0.30         | 2.40                | 2.32         | +0.08      | 42.93              | 41.41        | +1.52      | 0.6                           | 0.6                          | Bhagulpore       | Patna                   |           |                          |
| 84                     | 1.4                                       | 0.80                                   | 1.03               | 0.68         | 2.91                | 3.22         | -0.31      | 52.48              | 49.28        | +3.20      | 1.2                           | 1.0                          | Doonka           | South Bhagulpore        |           |                          |
| 85                     | 2.7                                       | 1.26                                   | Nil                | 0.60         | 1.37                | 2.80         | -1.43      | 46.42              | 40.07        | +6.35      | 0.0                           | 1.1                          | Hazaribagh       | Monghyr                 |           |                          |
| 88                     | 3.4                                       | 0.53                                   | 0.47               | 0.58         | 1.80                | 2.41         | -0.61      | 44.33              | 45.54        | -1.21      | 1.0                           | 0.9                          | Raichee          | Southal Pergunnahs      |           |                          |
| 81                     | 3.0                                       | Nil                                    | Nil                | 0.44         | 0.10                | 1.94         | -1.75      | 49.49              | 49.67        | +0.18      | 0.0                           | 1.2                          | Ohyebassa        | Lohardugga              |           |                          |
| 82                     | 6.3                                       | 0.43                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Sibsagar         | Manbhoom                |           |                          |
| 81                     | 2.0                                       | 1.32                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Dhubri           | Singhbhoom              |           |                          |
| 78                     | 6.6                                       | 0.17                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Silchar          | Singhbhoom              |           |                          |

— for the week is less than the corresponding normal mean, and positive when greater.





**SUPPLEMENT TO THE CALCUTTA GAZETTE, OCTOBER 26, 1887.**

**Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the of 21st October 1887—*cond.***

| Ordnance Division.   | District.           | Station.                 | RAINFALL.               |                       |                       |                        |                          |                         |                       | TOTAL                 |                   | Total rain-fall since 1st of month. | Average total rain-fall from 1st of month. | Total rain-fall since 18th May 1887. | Av. ra. from 1 to |
|----------------------|---------------------|--------------------------|-------------------------|-----------------------|-----------------------|------------------------|--------------------------|-------------------------|-----------------------|-----------------------|-------------------|-------------------------------------|--|--------------------------------------|-------------------|
|                      |                     |                          | Saturday, 15th October. | Sunday, 16th October. | Monday, 17th October. | Tuesday, 18th October. | Wednesday, 19th October. | Thursday, 20th October. | Friday, 21st October. | Number of rainy days. | of Rainfall week. |                                     |  |                                      |                   |
| THE BENGAL DIVISION. | Shahabad            | Gopalgunge ...           | 0.00                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.00              | 5.53                                | 5.45                                       | 41.60                                | 4                 |
|                      |                     | Sewan ...                | 0.22                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.22              | 0.00                                | 2.90                                       | 34.94                                | 4                 |
|                      |                     | Chunrah ...              | 1.02                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.22              | 4.95                                | 2.82                                       | 37.22                                | 3                 |
|                      |                     | Buxar ...                | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | 1.62              | 4.74                                | 2.44                                       | 33.50                                | 3                 |
|                      |                     | Denree ...               | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.62                                | ?  | 37.80                                | ?                 |
|                      |                     | Rhubonah ...             | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4.05                                | 2.50                                       | 40.78                                | 3                 |
|                      |                     | Sasseram ...             | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4.43                                | 2.08                                       | 35.44                                | 3                 |
|                      |                     | Arrah ...                | 2.57                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | Nil               | 5.80                                | 2.45                                       | 40.35                                | 3                 |
|                      |                     | Mohaula ...              | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | 2.57              | 3.20                                | ?  | ?                                    | ?                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | .....                               | .....                                      | .....                                | .....             |
| THE BENGAL DIVISION. | G. S.               | Aurangabad ...           | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.08                                | 2.00                                       | 20.23                                | 4                 |
|                      |                     | Gaya ...                 | 0.03                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.03              | 0.73                                | 1.77                                       | 42.13                                | 4                 |
|                      |                     | Nowadah ...              | 1.00                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.03              | 1.67                                | 2.08                                       | 35.02                                | 3                 |
|                      |                     | Jehanabad ...            | 0.05                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 1.00              | 8.03                                | 2.70                                       | 45.61                                | 3                 |
|                      |                     | Arwal ...                | 0.10                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.05              | 4.60                                | ?  | 30.24                                | ?                 |
|                      |                     | Daudnagar ...            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | 0.10              | 2.4                                 | ?  | 27.51                                | ?                 |
|                      |                     | Sherrghati ...           | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.87                                | ?  | 36.75                                | ?                 |
|                      |                     | Rajauli ...              | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.20                                | ?  | 27.43                                | ?                 |
|                      |                     | Pakri Barawan ...        | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.00                                | ?  | 21.42                                | ?                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | .....                               | .....                                      | .....                                | .....             |
| THE BENGAL DIVISION. | Patna               | Patna ...                | 0.52                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.52              | 3.20                                | 2.45                                       | 36.30                                | 4                 |
|                      |                     | Dinapore ...             | 0.48                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.52              | 2.83                                | 2.32                                       | 37.50                                | 3                 |
|                      |                     | Bohar ...                | 1.15                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.44              | 1.16                                | 2.41                                       | 34.30                                | 4                 |
|                      |                     | Barh ...                 | 2.40                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.15              | 3.40                                | 2.25                                       | 35.71                                | 3                 |
|                      |                     | Bickram ...              | 0.10                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.70              | 0.70                                | ?  | 30.75                                | ?                 |
|                      |                     | Hilsa ...                | 1.87                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.10              | 3.38                                | ?  | 33.54                                | ?                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 1.87              | .....                               | .....                                      | .....                                | .....             |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 1.40              | 2.51                                | 2.12                                       | 48.98                                | 3                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 3.00              | 3.04                                | 2.57                                       | 40.64                                | 4                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 1.56              | 2.07                                | 1.94                                       | 38.99                                | 4                 |
| THE BENGAL DIVISION. | South Haugul-pore.  | Gogri ...                | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.60                                | ?  | 42.83                                | ?                 |
|                      |                     | Sheikpura ...            | 2.05                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 2.05              | 2.05                                | ?  | 28.18                                | ?                 |
|                      |                     | Shaukulpore ...          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.28                                | 2.58                                       | 40.85                                | 4                 |
|                      |                     | Banka ...                | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.04                                | 2.62                                       | 30.34                                | 4                 |
|                      |                     | Kolgong ...              | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.87                                | ?  | 43.27                                | ?                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | .....                               | .....                                      | .....                                | .....             |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.44              | 4.00                                | 2.37                                       | ?                                    | ?                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.41              | 1.31                                | 2.00                                       | 40.10                                | 4                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 2                     | 0.35              | 0.35                                | 3.67                                       | 77.71                                | 52                |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.68              | 0.60                                | 3.54                                       | 41.77                                | 52                |
| THE BENGAL DIVISION. | Sonthal Pergunnahs. | Deognur ...              | 1.08                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 1.66              | 2.00                                | 3.27                                       | 46.71                                | 48                |
|                      |                     | Jamtara ...              | 0.09                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.00              | 2.20                                | 2.48                                       | 35.80                                | 48                |
|                      |                     | Simra ...                | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.00              | .....                               | .....                                      | .....                                | .....             |
|                      |                     | Kunkhat ...              | 0.67                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.67              | 1.73                                | ?  | 30.54                                | ?                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.00                                | 2.40                                       | 40.07                                | 46                |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.40                                | 2.50                                       | 45.43                                | 46                |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.14                                | 3.08                                       | 30.32                                | 45                |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.10                                | 2.58                                       | 40.26                                | 46                |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.20                                | 3.72                                       | 57.10                                | 01                |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.16                                | ?  | 38.27                                | ?                 |
| THE BENGAL DIVISION. | Lohardugga...       | Kanchi ...               | 0.73                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.73              | 1.03                                | 2.20                                       | 56.43                                | 40                |
|                      |                     | Paimow ...               | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.10                                | 2.10                                       | 48.20                                | 40                |
|                      |                     | Salt ...                 | 0.60                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.60              | 1.00                                | ?  | 42.00                                | ?                 |
|                      |                     | Batumat ...              | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.24                                | ?  | 31.08                                | ?                 |
|                      |                     | Mossinabad... Garwah ... | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4.70                                | ?  | 52.79                                | ?                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.19                                | 1.04                                       | 40.40                                | 40                |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.68                                | ?  | 36.00                                | ?                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.80                                | ?  | 53.40                                | ?                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.27              | 1.68                                | ?  | 38.60                                | ?                 |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 2                     | 0.65              | 2.84                                | 2.50                                       | 44.00                                | 47.4              |
| THE BENGAL DIVISION. | Manbhoom            | Govindpore ...           | 0.61                    | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.51              | 0.81                                | 2.87                                       | 29.53                                | 41.0              |
|                      |                     | Kaghunath-pore.          | 0.60                    | 0.30                  | .....                 | .....                  | .....                    | .....                   | .....                 | 2                     | 0.06              | 2.08                                | ?  | 30.80                                | ?                 |
|                      |                     | Barrabhoom...            | .....                   | 0.30                  | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.30              | 1.27                                | ?  | 40.02                                | ?                 |
|                      |                     | Jhalda ...               | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | .....                               | .....                                      | .....                                | .....             |
|                      |                     | Chas ...                 | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | .....                               | .....                                      | .....                                | .....             |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | .....                               | .....                                      | .....                                | .....             |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | .....                               | .....                                      | .....                                | .....             |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | .....                               | .....                                      | .....                                | .....             |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | .....                               | .....                                      | .....                                | .....             |
|                      |                     | .....                    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | .....                               | .....                                      | .....                                | .....             |

*vacation.*—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns being, the corresponding spaces in the total rainfall columns are left blank.

**CALCUTTA, the 25th October 1887.**

**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS  
TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE 21st OF  
OCTOBER 1887.**

THE meteorology of the previous week ending 14th October had been very important from the fact that a small cyclonic storm had formed in the south of the Bay, which crossed the coast a little to the north of Madras and travelled across the Peninsula into the Arabian sea. The indraught following in the path of the storm caused the humid south-west monsoon winds to again advance over the northern half of the Bay, and they then slowly spread over the whole of Bengal. Rain had therefore been general in Bengal in the previous week, and particularly during the last two days, very general and decidedly heavy rain was received in all districts of the Province. It was, however, evident at the close of that week, that this burst of monsoon winds and rain was rapidly diminishing in strength and retreating, for on Friday, the 14th, winds were becoming decidedly irregular in direction over the northern districts of the Province. On Saturday, 15th October, or the first day of the present week, wind directions over the north of the Province continued decidedly irregular, and at some of the western stations winds had become westerly; so that it was clear the wind systems were changing, and that the moist south-easterly and easterly current was being driven back by a dry westerly and north-westerly current. On the 16th of October the easterly element in the wind directions had almost disappeared, and winds had become northerly and north-westerly at many stations. These conditions developed further on the following day, and for the greater part of the remainder of the week a light northerly wind current has obtained over the Province, though there were slight oscillations during which southerly winds were reported at some stations, but only to be again driven back by the northerly current. The moist monsoon current therefore only affected the Province during the first day or two of the present week, and thus rainfall was only general on the 15th. On the 16th a considerable number of showers were reported in South-West, East and North Bengal, but for the remainder of the week the Province has been practically rainless, and at the close of the week conditions appeared to be becoming decidedly favourable for the setting in of the north-east monsoon or the cold-weather conditions in Bengal.

**Pressure.**—The retreat of the humid monsoon winds from the Province during the early part of the week was accompanied by a diminution of the air pressure. The falling barometer continued during the first-half of the week, and it was then succeeded by an equally steady rise. In the previous week pressure was rather considerably in excess of the normal; but as at the present season it is normal for pressure to increase, the general effect of the changes during the week has been to reduce the excess pressure. During the previous week pressure was in excess by 0·073 inch, and during the present week, taking into consideration only those stations which have recorded observations for many years, and which therefore furnish reliable averages, the mean pressure has been only 0·042 inch in excess of the normal. This excess pressure has been very equally divided over the whole Province of Bengal. In Assam also pressure has been in excess of the normal by 0·034 inch.

**Temperature.**—With the effects of the rather heavy rain of the previous week, and with the setting in of a cool northerly wind current during the present week, temperature has been below the normal over the whole of Bengal. The mean temperature for the week has been between 1° and 2° below the normal in each of the districts of Orissa, South-West, East and North Bengal; while in North and South Behar and in Chutia Nagpur the defect has been from 2° to 3°. The general mean temperature of the whole of Bengal has been 1·7° below the normal for the period. In Assam temperature has also been in defect by 0·7°.

**Rainfall.**—The only days on which rain was at all general were the 15th and 16th, but in many districts the falls were rather heavy. Thus, on the 15th, Bagaha in the Chumparun district reported 7·30 inches of rain, Netrokona in the Mymensingh district received 4·10 inches, Dinagepore 3·41 inches, and Monghyr three inches; while the following stations received between two and three inches:—In South-West Bengal, Bolpore (Beerbhoom district); in East Bengal, Mymensingh and Jamalpore (Mymensingh district); in North Bengal, Bhowanigunge, and Bagdogra in the Rungpore district and Debigunge in the Julpigoree district; in North Behar, Purneah, Madhubani (Durbhunga district), Sitamarhi (Mozufferpore district) and Motihari; and in South Behar, Arrah, Barrh (Patna district), Sheikhpura (Monghyr district), and Pakour (Sonthal Pergunnahs district). The number of stations reporting amounts between one and two inches is rather considerable, and about 50 stations in addition to those abovenamed have thus received heavy falls. The average rainfall over the whole of East Bengal, North Bengal, and North Behar has averaged from one to one and a third inches; in South Behar the fall has averaged 0·88 inch; in South-West Bengal it has been 0·45 inch; and in Orissa and Chutia Nagpur it has equalled about a fifth of an inch. Compared with the normal fall for the period, and expressed as a percentage of that amount, the actual average falls received in the seven large meteorological districts became in Orissa 16 per cent., South-West Bengal 40 per cent., East Bengal 111 per cent., North Bengal 100 per cent., North Behar 471 per cent., South Behar 200 per cent. and in Chutia Nagpur 40 per cent. Taking each of these divisions as having an equal value in the calculation, the average rainfall over the whole Province for the week has equalled 140 per cent. of the normal.

In Assam the following rainfalls have been recorded during the week :—Dhubri 1·32 inches, Sibsagar 0·43 inch, and Silchar 0·17 inch.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 21st of October 1887 :—

| METEOROLOGICAL DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          | RAINFALL.       |            |                         |                                |            |                     |                 |                      |                 |
|---------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|
|                           | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 16th May 1887. |                 |
|                           |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. | Average.             | Normal average. |
|                           |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |                 |
|                           |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                     |                 |                      |                 |
| Orissa                    | 84·4                          | 68·9                         | 87·8                    | 73·8                   | 80·8                  | -1·0   | 0·15     | 0·95            | -0·80      | 0·5                     | 1·5                            | -1·0       | 2·64                | 4·27            | 40·93                | 50·06           |
| South-West Bengal         | 89·3                          | 67·0                         | 86·7                    | 72·7                   | 79·7                  | -1·7   | 0·45     | 1·11            | -0·06      | 1·0                     | 1·1                            | -0·1       | 3·11                | 3·33            | 46·33                | 50·14           |
| East Bengal               | 89·4                          | 68·8                         | 86·2                    | 73·0                   | 79·6                  | -1·2   | 1·05     | 0·95            | +0·10      | 1·2                     | 1·3                            | -0·1       | 4·05                | 4·19            | 52·73                | 71·50           |
| North Bengal              | 89·6                          | 68·7                         | 83·3                    | 72·1                   | 78·7                  | -1·4   | 1·10     | 1·10            | 0          | 1·0                     | 1·1                            | -0·1       | 3·56                | 3·87            | 73·50                | 68·47           |
| North Behar               | 86·7                          | 63·8                         | 83·6                    | 70·6                   | 77·1                  | -2·2   | 1·32     | 0·28            | +1·04      | 1·1                     | 0·5                            | +0·6       | 4·01                | 2·82            | 51·99                | 46·96           |
| South Behar               | 88·9                          | 65·4                         | 84·3                    | 70·8                   | 77·6                  | -2·2   | 0·88     | 0·44            | +0·44      | 0·8                     | 0·7                            | +0·1       | 3·14                | 2·63            | 41·85                | 42·33           |
| Cooch Behar               | 83·0*                         | 60·4*                        | 81·5*                   | 64·2*                  | 72·8*                 | -2·5*  | 0·20     | 0·50            | -0·30      | 0·4                     | 1·0                            | -0·6       | 1·55                | 2·61            | 44·64                | 47·06           |
| Assam                     | 90·5                          | 60·9                         | 85·4                    | 71·9                   | 78·7                  | -0·7   |          |                 |            |                         |                                |            |                     |                 |                      |                 |

\* Chyabasa not included

METEOROLOGICAL OFFICE, BENGAL :

The 25th October 1887.

A. PEDLER,

Offg. Meteorological Reporter to the Govt. of Bengal.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 16th to 22nd October 1887.

| MONTH.  |     | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|---------|-----|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|         |     |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.   |     |       | °            | °        | "      | °        | °              | Inches.         | °          | %         | Inches. |
| October | ... | 16th  | 80·1         | 85·9     | 10·6   | 75·3     | 77·1           | 892             | 75·8       | 87        | 0·06    |
| "       | ... | 17th  | 80·5         | 87·4     | 12·8   | 74·6     | 75·4           | 813             | 73·0       | 78        | —       |
| "       | ... | 18th  | 79·6         | 88·0     | 15·0   | 73·0     | 72·9           | 720             | 69·4       | 71        | —       |
| "       | ... | 19th  | 79·0         | 89·0     | 19·0   | 70·0     | 73·5           | 753             | 70·7       | 76        | —       |
| "       | ... | 20th  | 77·9         | 87·4     | 16·8   | 70·6     | 73·8           | 780             | 71·7       | 82        | —       |
| "       | ... | 21st  | 78·6         | 88·2     | 17·9   | 70·3     | 72·9           | 733             | 69·9       | 75        | —       |
| "       | ... | 22nd  | 80·1         | 89·0     | 16·7   | 72·3     | 74·9           | 796             | 72·4       | 77        | —       |

The mean temperature of the seven days

The extreme variation of temperature

The maximum temperature

The mean relative humidity

The total fall of rain from 16th to 22nd October 1887

The mean temperature and humidity are obtained by applying to the mean of the 10th, 16th, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA ;

The 24th October 1887.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.



**Results of the Meteorological Observations taken at the Alipore Observatory from  
16th to 22nd October 1887.**

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 55° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                    |     | Miles recorded. | Rain.   | WEATHER.                            |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|--------------------------|-----|-----------------|---------|-------------------------------------|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction.    |     |                 |         |                                     |
| 1887.  |       | O               |                                     | Inches                               | O            | O        | O      | O        | O              | Inches          | O          | %         |                          |     |                 | Inches. |                                     |
| Oct.   | 16th  | 145.4           | 7.3                                 | 29.886                               | 78.9         | 84.0     | 9.0    | 75.0     | 76.1           | 0.866           | 74.9       | 88        | WSW and N                | ... | 56              | 0.15    | Partially cloudy,<br>O, G, P, =, D. |
| "      | 17th  | 146.7           | 10.5                                | .865                                 | 79.2         | 84.6     | 10.1   | 74.5     | 75.8           | .849            | 74.3       | 86        | N and NW                 | ... | 63              | Nil     | Partially cloudy,<br>O, D.          |
| "      | 18th  | 142.7           | 10.5                                | .855                                 | 77.9         | 84.7     | 11.7   | 73.0     | 72.8           | .730            | 70.2       | 79        | NW by N and NW           |     | 69              | "       | Partially cloudy,<br>=, D.          |
| "      | 19th  | 144.5           | 10.9                                | .889                                 | 77.0         | 84.6     | 14.7   | 69.9     | 72.4           | .738            | 70.2       | 81        | NWW by N and<br>SW by W. |     | 61              | "       | Chiefly clear,<br>=, D.             |
| "      | 20th  | 147.5           | 10.1                                | .925                                 | 77.3         | 84.7     | 14.9   | 69.8     | 73.0           | .757            | 70.9       | 82        | SW by W and WSW          |     | 48              | "       | Chiefly clear.<br>=, D.             |
| "      | 21st  | 139.5           | 9.7                                 | .938                                 | 77.7         | 84.9     | 14.5   | 70.4     | 73.4           | .766            | 71.2       | 81        | WSW and W by N           |     | 49              | "       | Chiefly clear,<br>=, D.             |
| "      | 22nd  | 143.5           | 10.8                                | .920                                 | 79.8         | 86.5     | 13.8   | 72.7     | 74.6           | .791            | 72.2       | 78        | W by N and NNW           |     | 73              | "       | Chiefly clear,<br>D.                |

The mean pressure of the seven days

The average pressure of the corresponding period for 24 years, S. G.'s Office

Inches.  
29.897  
29.866

The total number of hours of bright sunshine

The maximum possible number of hours of sunshine

Hours.  
70.1  
80.7

The mean temperature of the seven days

The average temperature of the corresponding period for 24 years, S. G.'s Office

The extreme variation of temperature

The maximum temperature

°  
78.3  
81.6  
16.7  
86.5

The highest velocity of the wind in one hour

The highest pressure of wind on one square foot

Miles.  
7  
lbs.

... Not measurable.

The mean relative humidity

The average relative humidity of the corresponding period for 24 years, S. G.'s Office

%  
82  
77

The total fall of rain from 16th to 22nd October 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

The total fall from 1st January to 22nd October 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

Inches  
0.15  
0.78  
57.81  
62.65

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The month of the rain-gauge is one foot above the ground.

o overcast, g gloomy, p passing temporary showers, = fog, D dew.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA ;  
Calcutta, the 24th October 1887.

CIRCULAR AND EASTERN CANALS.

*Approximate return of traffic for the week ending Saturday, the 22nd October 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO. |     |     | WEEK ENDING SATURDAY, THE<br>22ND OCTOBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>23RD OCTOBER 1886. |                     |          |
|------------------|-----|-----|---|---------------------|----------|---|---------------------|----------|
|                  |     |     | Number of<br>boats.                             | Weight of<br>cargo. | Tollage. | Number of<br>boats.                             | Weight of<br>cargo. | Tollage. |
|                  |     |     | No.   | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy   | ... | ... | 838   | 1,25,397            | 1,870    | 627   | 77,510              | 1,208    |
| Jute             | ... | ... | 311   | 1,63,555            | 2,902    | 186   | 87,545              | 1,521    |
| Firewood         | ... | ... | 124   | 53,505              | 624      | 169   | 87,770              | 1,263    |
| Other articles   | ... | ... | 1 073   | 2,65,151            | 4,025    | 838   | 1,87,523            | 2,877    |
| Total            | ... | ... | 2,346   | 6,07,608            | 9,421    | 1,820   | 4,40,348            | 6,869    |

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 15th October 1887, on 1,513½ miles open.

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings.   | TRAFFIC TRAIN-MILES RUN. |              |            |
|--|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-------------------|--------------------------|--------------|------------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |                   | Coaching.                | Merchandise. | Total.     |
|  |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.         |                          |              |            |
| al traffic for the week ...                                | 215,035               | 2,05,137 14 0      | 23,19,702 0                      | 5,46,372 2 0  | 15,687 1 0                  | 8,27,217 1 0      | 63,780½                  | 85,098       | 148,884½   |
| er mile of railway ...                                     | .....                 | 175 2 8            | .....                            | 360 15 0      | 10 5 10                     | 546 7 6           | .....                    | .....        | .....      |
| previous 14 weeks of half-year ...                         | 8,433,053             | 34,80,703 3 0      | 2,98,58,424 30                   | 63,26,966 4 2 | 2,40,022 3 9                | 1,00,53,691 10 11 | 925,021½                 | 1,121,803½   | 2,046,825  |
| Total for 15 weeks ...                                     | 8,648,069             | 37,51,861 1 0      | 3,21,78,186 30                   | 68,73,338 6 2 | 2,55,709 4 9                | 1,08,80,904 11 11 | 988,807½                 | 1,206,901½   | 2,195,709½ |
| COMPARISON.  |                       |                    |                                  |               |                             |                   |                          |              |            |
| al for corresponding week of previous year ...             | 217,607½              | 2,58,172 6 4       | 18,59,319 0                      | 4,06,742 8 0  | 16,200 12 10                | 6,81,115 11 2     | 67,212                   | 65,718       | 132,930    |
| er mile of railway corresponding week of previous year ... | .....                 | 170 6 7            | .....                            | 268 7 8       | 10 11 1                     | 449 9 4           | .....                    | .....        | .....      |
| al to corresponding date of previous year ...              | 3,530,831½            | 38,45,031 12 8     | 3,24,50,789 30                   | 70,55,325 0 0 | 2,67,022 14 1               | 1,17,07,982 10 0  | 1,060,338                | 1,371,476    | 2,431,714  |

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 16TH OCTOBER 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 16TH OCTOBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 15TH OCTOBER 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                                   | Per mile worked. | Mean mileage worked. | Receipts.                                   | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Rs.                     | R.                      |
| Rs.   | Rs.              |                      | Rs.   | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              |                      | Rs.                     | R.                      |
| 6,81,116                                    | 450              | 1,513½               | 8,27,217                                    | 546              | 1,515                | 2,45,51,565  | 579              | 1,513½               | 2,32,98,456  | 548              | .....                | .....                   | 12,63,109               |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 15th October 1887, on 57½ miles open.

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| al traffic for the week ...                                | 9,960                 | 5,457 4 0          | 39,144 0                         | 2,772 12 0 | 44 0 0                      | 8,274 0 0       | 1,966                    | 438          | 12,394 |
| er mile of railway ...                                     | 174                   | 95 6 6             | 688 0                            | 48 7 7     | 0 12 4                      | 144 10 5        | .....                    | .....        | .....  |
| previous 14 weeks of half-year ...                         | 203,336               | 1,08,450 1 0       | 4,91,439 20                      | 32,758 9 0 | 438 1 0                     | 1,40,646 11 0   | 25,545½                  | 10,318½      | 35,864 |
| Total for 15 weeks ...                                     | 213,316               | 1,12,907 5 0       | 5,31,383 20                      | 35,531 5 0 | 482 1 0                     | 1,48,920 11 0   | 27,501½                  | 10,756½      | 38,258 |
| COMPARISON.  |                       |                    |                                  |            |                             |                 |                          |              |        |
| al for corresponding week of previous year ...             | 9,214                 | 5,906 4 4          | 28,211 0                         | 2,075 10 0 | 27 10 9                     | 7,109 9 1       | 1,869                    | 554          | 2,413  |
| er mile of railway corresponding week of previous year ... | 161                   | 87 8 4             | 493 30                           | 36 4 7     | 0 7 9                       | 124 4 8         | .....                    | .....        | .....  |
| al to corresponding date of previous year ...              | 289,030½              | 1,57,885 11 7      | 6,33,728 0                       | 38,079 0 0 | 597 1 0                     | 1,77,161 13 1   | 28,127                   | 11,413       | 39,540 |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 16TH OCTOBER 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 15TH OCTOBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 15TH OCTOBER 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                                   | Per mile worked. | Mean mileage worked. | Receipts.                                   | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Rs.                     | Rs.                     |
| Rs.   | Rs.              |                      | Rs.   | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              |                      | Rs.                     | Rs.                     |
| 7,110                                       | 124              | 57½                  | 8,274                                       | 145              | 57½                  | 3,03,849   | 190              | 57½                  | 2,68,180   | 167              | .....                | .....                   | 35,669                  |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 15th October 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total  |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week...                           | 2,713                 | 489 11 0           | 8,727 10                         | 182 0 0    | 3 8 0                       | 693 9 0         | 414½                     | 79           | 493½   |
| Or per mile of railway                                  | 41 10 3               | .....              | .....                            | 15 0 8     | 0 4 8                       | 57 15 5         | .....                    | .....        | .....  |
| For previous 14 weeks of half-year                      | 41,443                | 7,055 5 0          | 1,32,594 0                       | 2,782 9 0  | 115 9 0                     | 9,954 7 0       | 5,594                    | 1,456        | 7,050  |
| Total for 15 weeks                                      | 44,156                | 7,535 0 0          | 1,31,321 10                      | 2,974 15 0 | 120 1 0                     | 10,630 0 0      | 6,008½                   | 1,535        | 7,543½ |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year           | 2,581½                | 443 14 8           | 8,152 30                         | 184 0 0    | 10 0 0                      | 638 4 8         | 406                      | 87           | 493    |
| Per mile of railway corresponding week of previous year | .....                 | 36 15 11           | .....                            | 15 5 10    | 0 13 4                      | 53 3 1          | .....                    | .....        | .....  |
| Total to corresponding date of previous year            | 40,329                | 6,786 14 1         | 1,37,548 30                      | 2,813 10 0 | 119 11 3                    | 9,760 3 4       | 6,141                    | 1,736        | 7,877  |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 15TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 15TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 12  | 638       | 53               | 12  | 690       | 55               | 12   | 27,022          | 80               | 12   | 25,250          | 75               | .....                   | 1,772                   |

## SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 15th October 1887, on 74½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week...                           | 6,549                 | 4,551 2 0          | 70,047 20                        | 3,752 1 0   | 118 0 0                     | 8,421 3 0       | 661                      | 1,744½       | 2,405½  |
| Or per mile of railway                                  | .....                 | 60 15 6            | .....                            | 50 2 7      | 1 9 3                       | 112 9 4         | .....                    | .....        | .....   |
| For previous 14 weeks of half-year                      | 73,247                | 54,391 11 9        | 12,80,324 20                     | 50,691 9 0  | 1,501 10 0                  | 1,06,284 14 9   | 9,877                    | 31,695½      | 31,475½ |
| Total for 15 weeks                                      | 79,796                | 58,942 13 9        | 13,50,272 0                      | 54,443 10 0 | 1,319 10 0                  | 1,14,706 1 9    | 10,538                   | 23,343       | 33,881  |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year           | 8,154                 | 5,100 4 4          | 94,674 0                         | 2,998 3 0   | 58 9 3                      | 8,247 0 7       | 761                      | 1,140        | 1,901   |
| Per mile of railway corresponding week of previous year | .....                 | 69 0 3             | .....                            | 40 1 4      | 0 12 6                      | 110 4 1         | .....                    | .....        | .....   |
| Total to corresponding date of previous year            | 77,391                | 55,840 3 5         | 12,89,878 10                     | 42,546 1 9  | 1,400 8 9                   | 99,905 13 11    | 10,733                   | 16,385       | 27,019  |

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 15TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 15TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 74½   | 8,247     | 110              | 74½   | 8,421     | 113              | 74½  | 1,06,180        | 84               | 74½  | 2,23,707        | 100              | 33,527                  | .....                   |

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 15th October 1887, on 22½ miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 15,959                | 4,474 5 0          | 5,148 20                         | 172 5 0    | 4 4 0                       | 4,651 0 0       | 929                      | 39           | 968    |
| Per mile of railway ...                                     | .....                 | 201 1 6            | .....                            | 7 11 11    | 0 3 1                       | 209 0 6         | .....                    | .....        | .....  |
| For previous 14 weeks of half-year ...                      | 329,204               | 62,822 11 0        | 57,350 30                        | 1,956 8 0  | 67 10 0                     | 64,846 13 0     | 13,310½                  | 703½         | 14,014 |
| Total for 15 weeks ...                                      | 345,163               | 67,297 0 0         | 62,498 10                        | 2,128 13 0 | 72 0 0                      | 69,497 13 0     | 14,239½                  | 742½         | 14,982 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 17,429½               | 4,498 9 0          | 1,314 30                         | 40 12 0    | 3 8 3                       | 4,542 13 3      | 953                      | 15           | 968    |
| Per mile of railway corresponding week of previous year ... | .....                 | 202 2 11           | .....                            | 1 13 4     | 0 2 6                       | 204 2 9         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 242,677½              | 60,050 1 10        | 43,074 0                         | 1,569 5 0  | 78 8 9                      | 61,637 15 7     | 14,720                   | 306          | 15,026 |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 16TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 16TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 15TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
| 22½   | Rs. 4,543 | Rs. 204          | 22½   | Rs. 4,651 | Rs. 209          | 22½  | Rs. 1,31,432    | Rs. 216          | 22½  | Rs. 1,46,570    | Rs. 215          | Rs. 12,138              | Rs. ....                |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 15th October 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,073                 | 980 1 3            | 45,815 10                        | 3,313 0 0  | 9 11 0                      | 4,302 12 3      | 403                      | 563          | 966    |
| Per mile of railway ...                                     | .....                 | 23 5 5             | .....                            | 78 14 1    | 0 3 8                       | 102 7 2         | .....                    | .....        | .....  |
| For previous 14 weeks of half-year ...                      | 30,614                | 12,907 0 3         | 1,31,768 0                       | 9,052 9 0  | 298 10 0                    | 22,318 3 3      | 4,839                    | 3,661        | 8,400  |
| Total for 15 weeks ...                                      | 32,687                | 13,947 1 6         | 1,77,583 10                      | 12,365 9 0 | 308 5 0                     | 26,020 15 6     | 5,242                    | 4,124        | 9,366  |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,525                 | 1,144 2 8          | 30,100 30                        | 1,623 11 0 | 25 5 0                      | 2,798 2 8       | 235                      | 353          | 588    |
| Per mile of railway corresponding week of previous year ... | .....                 | 27 3 10            | .....                            | 38 12 6    | 0 9 8                       | 65 10 0         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 53,500½               | 19,408 5 0         | 1,61,699 3                       | 17,240 2 0 | 309 2 6                     | 34,048 10 0     | 4,715                    | 4,525        | 9,240  |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 16TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 16TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 15TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
| 42  | Rs. 2,798 | Rs. 67           | 42  | Rs. 4,803 | Rs. 102          | 42   | Rs. 60,158      | Rs. 51           | 42   | Rs. 74,413      | Rs. 63           | Rs. 14,255              | Rs. ....                |

**EASTERN BENGAL STATE RAILWAY.**  
(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS).  
*Approximate Return of Traffic for week ended 8th October 1887, on 645 miles' open.*

|   | COACHING TRAFFIC.     |              | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------|----------------------------------|---------------|---|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.    | Weight carried.                  | Receipts.     |   |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.    | MDS. S.                          | Rs. A. P.     | Rs. A. P.   | Rs. A. P.       |                          |              |         |
| Total traffic for the week...                                 | 118,068               | 82,674 0 0   | 7,29,768 0                       | 1,83,880 0 0  | 14,598 0 0  | 2,51,152 0 0    | 19,842                   | 25,499       | 45,341  |
| Or per mile of railway ...                                    | 176                   | 82 0 0       | 1,131 0                          | 286 0 0       | 1 0 0   | 368 0 0         | .....                    | .....        | .....   |
| For previous 13 weeks of half-year ...                        | 1,531,309             | 6,87,310 0 0 | 82,89,671 0                      | 15,53,065 0 0 | 2,11,086 0 0                                      | 24,02,061 0 0   | 264,306                  | 308,479      | 572,785 |
| Total for 14 weeks ...  | 1,644,403             | 7,00,084 0 0 | 89,99,429 0                      | 17,17,545 0 0 | 2,25,084 0 0                                      | 26,53,213 0 0   | 284,148                  | 333,978      | 618,126 |
| <b>COMPARISON.</b>  |                       |              |                                  |               |   |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 108,998               | 50,562 0 0   | 4,75,184 0                       | 1,00,902 0 0  | 9,779 0 0   | 1,61,143 0 0    | 18,150                   | 21,010       | 39,160  |
| Per mile of railway corresponding period of previous year ... | 180                   | 84 0 0       | 784 0                            | 168 0 0       | .....   | 250 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 1,632,041             | 6,91,950 0 0 | 89,60,888 0                      | 18,08,428 0 0 | 1,54,367 0 0                                      | 21,54,735 0 0   | 230,618                  | 283,278      | 513,896 |

\* Steam-boat earnings, Rs. 13,000, have been excluded from the calculation.

NOTE.—Dacca and Assam-Bihar approximate returns of traffic are also published separately.

**FINANCIAL YEAR.**

*Approximate Statement of gross receipts of the Eastern Bengal State Railway.*

| RECEIPTS FOR WEEK ENDING 9TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 9TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 606  | 1,61,143  | 266              | 645  | 2,51,152  | 389              | 606   | 39,98,170       | 244              | 645   | 44,48,836*      | 255              | 4,50,000                | .....                   |

\* Audited up to 30th June 1887.

**BENGAL CENTRAL RAILWAY.**

*Approximate Return of Traffic for week ended 8th October 1887, on 125 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 21,556                | 7,353 0 0          | 41,730 0                         | 2,733 0 0  | 23 0 0                      | 10,100 0 0      | 3,786                    | 1,424        | 5,210  |
| Or per mile of railway ...                                    | 172                   | 69 0 0             | 334 0                            | 22 0 0     | .....                       | 81 0 0          | .....                    | .....        | .....  |
| For previous 13 weeks of half-year ...                        | 313,397               | 1,02,787 0 0       | 5,81,081 0                       | 36,340 0 0 | 1,565 0 0                   | 1,40,082 0 0    | 46,836                   | 24,219       | 71,055 |
| Total for 14 weeks ...  | 334,953               | 1,10,140 0 0       | 6,22,861 0                       | 39,073 0 0 | 1,588 0 0                   | 1,50,801 0 0    | 50,622                   | 25,643       | 76,265 |
| <b>COMPARISON.</b>  |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 19,879                | 6,663 0 0          | 15,706 0                         | 1,420 0 0  | 28 0 0                      | 2,111 0 0       | 3,478                    | 968          | 4,446  |
| Per mile of railway corresponding period of previous year ... | 159                   | 53 0 0             | 126 0                            | 12 0 0     | .....                       | 65 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 329,090               | 1,07,627 0 0       | 2,73,801 0                       | 21,880 0 0 | 342 0 0                     | 1,29,819 0 0    | 56,151                   | 20,023       | 76,173 |

**FINANCIAL YEAR.**

*Approximate Statement of gross receipts of the Bengal Central Railway.*

| RECEIPTS FOR WEEK ENDING 9TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 9TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. | Mean mileage worked.                                    | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125  | 8,111     | 65               | 125  | 10,109    | 81               | 125   | 8,05,377        | 90               | 125   | *3,15,830       | 94               | 10,429                  | .....                   |

Audited up to 30th June 1887.

## ASSAM-BEHAR STATE RAILWAY.

(PUBNAH SECTION.)

*Approximate Return of Traffic for week ended 8th October 1887, on 39 miles open.*

|   | COACHING TRAFFIC.    |                        | MERCHANDISE AND MINERAL TRAFFIC. |                      | Other earnings (estimated). | Total earnings.        | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|----------------------|------------------------|----------------------------------|----------------------|-----------------------------|------------------------|--------------------------|--------------|--------|
|   | Number of passengers | Receipts.              | Weight carried.                  | Receipts.            |                             |                        | Coaching.                | Merchandise. | Total. |
| Total traffic for the week ...                                | 2,551                | Rs. A. P.<br>1,120 0 0 | MDS. S.<br>5,623 0               | Rs. A. P.<br>491 0 0 | Rs. A. P.<br>17 0 0         | Rs. A. P.<br>1,028 0 0 | 728                      | 364          | 1,092  |
| Or per mile of railway ...                                    | 65                   | 29 0 0                 | 141 0                            | 13 0 0               | 0 0 0                       | 42 0 0                 | .....                    | .....        | .....  |
| For previous 18 weeks of half-year ...                        | 40,891               | 13,956 0 0             | 1,40,424 0                       | 14,435 0 0           | 325 0 0                     | 22,734 0 0*            | 9,024                    | 5,312        | 14,336 |
| Total for 14 weeks ...  | 43,442               | 15,076 0 0             | 1,40,047 0                       | 14,944 0 0           | 342 0 0                     | 30,362 0 0             | 9,752                    | 5,676        | 15,428 |
| COMPARISON.   |                      |                        |                                  |                      |                             |                        |                          |              |        |
| Total for corresponding week of previous year ...             | .....                | .....                  | .....                            | .....                | .....                       | .....                  | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                | Nil                    | .....                            | Nil                  | .....                       | Nil                    | .....                    | Nil          | .....  |
| Total to corresponding date of previous year ...              | .....                | .....                  | .....                            | .....                | .....                       | .....                  | .....                    | .....        | .....  |

\* Audited up to week ending 198 .

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 9TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 9TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
| .....                                      | Rs.       | Rs.              | 30   | Rs.       | Rs.              | .....   | Rs.             | Rs.              | 30  | Rs.             | Rs.              | Rs.                     | .....                   |
| .....                                      | .....     | .....            | 30   | 1,028     | 42               | .....   | .....           | .....            | 30  | 70,597*         | 67               | 70,597                  | .....                   |

\* Audited up to 30th June 1887.

## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 8th October 1887, on 86 miles open.*

|  | COACHING TRAFFIC.     |                        | MERCHANDISE AND MINERAL TRAFFIC. |                        | Other earnings (estimated). | Total earnings.        | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|------------------------|----------------------------------|------------------------|-----------------------------|------------------------|--------------------------|--------------|--------|
|  | Number of passengers. | Coaching receipts.     | Weight carried.                  | Receipts.              |                             |                        | Coaching.                | Merchandise. | Total. |
| Total traffic for the week ...                               | 9,888                 | Rs. A. P.<br>3,413 0 0 | MDS. S.<br>17,926 0              | Rs. A. P.<br>1,548 0 0 | Rs. A. P.<br>34 0 0         | Rs. A. P.<br>4,995 0 0 | 2,161                    | 803          | 2,964  |
| Or per mile of railway ...                                   | 113                   | 40 0 0                 | 208 0                            | 18 0 0                 | .....                       | 58 0 0                 | .....                    | .....        | .....  |
| For previous 18 weeks of half-year ...                       | 143,867               | 48,665 0 0             | 2,06,905 0                       | 16,121 0 0             | 1,930 0 0                   | 66,916 0 0*            | 28,956                   | 13,836       | 42,692 |
| Total for 14 weeks ...                                       | 153,755               | 52,278 0 0             | 2,24,831 0                       | 17,089 0 0             | 1,964 0 0                   | 71,911 0 0             | 31,011                   | 14,639       | 45,650 |
| COMPARISON.  |                       |                        |                                  |                        |                             |                        |                          |              |        |
| Total for corresponding week of previous year ...            | 8,916                 | 2,802 0 0              | 8,708 0                          | 1,373 0 0              | 51 0 0                      | 4,125 0 0              | 2,156                    | 714          | 2,870  |
| Or mile of railway corresponding period of previous year ... | 104                   | 32 0 0                 | 102 0                            | 15 0 0                 | .....                       | 47 0 0                 | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...             | 157,796               | 48,605 0 0             | 1,08,714 0                       | 12,190 0 0             | 4,602 0 0                   | 60,397 0 0             | 21,459                   | 10,364       | 31,723 |

\* Audited up to week ending 198 .

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 9TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 8TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 9TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 8TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.                       | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
| 86   | Rs.       | Rs.              | 86   | Rs.       | Rs.              | 86  | Rs.             | Rs.              | 86  | Rs.             | Rs.              | Rs.                     | .....                   |
| 86   | 4,125     | 48               | 86   | 4,995     | 58               | 86  | 1,26,707        | 55               | 86  | 1,36,637*       | 59               | 9,840                   | .....                   |

\* Audited up to 30th June 1887.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ended 15th October 1887, on 27½ miles open.

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). |            | Total earnings. |        | TRAFFIC TRAIN-MILES RUN. |                   |        |
|--|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|------------|-----------------|--------|--------------------------|-------------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |            |                 |        | Coaching.                | Merchan-<br>dise. | Total. |
|  |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.  | Rs. A. P.       |        |                          |                   |        |
| Total traffic for the week ...                                   | 3,513                 | 1,250 0 0          | 9,053 0                          | 540 0 0   | 4 0 0                       | 1,794 0 0  | 509             | 254    | 763                      |                   |        |
| Or per mile of railway ...                                       | 129                   | 45 14 0            | 332 0                            | 19 13 0   | 0 2 0                       | 65 13 0    | .....           | .....  | .....                    |                   |        |
| For previous 14 weeks of half-year                               | 43,538                | 15,602 0 0         | 1,30,844 0                       | 8,107 0 0 | 260 0 0                     | 23,969 0 0 | 7,308           | 4,409½ | 11,717½                  |                   |        |
| Total for 15 weeks ...   | 47,351                | 16,852 0 0         | 1,39,897 0                       | 8,647 0 0 | 264 0 0                     | 25,763 0 0 | 7,817           | 4,603½ | 12,480½                  |                   |        |
| COMPARISON.  |                       |                    |                                  |           |                             |            |                 |        |                          |                   |        |
| Total for corresponding week of previous year ...                | 3,421                 | 1,264 4 3          | 1,450 20                         | 108 11 0  | 7 2 0                       | 1,380 1 3  | 549             | 254    | 763                      |                   |        |
| Per mile of railway correspond-<br>ing week of previous year ... | 126                   | 46 6 0             | 53 0                             | 4 0 0     | 0 4 0                       | 50 10 0    | .....           | .....  | .....                    |                   |        |
| Total to corresponding date of previous year ...                 | 36,259½               | 13,005 4 6         | 91,897 30                        | 7,124 1 0 | 214 0 6                     | 21,303 6 0 | 7,838           | 4,028  | 11,861                   |                   |        |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 15TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 15TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         |                         |
| 27½   | 1,380     | 51               | 27½   | 1,794     | 65               | 27½  | 45,639          | 60               | 27½  | 51,251          | 67               | 5,612                   | .....                   |

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ended 15th October 1887, on 249 miles open.

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). |              | Total earnings. |        | TRAFFIC   |                   |        |
|--|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|--------------|-----------------|--------|-----------|-------------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |              |                 |        | Coaching. | Merchan-<br>dise. | Total. |
|  |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.    | Rs. A. P.       |        |           |                   |        |
| Total traffic for the week on 240 miles open ...                 | 81,990                | 11,186 12 5        | 1,32,574 0                       | 12,335 4 0    | 3,244 11 11                 | 20,700 12 4  | 5,055           | 4,835  | 10,490    |                   |        |
| Or per mile of railway ...                                       | 129                   | 45 15 0            | 532 0                            | 49 9 0        | 2 9 0                       | 87 1 0*      | .....           | .....  | .....     |                   |        |
| For previous 14 weeks of half-year ...                           | 540,995               | 1,84,591 3 7       | 15,73,441 0                      | 1,40,061 12 0 | 46,300 4 1                  | 3,71,643 3 8 | 89,290          | 64,673 | 153,963   |                   |        |
| Total for 15 weeks ...   | 573,994               | 1,95,778 0 0       | 17,06,415 0                      | 1,52,947 0 0  | 49,635 0 0                  | 3,08,410 0 0 | 91,951          | 69,508 | 161,459   |                   |        |
| COMPARISON.  |                       |                    |                                  |               |                             |              |                 |        |           |                   |        |
| Total for corresponding week of previous year on 240 miles open  | 30,465                | 11,173 4 1         | 93,570 20                        | 10,037 15 0   | 2,390 9 9                   | 23,601 12 10 | 5,187           | 4,222  | 9,409     |                   |        |
| Per mile of railway correspond-<br>ing week of previous year ... | 124                   | 45 6 0             | 380 0                            | 40 13 0       | 0 12 0                      | 88 15 0*     | .....           | .....  | .....     |                   |        |
| Total to corresponding date of previous year ...                 | 494,719½              | 1,63,606 12 7      | 16,56,022 30                     | 1,65,945 13 9 | 45,605 8 9                  | 3,75,148 3 1 | 77,332          | 64,128 | 141,460   |                   |        |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 15TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 15TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         |                         |
| 246   | 23,602    | 96               | 249   | 25,767    | 107              | 246  | 8,23,275        | 130              | 248½4  | 8,62,443        | 138              | 69,168                  | .....                   |



| DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.         |     |     |     |     |     |     | Rs.       |
|--|-----|-----|-----|-----|-----|-----|-----------|
| Approximate earnings for week ending 15th October 1887 | ... | ... | ... | ... | ... | ... | 8,116     |
| Corresponding week last year                           | ... | ... | ... | ... | ... | ... | 9,124     |
| Decrease   | ... | ... | ... | ... | ... | ... | 1,008     |
| Receipts from 1st July to 15th October 1887            | ... | ... | ... | ... | ... | ... | 1,39,524  |
| From 1st July to 16th October 1886                     | ... | ... | ... | ... | ... | ... | 1,51,482  |
| Decrease   | ... | ... | ... | ... | ... | ... | 11,958    |
|  |     |     |     |     |     |     | Miles.    |
| Miles open. week ending 15th October 1887...           | ... | ... | ... | ... | ... | ... | 51        |
| Corresponding week last year                           | ... | ... | ... | ... | ... | ... | 51        |
|  |     |     |     |     |     |     | Rs. A. P. |
| Receipts per mile open, week ending 15th October 1887  | ... | ... | ... | ... | ... | ... | 159 2 2   |
| Corresponding week last year                           | ... | ... | ... | ... | ... | ... | 178 14 8  |
| Decrease   | ... | ... | ... | ... | ... | ... | 19 12 6   |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 22nd October 1887.

W. STEVENSON, Acting Manager.





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, NOVEMBER 2, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## RESOLUTION ON THE REPORT ON THE ADMINISTRATION OF THE INCOME-TAX IN BENGAL FOR THE YEAR 1886-87.

### FINANCIAL DEPARTMENT—INCOME-TAX.

*Darjeeling, the 22nd October 1887.*

#### RESOLUTION.

Read—

Report of the Board of Revenue on the financial results of the Income-tax Administration for 1886-87.

Read also—

The Rules sanctioned by Government under clause 17 of the Rules prescribed by the Governor-General in Council under Act II of 1886.

Like the Annual Reports on the License-tax Administration, the present Report deals with all operations undertaken under Act II of 1886 up to 30th June 1887, the latest date on which proceedings could be legally commenced for the recovery of sums due under the Act in respect of the past financial year.

2. The change in the law, by which the Bengal License tax Act II (B.C.) of 1880 was repealed, and the Income-tax Act II of 1886 substituted, necessitated many changes of administration. It was found desirable, owing to the

novel character and wider scope of the new Act, to adopt the suggestion contained in paragraph 3 of the Government of India circular letter No. 595, dated 5th February, that an officer of experience should be placed on special duty to supervise the work during the year, and for this purpose Mr. W. H. Grimley was appointed Commissioner of Income-tax on 1st March, one month before the Act received the assent of the Governor-General in Council. The Board had commenced the issue of instructions to District Officers in January, in anticipation of the passing of the Act, and this work was now carried on under their supervision by Mr. Grimley, who also visited many of the districts in person, and became the constituted channel of reference to Government, and the advisor of the Board in all questions relating to the administration of the tax. During the year, Mr. Grimley reported on the progress of collections; but although the practical working of the Act was under the constant attention of the Lieutenant-Governor, the results achieved have not before now been the subject of a complete retrospective review by this Government.

3. *Results of the tax.*—It appears from the Board's report that the total demand under all parts of the tax amounted to Rs. 39,36,958, and the total collections to Rs. 38,60,658. After deduction of the unrecovered balance (Rs. 76,300), and charges amounting to Rs. 2,84,219, the net revenue from the tax is seen to be Rs. 35,76,439. The Accountant-General, Bengal, in October last estimated the probable yield of the tax for the whole year at Rs. 36,18,059; but as this was calculated on the gross receipts, the results have justified the more sanguine forecast of the Commissioner of Income-tax, who, on the same premises, estimated the probable receipts at Rs. 38,00,438.

The percentage of collections to demand, excluding from consideration the tax on official salaries, &c., and deductions on account of interest on Government securities, is 98·5. Of the balance of Rs. 76,300 outstanding on the 30th June, Rs. 9,867 has since been collected, bringing the percentage to nearly 99; and this figure, since the remainder of the balance is regarded as almost entirely irrecoverable, may be taken as finally correct. It compares very favourably with corresponding figures under the License-tax Acts. In the first year of the introduction of the License-tax Act I (B.C.) of 1878, the percentage of collections to demand was only 44; and although this was calculated on the original demand from which there were enormous remissions, still there remained an outstanding balance of over 6 lakhs when 26½ lakhs had been collected. So in 1880-81, with collections amounting to less than 15 lakhs, the unrecovered balance exceeded Rs. 80,000. In recent years the working of the late License Act has been so well understood that there has been little difficulty in collecting almost the entire demand; but the comparison with years in which a new system has been introduced is a fair one, and the Lieutenant-Governor considers that the results may be held to be satisfactory.

4. *Petitions of objection.*—But although some indication is thus afforded of the thoroughness with which the tax has been levied, a more efficacious test of the smoothness of its working lies in the number of petitions of objection presented; and the subject is one which deserves especial consideration in this the first year of the introduction of the Act. Out of 106,936 original assessments, objections were preferred in 29,413 cases, i.e., 27·5 assesses in every hundred objected. In Chittagong, Gya and Angul this percentage rose to 50·9, 54·3 and 71·9 respectively. The large number of objections in Chittagong has been sufficiently explained in the Board's report, but the reasons given in this case show the necessity for explanation in the other two cases also. In 1878-79, a year which has been already selected as suitable for comparison, the proportion of objections to assessments was about 33 per cent.; in 1880-81, 62 per cent.; and in 1885-86, when the Act of 1880 had been in force for six years without change, as much as 24·7. On these figures, and considering the difficulty of obtaining reliable information, as well as the far wider scope for objection afforded by the present Act, the Lieutenant-Governor agrees with the Board in thinking that the assessments have on the whole been carefully and judiciously made. It is, moreover, to be inferred from the large percentage (48) of successful objections, i.e., objections which were partially or wholly allowed, that the petitioners were treated with consideration, and that there was no unwillingness to modify assessments. This applies particularly to Calcutta and Darjeeling, where the percentage of successful objections rose as high as 78·4 and 73·3 respectively,

although the rate of objections to assessments was 27·8 per cent. and 3·2 per cent only. The number of applications to the Commissioner for revision, including cases called for by that officer of his own motion, was 1,289, or a percentage of 4·8 on the number of objections preferred.

These figures, moreover, show no less than 200 out of 342 cases in which the tax was reduced or entirely remitted. In all the other districts the orders were modified in only 76 cases out of 433 disposed of. These figures indicate that the orders passed on petitions of objection on the whole gave satisfaction.

Nevertheless remissions were by no means large. The percentage of remission on original demand was highest in the districts of Singbhoom and Chittagong, where it rose to 26·6 and 26·5 respectively; but for the whole Province, although the remissions granted by Collectors included a large number of cases in which no objections were preferred, but in which the assessee was found to have died or left the district, or given up the business for which originally assessed, they yet gave the comparatively small percentage on the demand of 17·6, and those granted by Commissioners a percentage of 4 only. The total amount remitted was Rs. 7,53,292 as against Rs. 14,39,635 of license-tax demand in 1878-79, and Rs. 11,87,920 in 1880-81.

5. *Mode of assessments.*—The mode of assessment is described in paragraphs 6 to 9 of the Report. The total number of assessors employed during the year was 82, and their average length of service a little under nine months. Out of 249,412 villages shown in the last census, the assessors visited 87,019, or an average of 1,061 each. The total number of assesseees was 1,05,611. It is said that in many of the districts the greater portion of the villages not visited contained no assesseees; but it nevertheless appears to the Lieutenant-Governor quite possible that neither the number of persons liable to the tax, nor the real assessable income of these persons, have been exhaustively registered. It is hoped that the instructions now issued by the Board will help to elucidate this point; but in the meantime Sir Steuart Bayley would hesitate to endorse, in regard to the coming year, the conclusions drawn by the Board from the very instructive table given in paragraph 41 of their report. The natural inference to be drawn from the progressive decrease of productiveness in successive years of the existence of previous income-tax Acts is that the assessing establishment grew careless and supervision was not kept up to the mark. It is to be hoped that better results will attend the efforts made by the Board on this occasion to introduce a fairly paid and efficient assessing staff, and to subject their work to a careful supervision. Of course there are in every district a great number of villages which to visit would be waste of time; but district officers cannot give a too careful attention to the judicious direction of the movements of assessors, and to the prevention of needless omission of villages in their tours. After allowance made for local peculiarities in regard to size of villages, the figures appear to show that in some districts during the past year the local enquiries were unduly restricted. Champaran shows only 784 villages visited out of 7,766, Mymensingh 1,598 out of 12,619, Midnapore 1,936 out of 13,875, Pooree 727 out of 5,166, Manbhoom 770 out of 6,147, and Shahabad 839 out of 5,641. And it is noteworthy that these districts show a proportion of assesseees to population which is smaller than the average. Thus, Shahabad and Champaran have 1 in 1,597 and 1 in 1,291 respectively, against a divisional average of 1 in 1,012; Pooree has 1 in 1,712 against 1 in 1,466; Manbhoom 1 in 1,263 against 1 in 1,129; Midnapore 1 in 999 against 1 in 940; and Mymensingh 1 in 857 against 1 in 816. These differences will no doubt receive the attention of the Board. It may be observed that the Dacca return, which shows every one of the 6,422 villages in the district as visited, must be incorrect.

6. *Incidence of the tax.*—The average incidence of the tax to the whole population of the Province, as given in the last census, was Re. 1 to every 19 persons. This high figure is chiefly due to the inclusion of Calcutta, where the incidence of the tax was as much as Rs. 2½ to every person. Without Calcutta, the average incidence for the Province was Re. 1 to every 39 persons, as against 64 under the late License-tax Act. The proportion between the number of assesseees and the total population was 1 to 677. In 1878-79, when

the minimum income taxable was Rs. 100, this proportion was 1 to 71; in 1879-80, when the minimum income taxable was raised to Rs. 250, it was 1 to 490; in 1880-81, the first year of the late License-tax Act, it was 1 to 921. According to this ratio as calculated for each division, Orissa and Chota Nagpore appear, as was generally the case in the days of the license-tax, at the bottom of the list, and, Calcutta being omitted from consideration, Rajshahye appears at the top. Orissa, owing perhaps to its large agricultural population, has nearly always held the lowest place, though in 1878-79 Patna and Chittagong (which has now risen high in the scale) were both lower than Orissa. In that year the Government of Bengal had occasion to notice the great diversity of assessment which was shown by this table of proportion to have occurred in different districts; but the Lieutenant-Governor is pleased, in the case of the present income-tax, to observe, as a rule, a commendable equality in the returns for each district. This difference between the first year of the license-tax of 1878-79 and the first year of the present tax can of course be explained to some extent by the difference in the minimum income liable to taxation; but the Lieutenant-Governor is disposed to attribute it in part to the uniformity of system introduced by Mr. Grimley, and to the care and attention given by Collectors to the instructions issued to them, and he is glad, on the latter point, to be able to endorse the favourable testimony borne by Mr. Grimley, in his Resolution dated 13th April 1887, to the willing and intelligent assistance accorded him by District Officers.

7 *Coercive measures.*—Extreme coercive measures were very seldom resorted to. The percentage of sales after distress to the total number of final assessments was .8 only. In every 100 assessments, warrants were issued in 12 cases, and property was distrained in 6.3; but if Calcutta be excluded, where the issue of distress warrants was disproportionately large, these figures are reduced to 9.5 and 5.1 respectively. It appears that the number of sales was largest in the district of Rungpore (186), and next came Dinagpore with 106. Where, as in the case of Rungpore, there is also a large unrealized balance, the Board rightly infer that too great severity has been exercised in assessment. The districts of Mozufferpore and Singbhoom are open to the same criticism. Rungpore and Mozufferpore are both in the first division into which the districts were classified for purposes of assessment, and they therefore had three assessors at work. When this is the case, there are opportunities for comparison of which the Collector of the district should not lose advantage. The statistics of objections show that the assessments in both these districts were unduly high. Rungpore shows 850 objections, of which 135 resulted in reduction and 260 in total remission. Mozufferpore shows 1,728 objections with 347 reductions and 672 total remissions. More than one-tenth of the total remissions in the Province was granted in this district alone. In these circumstances it especially behoved the Collectors to guard against the harsh employment of coercive process, and it is unsatisfactory that both districts show a larger number of warrants issued than any other district except Calcutta, and at the same time a considerably larger balance outstanding.

In Calcutta, there were no sales in execution of warrants of distress, but the issue of process was resorted to with great freedom. A percentage of 21 on the total number of persons finally assessed is abnormally high, and the Lieutenant-Governor cannot think that sufficient circumspection was exercised in granting issue of warrants. In fact, this has been evidenced in the case of Mr. Daniell, in which the orders of the Lieutenant-Governor were separately conveyed to the Collector; and the comparatively enormous costs incurred on account of additional establishment entertained in serving distress warrants, &c., is a further indication of the same fact.

8. *Expenditure.*—The percentage of total expenditure to collections in Calcutta is, however, very small—only 2.6—and the Lieutenant-Governor is glad to find that the Board have recently expressed an opinion that the administration of the tax in Calcutta has been on the whole successful. In respects other than the issue of process, he is inclined to concur in the Board's view.

The expenditure throughout the Province was of course heavy in the first year of the new tax, establishments being necessarily large. In the Lieutenant-Governor's opinion it was a wise policy to expend money in getting the assessments made as fairly and completely as possible in the first instance. Turning

again, however, to the figures of 1878-79, the comparison is certainly favourable, as will be seen from the following table :—

|         |     | Total<br>expenditure.<br>Rs. | Percentage of<br>costs to collec-<br>tions for whole<br>Province. | Percentage of<br>costs to collec-<br>tions for Calcutta. |
|---------|-----|------------------------------|---|--|
| 1878-79 | ... | 3,34,069                     | 12·1  | 6·7  |
| 1887-88 | ... | 2,41,766                     | 7   | 2·6  |

As a very large majority of the assessors had completed their term of service before the end of June, and as the appointments were in no case for a longer period than 12 months, there is every reason to believe that the percentage will be considerably lower next year. This is the natural sequence of events in the second year of a tax. In 1879-80 the expenditure fell to Rs. 1,47,785 and the percentage to 7·5.

9. Paragraphs 38-40 and 45-50 of the Board's report, and the connected statements, give details in regard to the levy of the tax under the different parts of the Act and in the different districts of the Province. The only figures that call for notice are those regarding employes of companies, local authorities, associations and private individuals and employes of Government, respectively. In the former class 12,294 persons paid Rs. 4,58,687. In the latter 7,310 persons paid Rs. 4,21,379.

10. *Classification of incomes.*—Statement XIV, showing the amount collected from different classes of people under different classes of income, is an interesting table. The largest contribution, Rs. 6,03,898, was from class I (incomes between Rs. 500 and Rs. 750). The next highest, Rs. 4,98,512, was from class VIII (incomes between Rs. 2,500 and Rs. 5,000), which was followed closely by class XV (incomes of Rs. 1,00,000 and over), with Rs. 4,57,433. The largest amount of tax, according to the prescribed classification of assesses, was paid by money-lenders and changers, and, as was to be expected, the contributions generally were largest from the commercial and mercantile communities, and after these by the professional (including official) classes. During the year a proposal was made by the Commissioner of Income-tax to make use of the services of assessors of income-tax in future census operations, by assimilating the income-tax classification to that adopted in the census tables. The suggestion was not supported by the Lieutenant-Governor, as it was apprehended that the measure would be liable to misconstruction by the less educated; but it may perhaps be possible to draw without prejudice a rough comparison between the figures for the mercantile and professional classes, as gathered from the existing systems of classification. The total of order VI in class III (commercial class) of table XII of the census tables (statement showing the occupations of the male population by locality) gives a total commercial population for the whole Province of 608,072. To obtain roughly the total corresponding number of commercial assesses, the total of items 50, 51, 52, 53, and 64 to 73 may be added together; the result being 44,574. Similarly the total of items 1, 4, 7 to 11, 35 to 49, and 53a may be roughly compared with the total of class I (professional class) in the same census table. This gives 33,630 professional assesses to a total professional population of 572,967. It would thus appear that 1 in every 13 or 14 of the commercial community, and 1 in every 17 of the professional classes, has been assessed to income-tax, as against 1 in every 677 of the whole population.

11. *Miscellaneous.*—Embezzlements of money paid as income-tax was only reported from one district. It is hoped that the prohibition, issued by the Income-tax Department against cash transactions, will entirely check misappropriation in future. The question of the extension of the money-order system to income-tax payments has been referred to the Postmaster-General, Bengal, whose reply is still awaited.

12. *Popular feeling.*—The Board have expressed no opinion on the state of popular feeling in regard to the tax, but have contented themselves with supplying extracts from the reports of Commissioners. The burden of these is that the tax is extremely unpopular with those who have to pay it, and a matter of indifference with those who have not. The Commissioner of Patna remarks: "I believe the dislike to the tax is simply dislike to pay money. I do not think there is anything approaching to intelligent criticism of the tax anywhere, except amongst us who collect it. This is no doubt a true description

of the attitude of the people at large. They pay indirect taxes without murmur because they hardly know what they pay. But a demand for payment of a direct tax is a tangible hardship, which they resent and seek by all means to avoid." Mr. Boxwell continues: "Vakeels and pleaders of reputation are quite content to ask me in appeal to knock off something from the assessment without any attempt at showing what the proper assessment is. A man will consent to pay Rs. 20 on a declared income of Rs. 200 because he was originally assessed at Rs. 40. They show in this way that they do not even pretend to believe what they tell the hakims." That the tax is unpopular with the more intelligent classes, who were exempted from the previous license-tax is undoubted; but this is not the place to discuss the propriety of the measure under which they have been taxed. Among the people generally there is no apparent ground for believing that the unpopularity of the Income-tax Act is greater than that of the License-tax Acts, when first introduced. The proportion of objections preferred was not so large, although, as has been already remarked, there was a wider door open to objection, and although in the rural districts the desire among the less educated to prove artificially small incomes must frequently have been strong enough to overcome their imperfect understanding of the law. The unpopularity of a direct tax may be greatly enhanced by injudicious administration; but the Lieutenant-Governor is glad to be able to record his belief that in the present year the dislike to the tax has not been seriously aggravated by errors in its working.

18. The thanks of Government are due to the Board and to the Income-tax Commissioner, Mr. Grimley, for the efficient administration of this department during the year. The names of the officers, specially mentioned by the Board as having done good service in the operations under the Act, will be noted in the Appointment Department.

By order of the Lieutenant-Governor of Bengal.

COLMAN MACAULAY,

*Secretary to the Government of Bengal.*

**RESOLUTION ON THE REPORT OF THE SANITARY COMMISSIONER  
FOR BENGAL FOR THE YEAR 1886, INCLUDING THE  
REPORT ON VACCINATION IN BENGAL FOR  
THE YEAR 1886-87.**

POLITICAL DEPARTMENT—SANITATION.

*Darjeeling, the 29th October 1887.*

**RESOLUTION.**

**READ—**

The Report of the Sanitary Commissioner for Bengal for the year 1886, including the Report on Vaccination in Bengal for the year 1886-87.

**Read also—**

The Report for the previous year and the Resolution recorded upon it.

The remarks of the Bengal Government on the length of the Sanitary Commissioner's report for 1884 had the desired effect of reducing to some extent the size of the volume for 1885. The Government of India, in reviewing the Report and Resolution for the latter year, called particular attention to this fact, and remarked that the report appeared to be capable of still further abridgment, and that the statistics of the province of Bengal, in their present state of imperfection, hardly called for such exhaustive criticism as they had received at the hands of Dr. Lidderdale. Notwithstanding the fact that Dr. Lidderdale's attention was specially directed to these remarks, the Lieutenant-Governor regrets to observe that the report for 1886 contains 163 pages, being indeed very little shorter than the report for 1884, the "inordinate length" of which was condemned by the Government of India. Sixty-eight pages of the report are devoted to the personal proceedings of the Sanitary Commissioner and his subordinates—no doubt a useful record, but containing much which need not be embodied in an annual report. Sir Stuart Bayley



is of opinion that the results of the year's administration can well be placed before Government in a report of 50 or 60 pages, and he trusts that the Sanitary Commissioner will aim at reducing the report of 1887 to some such dimensions.

2. *Registration of Births.*—Births were registered in 45 towns against 46 in the preceding year, showing a ratio of only 21·04 per 1,000 against 24·71 in the previous year. As the work of registration in those municipalities in which Act IV (B.C.) of 1873 is in force has passed from the Police to the Municipal Commissioners, Sir Steuart Bayley hopes to see some improvement on these “radically defective figures;” but to accomplish this end the close and sustained attention of the Commissioners will be necessary.

3. *Registration of deaths.*—The ratio of deaths to population was 21·99 per 1,000 of the population against 22·74 in 1885, the ratio varying from only 13·24 in Mozufferpore to 36·17 in Shahabad. As the year was a healthy one, it is not necessary to infer any retrogression in registration, the number of deaths from cholera alone having decreased by 55,399. Much seems to depend on the individual interest taken in the matter by different Magistrates and police officers. A copy of paragraph 4 of the report will be sent to all Commissioners and to the Inspector-General of Police for communication to Magistrates and District Superintendents of Police. It will also be sent to the Municipal Commissioners of towns in which the Compulsory Registration Act is in force. The provisions of this law were extended during the year to 31 towns, making a total at the close of the year of 148 towns and one rural area in Darjeeling.

4. *Causes of mortality.*—The following table shows the death-rate from various causes during 1886, 1885, and the quinquennial period 1881-85:—

|                         | PROPORTION OF DEATHS PER 1,000 OF POPULATION. |        |           |          |        |           |             |        |           |
|-------------------------|---|--------|-----------|----------|--------|-----------|-------------|--------|-----------|
|                         | In 1886.                                      |        |           | In 1885. |        |           | In 1881-85. |        |           |
|                         | Urban.  | Rural. | Province. | Urban.   | Rural. | Province. | Urban.      | Rural. | Province. |
| Cholera ... ..          | 4·12  | 1·70   | 1·78      | 5·22     | 2·53   | 2·62      | 4·34        | 1·91   | 1·99      |
| Small-pox ... ..        | ·08   | ·06    | ·06       | ·33      | ·14    | ·14       | ·53         | ·21    | ·23       |
| Fevers ... ..           | 12·29   | 16·11  | 15·97     | 14·40    | 16·79  | 15·75     | 15·08       | 14·59  | 14·44     |
| Bowel-complaints ... .. | 3·77  | ·75    | ·34       | 4·12     | ·85    | ·96       | 3·79        | ·74    | ·89       |
| Injury ... ..           | ·50   | ·43    | ·43       | ·50      | ·43    | ·43       | ·42         | ·30    | ·35       |
| Other causes ... ..     | 6·51  | 2·74   | 2·68      | 7·02     | 2·66   | 2·81      | 6·13        | 2·24   | 2·38      |
| ALL CAUSES ... ..       | 27·29   | 21·79  | 21·99     | 31·63    | 22·42  | 22·74     | 30·07       | 19·98  | 20·35     |

The death-rate in rural circles was 21·79 per 1,000, and in urban circles 27·29. The figures from 1881 to 1886 tend to show that urban circles are more unhealthy than the rural areas, and that better registration in the former cannot alone account for the widely divergent ratios. With reference to Dr. Lidderdale's remarks regarding the mortality among European seamen and the native floating population, the insanitary condition of the river and its causes have been noticed in paragraph 7 of the Resolution on the Report of the Health Officer for 1886, and the necessary orders have been passed. The opinion of the majority of local officers is that the year 1886 has been healthier than the preceding year. This opinion is endorsed by the Sanitary Commissioner, who attributes it principally to a decrease of cholera and small-pox, and a reduction in the price of food-grains owing to a good harvest.

5. *Cholera.*—The recorded deaths from cholera were 118,363, or a ratio of 1·78 per thousand, against 173,767, or a ratio of 2·62 in 1885. The disease attacked 21,567 villages, or 9·33 per cent. of the total number of villages in the Province, against 29,239, or 12·61 per cent. in 1885. In paragraph 35 a table is given showing the meteorological peculiarities which obtained during different periods of cholera outbreak in certain tracts, but the Sanitary Commissioner expresses an opinion that this method of enquiry is not likely to throw much light upon the causes of the disease. Meanwhile, as he remarks, the conditions which foster the disease are well known, and what the Sanitary Department require is more power and more money to remove them. In this connection

he has given interesting details regarding the outbreak and prevalence of cholera in different districts, and some of the instances cited by him show conclusively that even the educated portion of the community have not yet universally realised the necessity for general sanitation, and especially for a pure water-supply. The Commissioners of Baraset, when advised to set aside certain tanks for drinking water, urged that bathing was as necessary as drinking. The Commissioners of Baduria declined to interfere with the "time-honoured custom" by which Mahomedans bury their dead within their homesteads. Sir Stuart Bayley was under the impression that this custom had been to a great extent given up, but is surprised to hear of its continuance even in municipalities. The remarks of the Sanitary Commissioner on this head will be communicated to, and considered in, the Municipal Department. In other instances the outbreak of cholera is clearly traced to the use of impure water for drinking or culinary purposes. The details given in one or two cases show that the water used was unfit to be drunk even by cattle. Wherever there was a severe outbreak of the disease, all or almost all the usual insanitary conditions were found to exist, namely, filth, foul air, impure water, ill-constructed or ill-ventilated homesteads, and unwholesome or insufficient diet.

6. *Small-pox*.—The recorded number of the deaths from small-pox, which had decreased from 18,533 in 1884 to 9,563 in 1885, showed a still further fall to 4,049. This is the smallest number yet recorded, the mean average of the decade 1876-85 being 15,317. It was, moreover, reported by several medical officers that many of the cases returned as small-pox were really cases of measles, eruptive fevers, or pulmonary complaints. The great immunity from the disease enjoyed during the year under report is doubtless due to the extension of vaccination during recent years. Fifty-five per cent. of the total mortality occurred in the seven districts of the Patna Division, to only two of which has vaccination yet been extended; 31 per cent. of this mortality occurred in the district of Chumparun alone. Statistics have for several years shown that 75 per cent. of the mortality from this disease occurs among infants and children.

7. *Fever*.—The recorded mortality from fevers was 1,057,296, or a ratio of 15·97 per thousand of the population under registration, against 1,012,142, or a ratio of 15·75 in 1885. The mean death-rate of the decade 1876-85 was 12·27. It is noticeable that during the previous decade the urban population suffered from fever considerably more than the rural; but during the year under report the ratio of mortality was only 12·29 in urban circles, while it was 16·11 per 1,000 in rural circles. The death-rate exceeded 20 per thousand in ten districts, the worst districts being Julpigoree (31·01), Shahabad (29·20), Pubna (27·68), and Rungpur (27·12). Burdwan and Beerbhoom do not figure among these districts, but Nuddea stands ninth on the list. The district reports repeat the same melancholy story of weakness, anaemia, enlarged spleen and liver, debilitated constitutions, pulmonary and enteric complications, and other sequelæ; and among the causes assigned are dense jungle, imperfect drainage, rank vegetation, bad water-supply, silting up of *bils* and tanks, water-logged soil, burial of dead within homesteads, vicissitudes of temperature, general uncleanness, insufficient clothing, poor food, damp and improperly-constructed houses. In Khulna an extremely virulent type of fever occurred. Assistant Surgeon Umesh Chunder Ghose, Deputy Superintendent of Vaccination, found that 79 per cent. of the children examined by him in the Satkhira thana had enlargement of the spleen; in several villages in thana Magoora the disease was present in every house; and in thana Kalarooa, which suffered much, the water of the river Betna was found to be so bad as to kill the fish in it. The District Magistrate will be asked to inquire further during the ensuing cold weather into the causes of this outbreak.

8. *Mortality from other causes*.—The mortality from "bowel-complaints," "injury," and "other causes" during the year amounted to 55,693, 29,081, and 190,818 respectively. The corresponding figures for 1885 were 63,808, 28,956, and 186,209. In connection with the first of the above heads, it is a noteworthy fact that hill diarrhoea "now occurs in Darjeeling with seasonal regularity during the early months of the rainy season, when not a house-

hold escapes it, although in former years it was one of the advantages claimed for Darjeeling as a sanitarium that it was free from this plague of other hill stations." The causes of the disease are probably increase of population and overcrowding.

9. *Vaccination operations.*—The particulars given in the report regarding vaccination are for the official year 1886-87. As regards this portion of the report, which covers 30 pages, Sir Steuart Bayley would remark that the minute details given no doubt find a fitting place in reports submitted by subordinates to the head of a department; but they are quite inappropriate in a report submitted to Government by the head of a department. Such a report should summarize the results of the year's administration, and deal with matters of importance and salient features in such a way that they can be readily seen and reviewed by Government. Extremely minute details are given regarding the sources and character of the lymph employed during the year, the production and employment of bovine lymph, operations performed, local opinion on the value of bovine lymph, &c.; while several paragraphs are taken up with a full account of the results of certain experiments. These would be appropriate in a special report submitted with a view to some special action being taken, or to some change in a policy hitherto followed; but they are unnecessary in an annual administration report.

The following table shows the total number of vaccination operations performed during the year under report and the previous year:—

*Total number of Vaccinations performed.*

| Circles.  | 1886-87.  | 1885-86.  |
|---|-----------|-----------|
| Calcutta ... ..   | 10,563    | 12,365    |
| Metropolitan Circles ... ..   | 374,390   | 373,347   |
| Suburbs of Calcutta, including operations in Central Vaccination Depot ... .. | 14,337    | 14,044    |
| Total of Metropolitan Circles ... ..  | 388,727   | 387,391   |
| Darjeeling Circle ... ..  | 290,291   | 252,562   |
| Ranchi Circle ... ..  | 169,366   | 126,426   |
| Sonthal Pergunnahs Circle ... ..  | 143,918   | 114,589   |
| Eastern Bengal Circle ... ..  | 387,281   | 386,032   |
| Orissa Circle ... ..  | 66,277    | 57,681    |
| Behar .. ...  | 65,739    | 47,178    |
| Total of Vaccination Circles ... ..   | 1,522,176 | 1,284,174 |
| Municipalities, Dispensaries, &c. ... ..                                      | 88,101    | 84,832    |
| GRAND TOTAL ... ..  | 1,610,277 | 1,368,996 |

Every circle contributed to the increase except Calcutta, where there was a diminution of 1,802 operations, said to be chiefly due to the smaller number of unprotected children. A proposal came up during the year for the employment of women in the Vaccination Department. The Sanitary Commissioner was not in favour of the proposal on the grounds that vaccination is freely accepted from the present agency, and that no difficulties in this respect arise from the zenana system; whereas operations may be retarded and complicated by the introduction of a new element, difficult to control and not easily moved about. Sir Steuart Bayley did not think it necessary to take any further action on the proposal, though he is by no means sure that Dr. Lidderdale's objections are conclusive. As regards the work performed by the licensed and Government agencies, it is only natural that the former should have actually accomplished more, as the number of licensed operators is 1,811, while there are only 285 Government operators; but the total number of vaccinations performed by each class shows that each Government vaccinator performed on an average 1,443 operations, while the number performed by each licensed vaccinator was only 613.

The total expenditure on vaccination during the year amounted to Rs. 1,54,084-5-8, of which Rs. 67,980-7-8 was the cost of maintaining the Government agency, and Rs. 74,093-10-6 the cost of supervising the licensed agency, while Rs. 12,010-3-6 was paid by municipalities. The licensed vaccination system was considerably extended during the year.

Revised rules were sanctioned, and it is hoped that they may put a stop to some of the irregularities and abuses which have been brought to notice. It is gratifying to observe that the opposition to vaccination is gradually giving way before the perseverance and persistency of the Vaccination Department; in some districts it is willingly accepted, and in others eagerly sought for.

10. *The Compulsory Vaccination Acts.*—The Compulsory Vaccination Act V (B.C.) of 1880 is now in force in 114 towns, four cantonments and nine rural areas, having been extended to ten towns during the year under report and to 19 others on the 1st April last. The amending Act II (B.C.) of 1887 was passed just after the close of the year. It would appear from the Sanitary Commissioner's report that the extension of the Act has done no good in many cases, the requirements of the law not having been carried out. The attention of the Magistrates concerned will be drawn to paragraph 155 of Dr. Lidderdale's report.

Act IV (B.C.) of 1865, prohibiting inoculation, is now in force everywhere with the exception of seven districts and certain thanas of three other districts.

11. *Village Sanitation.*—In a memorandum, dated the 25th February 1887, reviewing the Bengal Sanitary Report for 1885, the Army Sanitary Commission proposed a scheme of organised sanitary reform which, if carried out on the scale which they appear to contemplate, would undoubtedly lead to a marked improvement in the health of the people of Bengal. After commenting on the highly unwholesome conditions prevailing in most of the villages inspected by the Sanitary Commissioner and his assistants, and noticing the vast numerical preponderance of dwellers in villages over dwellers in towns, the Commission repeat the opinion expressed by them in former years that "the most important sanitary problems in Bengal are those connected with the population of villages." Owing to "the apathy or indifference displayed by the people to the simplest elements of sanitation" and their "long-continued filthy habits," the Commission regard these problems as hopeless "unless some more effectual method be adopted for overcoming apathy and substituting active and efficient work for it." The method advocated in the memorandum is of a simple and searching character. It consists in calling in the aid of an experienced Sanitary Engineering Department to apply its principles and experience to each case as it arises." Where the soil of a village has become polluted by persistent neglect of sanitary precautions, "the alternative at once suggests itself of selecting new sites for such villages, placing the sites in good sanitary state, laying down an authoritative code of village sanitary law, with means of execution and inspection, and then removing the village by degrees. The vacated sites would have some value as manured land." The duty of carrying out these extensive reforms, and of seeing that the people, when settled in their new homes, do not revert to their former habits of life, would, it is understood, be entrusted to the Sanitary Engineering Department which the Commission proposes to constitute.

12. There can be little doubt that the internal arrangements of most villages in Bengal go far to bear out the strictures of the Army Sanitary Commission. Out of 5,206 villages inspected in 1885, the period dealt with in the memorandum, nearly all were conspicuous for sanitary defects, amply sufficient, if regarded solely from the scientific point of view, to justify the introduction of the sweeping reforms suggested by the Commission. A considerable amelioration of the public health would probably result from the adoption of these measures, which embody the latest ideas of hygienic experts, and appear, were they only practicable, admirably adapted to attain the ends for which they are designed. The history of the Mohammedan dynasties no doubt furnishes us with instances (not always successful) of the entire population of large cities being forcibly removed to new sites; but neither the legal powers nor the financial resources at the disposal of the Lieutenant-Governor are such as to enable him to hold out any prospect of being able to adopt the measures which have the advocacy of the Army Sanitary Commission. Projects of material improvement necessarily involve some consideration of ways and means; and in this case it may be feared that even if the wishes of the people concerned could be entirely disregarded, still the value which (as the Commission point out) the abandoned village sites would possess "as manured land" would hardly suffice to meet the cost of demolishing the existing

houses, acquiring new sites, and in fact removing and rebuilding the greater number of the villages in Bengal. For the present, then, Sir Steuart Bayley regrets that he cannot see his way to giving effect to the views of the Commission, and meanwhile we must be content with the humbler task of doing all that our resources will allow to improve existing conditions.

13. *Expenditure on Sanitation.*—With reference to the concluding remark of the preceding paragraph, it is not satisfactory to observe that, though there was an increase of municipal income, the amount expended on sanitation by municipalities was somewhat curtailed. The Sanitary Commissioner complains that nothing is done towards the removal of grave sanitary defects, while plenty of money is forthcoming for lighting, watering roads, and education. Dr. Lidderdale cites some instances in which either nothing was spent on sanitation proper, or in which the amounts allotted were clearly inadequate; but Sir Steuart Bayley is unable to agree that education can properly be described as a secondary requirement. Again, the Inspector-General of Police annually complains of the inadequate sums spent on lighting; and no doubt good lighting goes a long way towards putting a stop to the commission of theft and house-breaking at night. Although, however, the Lieutenant-Governor is unable fully to accept Dr. Lidderdale's views on these points, he is satisfied that, in some municipalities, the allotments made for sanitation are small in comparison with the amounts devoted to other objects.

14. *Sanitary works.*—In the town of Darjeeling the water-works scheme was extended, while a scheme for supplying Jamalpore was brought into operation during the year. The Bhagulpore scheme is not yet complete. A scheme for supplying Puri with good drinking-water is now under the consideration of Government. The question of a filtered water-supply for Howrah is not being pushed forward with that energy and determination which so important a matter calls for. The orders passed by Government in 1883 and 1885 distinctly stated that the condition on which Government undertook, under section 7 of Act IV (B.C.) of 1884, to relieve the municipality of two-thirds of its police charges, was that a satisfactory scheme for the supply of filtered water to the town would be adopted within a reasonable time. The Lieutenant-Governor has already had occasion to intimate that, if the scheme be not pushed forward in earnest, he may have to reconsider this engagement. The question of drainage is beginning to attract more attention, and during the year some satisfactory progress was made in this direction.

15. *Legislation.*—Act VI (B.O.) of 1886 was passed during the year under report. It provides for the voluntary registration of births, deaths, and marriages among persons to whom the provisions of the Indian Succession Act, the Indian Christian Marriage Act, and the Parsee Marriage and Divorce Act apply. It has been decided in the General (Ecclesiastical) Department of this Government that the Inspector-General of Registration is to be appointed Registrar-General under this Act, and that his department must be largely used in working its provisions. He has accordingly been asked to submit detailed proposals for submission to the Government of India. The Bill to amend the Vaccination Act was passed as Act II (B.C.) of 1887 after the close of the year. This Act gives larger powers of vaccination and inspection, and its working should be briefly noticed in the report for the present year. Act III (B.C.) of 1886 (known as the Ghee Act) was passed during the year. It is now under the consideration of Government whether any further legislation is required regarding the adulteration of ghee. The Local Self-Government Act III (B.C.) of 1885 was introduced during the year into all the districts in the province, except the Chota Nagpore Division; and the districts of Darjeeling, the Sonthal Pergunnahs, and the Chittagong Hill Tracts. It will be considered in the Municipal Department whether sections 87 to 91, relating to sanitation, and sections 92 to 96, relating to vaccination, should be introduced into these districts.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

Offg. Chief Secy. to the Govt. of Bengal.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 29th October 1887.

| No.                       | District and date of return. | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.   |
|---------------------------|------------------------------|---------------------------------------|--|
| <b>BENGAL.</b>            |                              |                                       |  |
| <i>Western Districts.</i> |                              |                                       |  |
| BURDWAR DIV.              | 1 Burdwan, Oct. 29, '87      | Nil                                   | Weather seasonable. Prospect of crops fair. More rain still required. Fever prevalent. Price of rice stationary.   |
|                           | Culna ...                    | Nil                                   |  |
|                           | Cutwa ...                    | 0-19                                  |  |
|                           | Raneegunge ...               | 0-01                                  | Weather—seasonable. <i>Nasa</i> paddy is ripening. <i>Amun</i> in ear and expected to yield a 10-anna crop in Bishenpur and an 8-anna crop in the Fadder sub-division. <i>Rabbi</i> sowings have commenced. Want of moisture will affect the cultivation of this crop. Sugarcane coming on well. No appreciable change in the rice market during the week. Public health good.   |
|                           | 2 Bankoora „ 28, '87         | 0-08                                  |  |
|                           | Bishenpur ...                | 0-11                                  |  |
|                           | 3 Boerbhoom „ 29, '87        | 0-06                                  | Temperature sensibly lower than last week, and cold weather has evidently set in. Harvest has commenced with excellent results in marshy localities. Rices in uplands backward and has suffered to some extent by drought, but irrigation is being extensively adopted. Fallow lands are being cultivated for <i>rabbi</i> crop. Sugarcane promises well. Public health has improved; fever, it is hoped, is disappearing. |
|                           | 4 Midnapur „ 29, '87         | Nil                                   | Weather—much cooler. Crops reported good, but rain still wanted in parts of Ghatal. Fever reported to be bad in that sub-division.   |
|                           | 5 Hooghly „ 29, „            | Nil                                   | Cold weather has set in. Prospects of winter rice fair. Rain wanted, but there appears to be no prospect of it now. Other crops doing well. Fever prevalent and cholera in one village.  |
|                           | Howrah „ 31, '87             | Nil                                   | Weather—cloudy with cool mornings and evenings. Prospects of <i>amun</i> good throughout the district except in Juggutbulbupore, where more rain is wanted. Public health fair.  |
| <i>Central Districts.</i> |                              |                                       |  |
| PRESIDENCY DIV.           | 6 24-Parghs. Nov. 1, '87     | Nil                                   | Weather—cold during the week; cloudy and drizzling at the time of report. Prospects of <i>amun</i> generally good. Sugarcane doing well. Public health on the whole good.  |
|                           | 7 Nuddea Oct. 29, „          | Nil                                   | Weather—clear and cool. Rice promises well; best in the north of the district. Sugarcane also promising. Cultivation for cold-weather crops going on. Fever prevalent.   |
|                           | 8 Khoolna „ 29, '87          | Nil                                   | Weather—rather cool and without rain. Prospects of late rice are fair. Early <i>amun</i> is in flower. Winter sowings have commenced. Fever has decreased.   |
|                           | 9 Jessore „ 29, „            | Nil                                   | Weather—seasonable. Prospects of <i>amun</i> good. Sowing of mustard and other oilseeds going on. <i>Kalai</i> and pulses doing well. Fever reported from Jhenida sub-division and cholera from Magura station.  |
|                           | 10 Moorshedabad „ 29, '87    | 0-20                                  | Weather—hot during day; cool at night. <i>Amun</i> paddy in ear; prospects good. <i>Kalai</i> and <i>moog</i> are still being sown; <i>til</i> and <i>rahar</i> progressing.   |
|                           | Lalbagh ...                  | 0-10                                  |  |
|                           | Kandi ...                    | 0-12                                  |  |
| RAJSHAHY DIV.             | Jungipur ...                 | 0-25                                  | Weather—seasonable. Standing crops doing well. Rice 23 seers per rupee.  |
|                           | 11 Dinagpur „ 29, '87        | 0-05                                  |  |
|                           | 12 Rajshahye „ 29, '87       | 0-13                                  |  |
|                           | Nowgong ...                  | 0-22                                  | Weather—seasonable. Prospects of crops excellent. Fever somewhat prevalent.  |
|                           | 13 Rungpur „ 29, '87         | 0-20                                  |  |
|                           | 14 Bogra „ 29, '87           | Nil                                   | Prospects of <i>amun</i> crop continue favourable. Mustard and pulses are being sown. Public health fair for the time of the year.   |
|                           | 15 Pubna „ 29, '87           | Nil                                   | Weather—cool. Cold weather appears to have set in. State and prospects of crops continue satisfactory.   |
| DACA DIVISION.            | 16 Darjeeling „ 29, '87      | Nil                                   | Weather—seasonable. State and prospects of crops good.   |
|                           | 17 Julpigoree „ 29, „        | Nil                                   | Weather—cold and clear. State and prospects of crops good.   |
|                           | <i>Eastern Districts.</i>    |                                       | Weather—mornings and nights cool; days rather hot. Prospects continue generally good. Common rice sells at 20 seers per rupee. Fever prevails; public health otherwise good.   |
|                           | 18 Dacca, Oct. 29, '87       | Nil                                   | Weather—days hot; nights cool. <i>Amun</i> paddy being harvested. Sowing of mustard and pulses going on. Sugarcane thriving. Prospects of crops good on the whole. Some loss of crops will occur on high lands for want of rain. Public health fair, but fever prevalent.  |
|                           | 19 Furreedpur „ 29, '87      | Nil                                   | Weather—seasonable. Condition and prospects of crops satisfactory. Public health fair.   |
|                           | 20 Backergunge „ 28, '87     | Nil                                   | Weather—seasonable. Prospects of crops very good except at Gournadi, where rain is wanted, and at Gulshakhali and Chittabunia, where insects are said to be doing some damage. General health fair.  |
|                           | 21 Mymensingh „ 28, '87      | Nil                                   | Weather—seasonable. State and prospects of crops good.   |

| No.                                | District and date of return        | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|------------------------------------|------------------------------------|---------------------------------------|---|
| <b>BENGAL—contd.</b>               |                                    |                                       |   |
| <i>Eastern Districts—contd.</i>    |                                    |                                       |   |
| <b>CHITTAGONG DIV.</b>             | 22 Chittagong, Nov. 1, '87         | 0'17                                  | Prospects fair. Lands being made ready for winter crops. Sugarcane doing well. Cholera still reported; public health otherwise good. Prices stationary.   |
|                                    | 23 Noakholly Oct. 28, "            | 0'09                                  | Weather—seasonable and dry. Prospects of <i>amun</i> crop very fair. Public health fair.  |
|                                    | 24 Tipperah " 27, "                | Nil                                   | Weather—getting cold. Crops coming on very well, save on the high land in the centre and south of the district.   |
|                                    | 25 Chittagong Hill Tracts, " 26, " | Nil                                   | Weather—hot at noon; foggy in the mornings. Gathering of <i>jhum</i> nearly complete. Cotton in pods. Ploughing for mustard continues.  |
|                                    | Hill Tipperah " 26, "              | Nil                                   | Weather—getting cold. Prospects of <i>amun</i> paddy and cotton fair. Sugarcane doing well. Mustard being sown. Public health good.   |
| <b>BEHAR.</b>                      |                                    |                                       |   |
| <b>PATNA DIV.</b>                  | 26 Patna Oct. 29, '87              | Nil                                   | Weather—clear and cool. Prospect of rice on low lands promising. Sowing of <i>rubbi</i> crops is pushed on. <i>Rahar</i> and cotton growing well. Cases of cholera reported from the Behar sub-division; otherwise public health good.  |
|                                    | 27 Gya " 29, "                     | Nil                                   | Weather—fair. Paddy has suffered seriously for want of rain. <i>Rubbi</i> being sown. Fever still reported.   |
|                                    | 28 Shahabad " 29, "                | Nil                                   | Weather—bright and clear; mornings and evenings pleasantly cool. Prospects of paddy crop favourable. <i>Rubbi</i> sowings in progress. Public health generally good; cases of cholera reported in thana Dumraon.  |
|                                    | 29 Durbhunga " 29, "               | Nil                                   | Weather—getting cold. Paddy is getting into ear. <i>Rubbi</i> sowing in progress. Prices stationary. Public health generally good.  |
|                                    | 30 Mozufferpur " 28, "             | Nil                                   | Rains appear to have ceased. Prospects of both rice and <i>rubbi</i> crops favourable. Some cholera and a good deal of fever in the district.   |
|                                    | 31 Saran " 29, "                   | Nil                                   | Weather—fair; days still warm; mornings and evenings cool. <i>Aghani</i> paddy doing well. <i>Rubbi</i> sowings going on. Early sowings coming on well. Prospects continue good. Public health on the whole good.   |
|                                    | 32 Chumparun " 29, "               | Nil                                   | Weather—days warm, but nights cool, especially at dead hours. Prospects of crops favourable. Sowing of <i>rubbi</i> going on. Paddy plants putting forth ear. Prices falling. Fever prevalent to a small extent; public health otherwise good.                                      |
| <b>BHAGULPORE DIV.</b>             | 33 Monghyr " 29, "                 | Nil                                   | Weather fine and dry; days hot, nights and mornings cool. <i>Rubbi</i> sowings still going on. Winter rice doing well. Public health generally good, except a few isolated cases of cholera in the Sudder sub-division. Prices stationary.  |
|                                    | 34 Bhagulpur " 29, "               | Nil                                   | Weather—seasonable. <i>Rubbi</i> sowings continue with good moisture. Prospects of late rice very fair. The last rise of the river destroyed some <i>kalai</i> .  |
|                                    | 35 Purneah " 29, "                 | Nil                                   | Weather—fair and growing cold. All crops doing well. Tobacco, mustard and potato being sown.  |
|                                    | 36 Maldah " 29, "                  | 0'07                                  | Weather—seasonable. Prospects of all crops favourable. Common rice selling at an average of 22 seers per rupee. Fever prevalent.  |
|                                    | 37 Sonthal Pergah. Pakour " 29, "  | Nil<br>0'08                           | Weather—clear and getting cool. Paddy on high lands has greatly suffered for want of rain, especially in the Deoghur and Jamtara sub-divisions. Prices almost stationary. Fever prevalent in Rajmahal otherwise public health good.   |
| <b>ORISSA.</b>                     |                                    |                                       |   |
| <b>ORISSA DIV.</b>                 | 38 Cuttack " 28, "                 | Nil                                   | Weather—fair; nights cold. <i>Laghu sarad</i> ripening and in some places being cut. <i>Garu sarad</i> growing well. High land paddy requires more rain. Common rice sells at 18½ seers per rupee in town. Fever prevails almost everywhere in the district.                        |
|                                    | 39 Pooree " 27, "                  | Nil                                   | Weather—seasonable. <i>Sarad</i> crop coming into ear. Prospects generally fair, except in the Chilva tracts and part of Gop thana. Common rice 20 seers 7 chittacks per rupee in the Sudder sub-division and 20 seers 8 chittacks in the Khoorda sub-division. Public health good. |
|                                    | 40 Balasore " 28, "                | Nil                                   | Weather—getting cooler. <i>Sarad</i> rice coming into ear. A little more rain wanted, especially in the Bhadruck sub-division. Public health good, except a few cases of fever.   |
| <b>CHOTA NAGPORE.</b>              |                                    |                                       |   |
| <i>South-West Frontier Agency.</i> |                                    |                                       |   |
| 41                                 | Hasaribagh, Oct. 28, '87           | Nil                                   | Weather—getting cold. Winter rice will be a 10 to 12-anna crop. <i>Rubbi</i> is being sown everywhere. Public health good.  |
| 42                                 | Lohardagga " 29, "                 | Nil                                   | Weather—clear and cool. Prospects of winter paddy not favourable. <i>Rubbi</i> being sown. Prices rising. Public health good.   |
| 43                                 | Singbhoom " 28, "                  | 0'13                                  | Cold weather seems to have set in. Prospects have somewhat improved owing to recent fall of rain in parts of district. Prices have fallen again—26 seers per rupee. General health good.  |
| 44                                 | Manbhoom " 29, "                   | 0'02                                  | Weather—cold at night; getting cool in the daytime. Prospects of winter rice fair. Sugarcane and cotton doing well. Public health good.   |

Published for general information.



## Meteorological Report of the Province of B.

| METEOROLOGICAL DIVISION. |                        | DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                       |       |                     |       |                           |                                   |                                 |                                     |
|--------------------------|------------------------|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|-----------------------|-------|---------------------|-------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|
|                          |                        |                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.          |       |                     |       |                           |                                   |                                 |                                     |
|                          |                        |                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week.  | Date. | Lowest during week. | Date. | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. |
|                          |                        |                        |                         |                                 |                            |                      |                       |                     |                       |       |                     |       |                           |                                   |                                 |                                     |
| ORIGINAL.                | Pooree                 | Gopalpore              | 29.956                  | 30.006                          | +0.055                     | N                    | 117                   | 90.2                | 25th Oct.             | 72.0  | 25th Oct.           | 88.7  | 74.8                      | 81.8                              | +0.6                            |                                     |
|                          |                        | False Point            | 30.000                  | 30.022                          | +0.022                     | N                    | 158                   | 88.5                | 25rd                  | 65.5  | 28th                | 86.8  | 70.1                      | 78.4                              | -0.6                            |                                     |
|                          | Cuttack                | Cuttack                | 29.936                  | 30.018                          | +0.075                     | NE                   | 27                    | 90.4                | 23rd                  | 67.8  | 28th                | 89.1  | 71.7                      | 80.4                              | +0.4                            |                                     |
|                          | Balasore               | Balasore               | 29.968                  | 30.008                          | +0.042                     | NE                   | 70.5                  | 83.4                | 23rd                  | 62.5  | 28th                | 86.8  | 67.4                      | 77.1                              | -1.5                            |                                     |
|                          | South-West Midnapore   | Saugor Island          | 29.990                  | 30.025                          | +0.035                     | N                    | 216                   | 87.2                | 23rd                  | 65.9  | 27th                | 85.8  | 70.8                      | 78.3                              | -0.8                            |                                     |
|                          | Midnapore              | Midnapore              | 29.888                  | 30.039                          | +0.151                     | N                    | 61.6                  | 89.3                | 22nd                  | 61.7  | 28th                | 86.8  | 66.5                      | 76.7                              | -1.9                            |                                     |
|                          | 24-Pergunnahs          | Calcutta               | 29.908                  | 30.020                          | +0.112                     | N                    | 62                    | 86.5                | 23rd                  | 63.0  | 27th                | 84.4  | 68.0                      | 76.2                              | -2.5                            |                                     |
|                          | Howrah                 | Burdwan                | 29.918                  | 30.020                          | +0.102                     | NW                   | 31                    | 88.6                | 22nd, 23rd Oct.       | 65.4  | 27th & 28th Oct.    | 85.9  | 69.0                      | 77.0                              | -2.3                            |                                     |
|                          | Bankoora               | Bankoora               | 29.703                  | -                               | -                          | Calm                 | 1.3                   | 80.1                | 24th, 25th Oct.       | 61.7  | 28th                | 80.4  | 66.3                      | 76.5                              | -                               |                                     |
|                          | Beerbhoom              | Raneegunge             | 29.711                  | 30.023                          | +0.312                     | Variable             | 63.1                  | 90.5                | 23rd                  | 60.1  | 27th                | 87.2  | 63.6                      | 76.4                              | -2.2                            |                                     |
|                          | West Burdwan           | Berhampore             | 29.944                  | 30.032                          | +0.088                     | NW                   | 37.4                  | 87.6                | 22nd, 23rd Oct.       | 62.7  | 27th                | 83.9  | 68.5                      | 76.2                              | -2.8                            |                                     |
|                          | Moorehadabad           | Krishnagur             | 29.955                  | 30.023                          | -                          | Northerly            | 44.7                  | 88.8                | 23rd                  | 61.4  | 29th                | 85.6  | 66.2                      | 75.9                              | -                               |                                     |
|                          | Nuddes                 | Jessore                | 29.948                  | 30.022                          | +0.074                     | North-westerly.      | 34.8                  | 89.2                | 23rd                  | 61.5  | 27th                | 86.8  | 69.0                      | 77.8                              | -1.4                            |                                     |
|                          | Jessore                | Chittagong             | 29.915                  | 30.005                          | +0.090                     | North-easterly.      | 27                    | 87.6                | 23rd, 24th, 25th Oct. | 65.5  | 26th                | 86.9  | 69.2                      | 78.0                              | -0.5                            |                                     |
|                          | Khobna                 | Damagiri               | 29.991                  | 30.006                          | +0.015                     | NNE                  | 41.8                  | 87.8                | 22nd, 24th Oct.       | 66.0  | 27th                | 86.4  | 69.8                      | 78.1                              | +0.1                            |                                     |
|                          | Chittagong             | Barrisal               | 29.956                  | 30.000                          | -                          | Calm                 | 1.0                   | 80.6                | 23rd, 24th Oct.       | 63.0  | 28th                | 85.4  | 67.9                      | 76.7                              | -                               |                                     |
|                          | Chittagong Hill Tracts | Noakholly              | 29.980                  | 30.021                          | +0.041                     | N                    | 29.4                  | 86.5                | 23rd, 24th Oct.       | 63.6  | 28th                | 84.0  | 68.4                      | 76.2                              | -2.9                            |                                     |
|                          | Backergunge            | Furreedpore            | 29.985                  | 30.008                          | +0.023                     | NW                   | 45                    | 88.1                | 23rd, 24th Oct.       | 66.0  | 26th, 27th Oct.     | 85.5  | 69.1                      | 77.3                              | -2.1                            |                                     |
|                          | Dacca                  | Commillah              | 29.960                  | 30.015                          | +0.055                     | N                    | 18.4                  | 89.4                | 22nd, 23rd Oct.       | 63.9  | 26th                | 87.3  | 68.4                      | 77.8                              | -1.1                            |                                     |
|                          | Commillah              | Mymensingh             | 29.956                  | 30.015                          | +0.059                     | Northerly            | 53.0                  | 88.3                | 23rd                  | 64.1  | 26th, 27th Oct.     | 85.4  | 68.2                      | 76.8                              | -1.6                            |                                     |
|                          | Mymensingh             | Bogra                  | 29.924                  | 30.088                          | +0.164                     | Calm                 | 3.3                   | 87.3                | 23rd                  | 62.9  | 25th                | 84.2  | 66.0                      | 75.1                              | -                               |                                     |
|                          | Bogra                  | Serajunge              | 29.964                  | 30.011                          | +0.047                     | Westerly             | 20.8                  | 88.0                | 23rd                  | 62.3  | 27th                | 85.7  | 66.0                      | 75.9                              | -2.3                            |                                     |
|                          | Serajunge              | Rampore Beach.         | 29.946                  | 30.017                          | +0.071                     | Westerly             | 42.5                  | 88.3                | 23rd                  | 60.7  | 27th                | 85.0  | 64.4                      | 74.7                              | -5.4                            |                                     |
|                          | Rampore Beach.         | Maldah                 | 29.855                  | -                               | -                          | Calm                 | -                     | 90.3                | 22nd                  | 53.1  | 27th                | 86.3  | 68.3                      | 74.8                              | -                               |                                     |
|                          | Maldah                 | Dinapore               | 29.870                  | 30.008                          | +0.138                     | WSW                  | 40.6                  | 89.1                | 22nd, 23rd Oct.       | 61.7  | 27th                | 85.1  | 68.1                      | 76.5                              | -0.4                            |                                     |
|                          | Dinapore               | Rangpore               | 29.884                  | 30.011                          | +0.127                     | Calm                 | 17.4                  | 89.8                | 23rd                  | 60.7  | 25th                | 85.0  | 66.1                      | 75.4                              | -0.8                            |                                     |
|                          | Rangpore               | Julpigoree             | 29.725                  | 30.021                          | +0.296                     | SE                   | 51.8                  | 86.9                | 22nd,                 | 61.0  | 28th                | 84.0  | 68.3                      | 76.2                              | -0.9                            |                                     |
|                          | Julpigoree             | Cooch Behar            | 29.988                  | -                               | -                          | Calm                 | 65.9                  | 63.1                | 23rd                  | 43.6  | 26th                | 88.9  | 48.3                      | 52.6                              | -0.5                            |                                     |
|                          | Cooch Behar            | Darjeeling Hill Tracts | 29.988                  | -                               | -                          | Calm                 | 12.6                  | 86.2                | 22nd, 23rd Oct.       | 58.7  | 25th, 26th Oct.     | 83.8  | 63.5                      | 73.7                              | -3.0                            |                                     |
|                          | Darjeeling Hill Tracts | Purneah                | 29.886                  | 30.015                          | +0.129                     | Calm                 | 75                    | 86.4                | 22nd                  | 62.9  | 25th                | 84.1  | 67.4                      | 75.8                              | -1.5                            |                                     |
|                          | Purneah                | North Bhagulpore       | 29.854                  | 30.021                          | +0.167                     | WSW                  | 119.0                 | 87.7                | 22nd, 23rd Oct.       | 55.9  | 25th                | 85.3  | 69.9                      | 75.1                              | -3.8                            |                                     |
|                          | North Bhagulpore       | Mozufferpore           | 29.816                  | 30.011                          | +0.195                     | W                    | 5.9                   | 87.9                | 22nd                  | 61.4  | 25th                | 85.1  | 65.6                      | 74.4                              | -2.9                            |                                     |
|                          | Mozufferpore           | Durbhunga              | 29.669                  | 30.031                          | +0.362                     | SSW                  | 167.5                 | 86.4                | 23rd                  | 62.5  | 27th                | 83.9  | 65.4                      | 74.6                              | -1.7                            |                                     |
|                          | Durbhunga              | Chumpanan              | 29.781                  | 30.031                          | +0.250                     | W                    | 82.0                  | 86.9                | 22nd, 23rd Oct.       | 61.9  | 26th                | 86.0  | 64.0                      | 75.0                              | -2.7                            |                                     |
|                          | Chumpanan              | Saron                  | 29.804                  | 30.006                          | +0.192                     | SW                   | 33.9                  | 86.8                | 22nd, 23rd Oct.       | 60.3  | 25th,               | 85.7  | 63.5                      | 74.1                              | -3.9                            |                                     |
|                          | Saron                  | Shahabad               | 29.669                  | 30.035                          | +0.366                     | W                    | 51                    | 88.9                | 22nd                  | 60.7  | 25th, 26th Oct.     | 87.3  | 64.0                      | 75.7                              | -1.7                            |                                     |
|                          | Shahabad               | Gya                    | 29.847                  | 30.035                          | +0.188                     | W                    | 55                    | 87.8                | 23rd                  | 63.3  | 25th                | 86.3  | 65.0                      | 76.7                              | -1.3                            |                                     |
|                          | Gya                    | Patna                  | 29.56                   | 30.021                          | +0.461                     | N                    | 41.0                  | 86.9                | 23rd                  | 59.0  | 27th                | 84.5  | 68.1                      | 73.8                              | -3.0                            |                                     |
|                          | Patna                  | South Bhagulpore       | 29.506                  | -                               | -                          | Calm                 | 14.7                  | 85.1                | 22nd                  | 57.0  | 27th                | 85.0  | 68.1                      | 74.1                              | -                               |                                     |
|                          | South Bhagulpore       | Xonghyr                | 28.911                  | 28.939                          | +0.028                     | Northerly            | 175.0                 | 82.4                | 22nd, 26th Oct.       | 58.8  | 27th                | 81.4  | 61.3                      | 71.4                              | -0.8                            |                                     |
|                          | Xonghyr                | Longthal Pergunnahs    | 27.860                  | 30.011                          | +0.151                     | Northerly            | 109.9                 | 82.5                | 25th Oct.             | 64.4  | 27th                | 81.6  | 60.4                      | 71.1                              | -1.7                            |                                     |
|                          | Longthal Pergunnahs    | Hazaribagh             | 29.253                  | -                               | -                          | Variable             | 21.0                  | 88.9                | 24th                  | 55.8  | 26th                | 85.8  | 65.3                      | 75.7                              | -                               |                                     |
|                          | Hazaribagh             | Chhardugga             | 29.704                  | 30.045                          | +0.341                     | NE                   | 41                    | 87.6                | 22nd                  | 66.4  | 26th                | 83.5  | 65.3                      | 76.0                              | +0.7                            |                                     |
|                          | Chhardugga             | Sanbhoom               | 29.690                  | 30.019                          | +0.329                     | Calm                 | 93                    | 87.7                | 23rd                  | 65.9  | 25th                | 83.8  | 66.6                      | 76.6                              | -1.3                            |                                     |
|                          | Sanbhoom               | Silohar                | 29.604                  | 30.011                          | +0.407                     | Calm                 | 34                    | 87.0                | 23rd                  | 63.3  | 27th                | 89.1  | 70.7                      | 79.8                              | +1.8                            |                                     |
| Silohar                  |                        |                        |                         |                                 |                            |                      |                       |                     |                       |       |                     |       |                           |                                   |                                 |                                     |

Summary.—The normal means of air pressure and temperature at the stations are given in the margin of the table.

Summary.—The normal means of air pressure and temperature at the stations are given in the margin of the table.

Observations suspended.

Summary.—The normal means of air pressure and temperature for the month of November are—  
 Air pressure at sea-level, 30.000; mean daily temperature, 76.7; mean maximum temperature, 86.8; mean minimum temperature, 66.5.



the week ending Friday, the 28th October 1887.

| No. | Temperature at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | DISTRICT OBSERVATIONS. |              |      |                     |              |            |                    |              |            |                               | Representative station.      | District.        | Meteorological Division. |  |  |
|-----|------------------------|---|--|------------------------|--------------|------|---------------------|--------------|------------|--------------------|--------------|------------|-------------------------------|------------------------------|------------------|--------------------------|--|--|
|     |                        |   |  | RAINFALL.              |              |      |                     |              |            |                    |              |            |                               |                              |                  |                          |  |  |
|     |                        |   |  | OF WEEK.               |              |      | Since 1st of month. |              |            | Since May 16th.    |              |            | Average number of rainy days. | Normal number of rainy days. |                  |                          |  |  |
|     |                        |   |  | Mean for district.     | Normal mean. |      | Mean for district.  | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. |                               |                              |                  |                          |  |  |
| 70  | 8.3                    | 1.06                                      | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Gopalpore        | Orissa.                  |  |  |
| 64  | 1.8                    | —   | Nil                                    | 2.33                   | 6.32         | 7.58 | -1.26               | 41.21        | 52.08      | -11.47             | 0.9          | 2.1        | —                             | —                            | Falae Point      |                          |  |  |
| 56  | 2.7                    | —   | Nil                                    | 1.83                   | 2.21         | 5.55 | -3.31               | 42.03        | 50.37      | -7.44              | 0.0          | 1.8        | —                             | —                            | Cuttack          |                          |  |  |
| 60  | 0                      | —   | Nil                                    | 0.91                   | 2.58         | 5.00 | -2.12               | 41.38        | 52.05      | -10.67             | 0.0          | 1.3        | —                             | —                            | Balasore         |                          |  |  |
| 65  | 1.7                    | —   | Nil                                    | 2.64                   | 4.08         | 7.30 | -2.34               | 50.86        | 60.60      | -3.80              | 0.0          | 1.8        | —                             | —                            | Saugor Island    | South-West Midnapore     |  |  |
| 57  | 2.0                    | —   | Nil                                    | 1.20                   | 2.24         | 4.32 | -2.08               | 50.41        | 50.49      | -0.08              | 0.0          | 1.1        | —                             | —                            | Midnapore        |                          |  |  |
| 59  | 2.4                    | —   | Nil                                    | 0.98                   | 2.06         | 4.12 | -1.16               | 40.45        | 51.08      | -10.63             | 0.0          | 1.2        | —                             | —                            | Calcutta         | South-West Bengal.       |  |  |
| 55  | 2.8                    | —   | 0.06                                   | 0.14                   | 1.70         | 4.00 | -2.24               | 44.71        | 45.78      | -1.07              | 0.3          | 1.3        | —                             | —                            | Burdwan          |                          |  |  |
| 53  | 2.3                    | 0.08                                      | 0.13                                   | 0.74                   | 1.21         | 4.01 | -2.72               | 49.34        | 51.33      | -1.99              | 1.0          | 1.1        | —                             | —                            | Bankoora         |                          |  |  |
| 50  | 2.6                    | 0.01                                      | 0.02                                   | 0.53                   | 2.28         | 3.42 | -1.14               | 47.24        | 51.01      | -4.37              | 0.5          | 1.0        | —                             | —                            | Raneegunge       |                          |  |  |
| 68  | 2.0                    | 0.20                                      | 0.17                                   | 0.36                   | 3.63         | 4.17 | -0.54               | 58.79        | 48.85      | +10.94             | 1.0          | 0.7        | —                             | —                            | Berhampore       | South-West Bengal.       |  |  |
| 55  | 3.6                    | —   | Nil                                    | 0.01                   | 3.04         | 4.12 | -0.48               | 42.77        | 48.52      | -5.75              | 0.0          | 1.3        | —                             | —                            | Krishnagpur      |                          |  |  |
| 65  | 3.0                    | —   | Nil                                    | 1.07                   | 4.50         | 4.25 | +0.25               | 40.83        | 52.65      | -11.82             | 0.0          | 1.4        | —                             | —                            | Jessore          |                          |  |  |
| 73  | 2.4                    | —   | Nil                                    | 1.72                   | 4.79         | 0.51 | -1.72               | 87.30        | 111.53     | -24.23             | 0.0          | 1.9        | —                             | —                            | Chittagong       |                          |  |  |
| 67  | 0.4                    | —   | Nil                                    | 1.24                   | 2.54         | 7.20 | -4.60               | 57.47        | 78.93      | -21.46             | 0.0          | 1.5        | —                             | —                            | Demagiri         | East Bengal.             |  |  |
| 70  | 0.7                    | 0.15                                      | 0.05                                   | 1.06                   | 4.05         | 6.37 | -1.72               | 67.75        | 105.82     | -38.07             | 0.5          | 1.3        | —                             | —                            | Barrisal         |                          |  |  |
| 65  | 1.7                    | Nil                                       | Nil                                    | 0.77                   | 4.36         | 4.31 | +0.05               | 36.50        | 55.31      | -19.81             | 0.0          | 1.4        | —                             | —                            | Noakhally        |                          |  |  |
| 62  | 2.7                    | Nil                                       | Nil                                    | 0.92                   | 4.49         | 4.26 | +0.23               | 39.18        | 59.91      | -20.73             | 0.0          | 1.4        | —                             | —                            | Furzedpore       |                          |  |  |
| 66  | 2.0                    | Nil                                       | Nil                                    | 0.98                   | 3.78         | 5.12 | -1.34               | 40.80        | 60.02      | -24.73             | 0.0          | 1.3        | —                             | —                            | Dacca            | North Bengal.            |  |  |
| 72  | 3.7                    | Nil                                       | Nil                                    | 1.40                   | 5.10         | 5.22 | -0.03               | 60.41        | 60.74      | -0.33              | 0.0          | 1.5        | —                             | —                            | Commilla         |                          |  |  |
| 63  | 2.0                    | 0.03                                      | Nil                                    | 0.54                   | 4.32         | 4.30 | -0.07               | 60.50        | 50.19      | +4.31              | 0.0          | 0.8        | —                             | —                            | Mymensingh       |                          |  |  |
| 31  | 1.0                    | —   | Nil                                    | 1.00                   | 4.18         | 4.55 | -0.36               | 43.07        | 53.03      | -9.06              | 0.0          | 1.7        | —                             | —                            | Bogra            |                          |  |  |
| 59  | 1.4                    | 0.11                                      | 0.07                                   | 0.76                   | 3.58         | 4.68 | -1.13               | 49.39        | 53.48      | -4.09              | 0.5          | 1.0        | —                             | —                            | Serajpore        | North Bengal.            |  |  |
| 62  | 1.4                    | 0.07                                      | 0.04                                   | 0.74                   | 2.63         | 3.61 | -1.01               | 48.01        | 53.94      | -7.93              | 0.5          | 1.0        | —                             | —                            | Rampore Beaulah  |                          |  |  |
| 34  | 2.3                    | 0.06                                      | 0.05                                   | 0.43                   | 4.43         | 3.61 | +0.82               | 60.00        | 55.40      | +13.66             | 0.8          | 0.8        | —                             | —                            | Maldah           |                          |  |  |
| 70  | 1.4                    | 0.20                                      | 0.10                                   | 0.80                   | 3.77         | 4.88 | -1.11               | 80.61        | 72.57      | +8.04              | 0.8          | 0.8        | —                             | —                            | Dinapore         |                          |  |  |
| 76  | 3.1                    | —   | 0.03                                   | 0.91                   | 2.41         | 6.00 | -3.59               | 117.42       | 109.71     | +7.71              | 0.2          | 1.2        | —                             | —                            | Rangpore         | North Bengal.            |  |  |
| 35  | 4.6                    | Nil                                       | 0.20                                   | 1.39                   | 4.96         | 5.92 | -0.96               | 117.09       | 119.25     | -2.16              | 0.5          | 1.3        | —                             | —                            | Jalpigoree       |                          |  |  |
| 55  | 0.8                    | Nil                                       | Nil                                    | 0.06                   | 3.80         | 3.35 | +0.45               | 65.04        | 57.08      | +7.96              | 0.0          | 0.6        | —                             | —                            | Cooch Behar      |                          |  |  |
| 35  | 0.4                    | Nil                                       | Nil                                    | 0.53                   | 4.59         | 3.13 | +1.46               | 46.91        | 42.21      | +4.70              | 0.0          | 0.5        | —                             | —                            | Darjeeling       |                          |  |  |
| 34  | 0.4                    | Nil                                       | Nil                                    | 0.55                   | 3.28         | 2.78 | +0.50               | 49.02        | 43.46      | +5.56              | 0.0          | 0.4        | —                             | —                            | Purneah          | North Bengal.            |  |  |
| 36  | 0.4                    | Nil                                       | Nil                                    | 0.09                   | 7.20         | 3.14 | +4.06               | 40.40        | 45.46      | -5.06              | 0.0          | 0.2        | —                             | —                            | Mozufferpore     |                          |  |  |
| 37  | 0                      | Nil                                       | Nil                                    | 0.52                   | 5.40         | 4.27 | +1.12               | 39.35        | 42.10      | -2.75              | 0.0          | 0.5        | —                             | —                            | Durbhunga        |                          |  |  |
| 38  | 0                      | Nil                                       | Nil                                    | 0.07                   | 5.00         | 3.15 | +1.85               | 37.25        | 38.93      | -1.68              | 0.0          | 0.0        | —                             | —                            | Motihari         |                          |  |  |
| 39  | 0                      | Nil                                       | Nil                                    | 0.46                   | 2.98         | 2.75 | +0.23               | 38.00        | 40.51      | -2.51              | 0.0          | 0.6        | —                             | —                            | Chupra           | South Bengal.            |  |  |
| 40  | 0                      | Nil                                       | Nil                                    | 0.82                   | 2.62         | 3.20 | -0.58               | 36.04        | 40.56      | -4.52              | 0.0          | 0.8        | —                             | —                            | Dehree           |                          |  |  |
| 41  | 0.4                    | —   | Nil                                    | 0.79                   | 2.40         | 3.11 | -0.62               | 42.93        | 42.20      | +0.73              | 0.0          | 0.8        | —                             | —                            | Buxar            |                          |  |  |
| 42  | 1.4                    | —   | 0.01                                   | 0.71                   | 2.92         | 3.93 | -1.01               | 52.49        | 40.99      | +11.50             | 0.2          | 0.8        | —                             | —                            | Arrah            |                          |  |  |
| 43  | 0.6                    | —   | Nil                                    | 0.39                   | 1.37         | 3.28 | -1.91               | 46.42        | 40.46      | +5.96              | 0.0          | 0.5        | —                             | —                            | Gya              | South Bengal.            |  |  |
| 44  | 2.1                    | —   | 0.61                                   | 0.63                   | 1.87         | 3.04 | -1.17               | 44.34        | 46.17      | -1.83              | 0.2          | 1.0        | —                             | —                            | Bankipore        |                          |  |  |
| 45  | 3.7                    | 0.13                                      | 0.13                                   | 0.93                   | 0.33         | 2.87 | -2.55               | 40.62        | 50.00      | -9.38              | 1.0          | 1.0        | —                             | —                            | Gya              |                          |  |  |
| 46  | 3.0                    | 0.46                                      | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Patna            |                          |  |  |
| 47  | 1.4                    | 0.03                                      | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | South Bhagulpore | Chota Nagpur.            |  |  |
| 48  | 5.8                    | 0.14                                      | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Monghyr          |                          |  |  |
| 49  | —                      | —   | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Dumka            |                          |  |  |
| 50  | —                      | —   | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Hasaribagh       |                          |  |  |
| 51  | —                      | —   | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Lohardugga       | Chota Nagpur.            |  |  |
| 52  | —                      | —   | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Manbhoom         |                          |  |  |
| 53  | —                      | —   | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Singbhoom        |                          |  |  |
| 54  | —                      | —   | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Sibesar          |                          |  |  |
| 55  | —                      | —   | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Dhubri           | Assam.                   |  |  |
| 56  | —                      | —   | —                                      | —                      | —            | —    | —                   | —            | —          | —                  | —            | —          | —                             | —                            | Silchar          |                          |  |  |





## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the of 28th October 1887—cont.

| Meteorological Division. | District. | Station.      | RAINFALL.              |                      |                       |                        |                          |                         |                       | TOTAL                 |                   | Total rainfall since 1st of month. | Average total rainfall from 1st of month. | Total rainfall since 1st May 1887. | A. F. ft. |
|--------------------------|-----------|---------------|------------------------|----------------------|-----------------------|------------------------|--------------------------|-------------------------|-----------------------|-----------------------|-------------------|------------------------------------|---|------------------------------------|-----------|
|                          |           |               | Saturday, 2nd October. | Sunday, 3rd October. | Monday, 24th October. | Tuesday, 25th October. | Wednesday, 26th October. | Thursday, 27th October. | Friday, 28th October. | Number of rainy days. | of Rainfall week. |                                    |   |                                    |           |
| NORTH BHAR               | Narad     | Gopalgunge    | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 5'53                               | 5'51                                      | 41'99                              |           |
|                          |           | Bowan         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 6'00                               | 5'85                                      | 38'94                              |           |
| SOUTH BHAR               | Shahabad  | Chaurah       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4'95                               | 3'43                                      | 57'32                              |           |
|                          |           | Buxar         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4'74                               | 3'16                                      | 35'08                              |           |
|                          |           | Deoria        | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 5'02                               | 3'03                                      | 37'86                              |           |
|                          |           | Bhubooh       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4'43                               | 3'44                                      | 40'78                              |           |
|                          |           | Sameram       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 5'89                               | 3'44                                      | 35'44                              |           |
|                          |           | Arrah         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 5'89                               | 3'44                                      | 35'44                              |           |
|                          |           | Mohania       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 5'89                               | 3'44                                      | 35'44                              |           |
|                          |           | Aurangabad... | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'96                               | 2'84                                      | 20'35                              |           |
|                          |           | Gaya          | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'73                               | 2'84                                      | 42'13                              |           |
|                          |           | Nowadah       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'57                               | 2'06                                      | 35'02                              |           |
|                          |           | Shahabad      | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3'63                               | 3'17                                      | 45'61                              |           |
|                          |           | Arwal         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4'06                               | 3'17                                      | 30'84                              |           |
|                          |           | Deoria        | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'41                               | 2'87                                      | 27'81                              |           |
|                          |           | Sherrghati    | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'87                               | 2'87                                      | 36'75                              |           |
|                          |           | Bajauli       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'80                               | 2'87                                      | 27'43                              |           |
|                          |           | Sherrghati    | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'80                               | 2'87                                      | 27'43                              |           |
|                          |           | Patna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3'20                               | 3'27                                      | 36'36                              |           |
|                          |           | Divapora      | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'88                               | 3'23                                      | 37'56                              |           |
|                          |           | Behar         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'16                               | 3'21                                      | 34'50                              |           |
|                          |           | Barh          | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3'30                               | 3'13                                      | 35'71                              |           |
|                          |           | Bickram       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3'70                               | 3'70                                      | 37'75                              |           |
|                          |           | Hilsa         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3'38                               | 3'38                                      | 33'54                              |           |
|                          |           | Benares       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'51                               | 3'03                                      | 48'84                              |           |
|                          |           | Mounayr       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3'04                               | 3'25                                      | 46'64                              |           |
|                          |           | Jamui         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'07                               | 2'55                                      | 38'00                              |           |
|                          |           | Gogri         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'60                               | 2'55                                      | 42'03                              |           |
|                          |           | Sheikpura     | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'05                               | 2'55                                      | 28'18                              |           |
|                          |           | Shikulpore.   | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'28                               | 3'22                                      | 40'86                              |           |
|                          |           | Banra         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'04                               | 3'42                                      | 39'34                              |           |
|                          |           | Kolgaug       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'87                               | 3'42                                      | 43'27                              |           |
|                          |           | South Bengal  | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4'00                               | 2'89                                      | 49'10                              |           |
|                          |           | Per-          | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'31                               | 3'12                                      | 77'76                              |           |
|                          |           | gunnahs.      | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'39                               | 4'21                                      | 44'77                              |           |
|                          |           | Rajmoul       | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'00                               | 4'27                                      | 46'71                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'29                               | 3'26                                      | 39'36                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'73                               | 3'26                                      | 39'36                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'90                               | 3'22                                      | 40'07                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'49                               | 3'15                                      | 45'43                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3'18                               | 3'18                                      | 39'32                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'10                               | 2'09                                      | 46'28                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'20                               | 4'15                                      | 57'10                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'16                               | 3'27                                      | 47'72                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'82                               | 3'27                                      | 72'16                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'30                               | 3'27                                      | 50'34                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'30                               | 3'27                                      | 53'07                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'03                               | 2'83                                      | 56'43                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'10                               | 2'59                                      | 45'86                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'00                               | 2'59                                      | 45'86                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'24                               | 2'59                                      | 51'08                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4'79                               | 2'59                                      | 52'79                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'32                               | 2'87                                      | 40'03                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'68                               | 2'87                                      | 36'99                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'80                               | 2'87                                      | 53'40                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'68                               | 2'87                                      | 38'80                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'02                               | 2'86                                      | 44'11                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0'81                               | 3'03                                      | 29'53                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2'08                               | 3'03                                      | 36'86                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'27                               | 3'03                                      | 40'82                              |           |
|                          |           | Godna         | .....                  | .....                | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1'27                               | 3'03                                      | 40'82                              |           |

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 1st November 1887.

**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS  
TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE 28TH OF  
OCTOBER 1887.**

At the close of the previous week the meteorological conditions were decidedly those which usually usher in the north-east monsoon or the cold weather season in Bengal. Winds were, however, rather light and irregular in direction, though cloud proportion and humidity were low, and temperature was distinctly falling. On the 22nd winds became decidedly more northerly than they had been, and except at the western stations in Behar, where winds were westerly, light northerly and north-easterly winds prevailed over the whole province. The westerly element in the wind directions strengthened on the 23rd, and temperature began to fall rather rapidly, so that the mean temperature of this day, as shewn in the report of the 24th, was at some of the western stations  $4^{\circ}$  and  $5^{\circ}$  below the normal. On the 24th, also, winds became somewhat southerly at some of the central stations in the province, but on the 25th the southerly winds had almost disappeared, and for the remainder of the week winds were northerly over the whole province. A further rather rapid fall of temperature took place later on, and in the observations reported on Thursday, the 27th, the mean temperature of the previous day was shown to be no less than  $9.8^{\circ}$  in defect of the normal at Berhampore and  $8.8^{\circ}$  below it at Raneegunge. The defect exceeded  $7^{\circ}$  at Rampore Bauleah; at Burdwan, Dinagepore and Dhubri the defects exceeded  $6^{\circ}$ , and at Furreedpore and Rungpore they exceeded  $5^{\circ}$ . At the same time also humidity became decidedly low, and at 10 A.M. of the 25th, at Ranchi, the saturation of the air with moisture was only 23 per cent. and at Hazaribagh only 24 per cent. of the possible amount. The sky also became practically cloudless over the greater part of the province, except on the 26th, when it clouded over locally in parts of South-West and North Bengal, and a few local showers were reported on this day from the Burdwan, Bankoora, Beerbhoom, Moorshedabad, Rajshahye, Dinagepore and Rungpore districts. With the exception of these light local showers, the whole province has been practically rainless throughout the week. The principal features during the week have therefore been the gradual establishment of the north-east monsoon conditions over the greater part of Bengal, accompanied by the continuance of comparatively high pressure, and with a decidedly rapid reduction of temperature; skies have also cleared, humidity has decreased, and rainfall has been almost entirely absent. But while these conditions have gradually become established in Bengal, in the south of the Bay the south-west monsoon has still continued to blow; rather heavy rain has been received along the Madras coast, and strong winds and rather squally weather have generally prevailed, and at the close of the week it was evident that a decided barometric depression or feeble cyclonic storm was forming in the south-west of the Bay.

*Pressure.*—The pressure variations which have occurred during the present week have only been such as usually occur during fine settled weather, and they have been of slight oscillatory character only. The tendency of the oscillations has, however, been distinctly towards increased pressure, as is normal at this season; and the excess pressure which has been a marked feature in the meteorology of the last two weeks has been maintained. Taking into consideration only those stations from which observations have been received for a number of years, the mean pressure of the whole of Bengal for the week has been 0.065 inch in excess of the normal. This excess pressure has been fairly evenly distributed, though in North Behar at Purneah the excess has been only 0.043 inch. In Assam the excess pressure has varied between 0.03 inch and 0.04 inch.

*Temperature.*—In the previous portion of this summary, it has been noticed that temperature fell rapidly during a part of the week, and thus the mean temperature for this period has been very decidedly below the normal. For the whole province the mean temperature for the week has been  $1.7^{\circ}$  below the normal. The defects have generally been largest in South-West Bengal, North Behar and South Behar, where they vary from  $2^{\circ}$  upwards. The reduction in the temperature has apparently taken place most rapidly in the night or minimum temperature, for while at many stations the mean maximum or day temperatures have been nearly equal to the normal, the night temperatures have been much more largely in defect. This is shown in the following table, where the mean maximum and minimum temperatures for the week at nine typical stations in different districts of the province are given, compared with the normal for the period; and thus while the mean day temperature of these nine stations has been less than half a degree below the normal only, the defect in the night temperatures has averaged more than two and a half degrees, and at such stations as Calcutta, Burdwan and Purneah the defects have averaged nearly four degrees.

*Table showing the excess or defect of the actual temperature from the normal for the week ending the 28th October 1887.*

|            | Normal<br>mean maxi-<br>mum tem-<br>perature for<br>the week<br>ending 28th<br>October. | Actual<br>mean maxi-<br>mum tem-<br>perature for<br>the week<br>ending 28th<br>October<br>1887. | Excess or<br>defect from<br>normal. | Normal<br>mean mini-<br>mum tem-<br>perature for<br>the week<br>ending 28th<br>October. | Actual<br>mean mini-<br>mum tem-<br>perature for<br>the week<br>ending 28th<br>October<br>1887. | Excess or<br>defect from<br>normal. | Normal<br>mean daily<br>temperature<br>for the week<br>ending the<br>28th Octo-<br>ber. | Actual<br>mean daily<br>temperature<br>for the<br>week end-<br>ing 28th<br>October<br>1887. | Excess or<br>defect from<br>normal. |
|------------|---|---|-------------------------------------|---|---|-------------------------------------|---|---|-------------------------------------|
| Cuttack    | 88°0  | 89°1  | +1°1                                | 71°9  | 71°7  | -0°2                                | 80°0  | 86°4  | +6°4                                |
| Calcutta   | 85°5  | 84°4  | -1°1                                | 71°9  | 68°0  | -3°9                                | 78°7  | 76°2  | -2°5                                |
| Dacca      | 86°4  | 85°5  | -0°9                                | 72°3  | 69°1  | -3°2                                | 79°4  | 77°2  | -2°2                                |
| Burdwan    | 88°5  | 85°9  | -0°6                                | 71°9  | 69°0  | -2°9                                | 79°2  | 77°0  | -2°2                                |
| Patna      | 86°1  | 86°3  | +0°2                                | 67°8  | 65°0  | -2°8                                | 77°0  | 75°7  | -1°3                                |
| Gya        | 87°3  | 87°3  | 0                                   | 67°3  | 64°9  | -2°3                                | 77°2  | 75°7  | -1°5                                |
| Purneah    | 87°0  | 83°8  | -3°2                                | 67°3  | 63°5  | -3°8                                | 77°2  | 73°7  | -3°5                                |
| Hazarihagh | 86°7  | 81°4  | +0°7                                | 63°5  | 61°3  | -2°2                                | 72°1  | 71°4  | -0°7                                |
| Darjeeling | 59°2  | 58°9  | -0°3                                | 45°7  | 40°3  | +0°6                                | 52°5  | 53°6  | +0°1                                |

**In Assam the mean temperature for the week has been 0.3° above the normal.**

**Rainfall.**—The rainfall of the week has been of so slight a character that it has been almost practically absent from the province. As stated previously, light falls have occurred in a few districts in South-West and North Bengal, but the only districts in which the average falls have exceeded a tenth of an inch have been Bankoora (0·18 inch), Moorshedabad (0·17 inch), Rungpore (0·10 inch), Darjeeling (0·20 inch), and Chyebassa (0·13 inch).

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 28th of October 1887 :—

[illegible]

\* Chyebman not included.

**METEOROLOGICAL OFFICE, BENGAL:**

**The 1st November 1887.**

**A. PEDLER.**

*Offg. Meteorological Reporter to the Govt. of Bengal.*

**Results of the Meteorological Observations taken at the Alipore Observatory from  
23rd to 29th October 1887.**

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 29° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY     |                 |            |           | WIND.                 |                 | Rain.   | WEATHER.                                  |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|---|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |         |   |
| 1887.  |       | O               |                                     | Inches                               | O            | O        | O      | O        | O              | Inches          | O          | %         |                       |                 | Inches. |   |
| Oct.   | 23rd  | 142.5           | 10.8                                | 29.910                               | 78.1         | 85.5     | 12.5   | 73.0     | 71.8           | 0.698           | 68.5       | 74        | NNW and WNW ...       | 56              | Nil     | Clear, $\overline{\text{p}}$ .            |
| "      | 24th  | 138.5           | 10.2                                | .926                                 | 76.3         | 85.0     | 16.3   | 68.7     | 70.0           | .649            | 66.4       | 74        | WNW and N by W        | 44              | "       | Clear, $\overline{\text{p}}$ .            |
| "      | 25th  | 138.7           | 10.7                                | .949                                 | 76.0         | 85.4     | 17.4   | 68.0     | 69.2           | .624            | 65.2       | 72        | N by E and N ...      | 65              | "       | Clear, $\overline{\text{p}}$ .            |
| "      | 26th  | 148.5           | 2.3                                 | .960                                 | 73.4         | 82.8     | 16.4   | 66.4     | 66.7           | .568            | 62.6       | 70        | N and NNW ...         | 101             | "       | Chiefly cloudy, $\overline{\text{p}}$ .   |
| "      | 27th  | 183.9           | 4.5                                 | .959                                 | 71.8         | 80.4     | 17.2   | 63.2     | 66.3           | .574            | 62.8       | 74        | N and N by W ...      | 54              | "       | Partially cloudy, $\overline{\text{p}}$ . |
| "      | 28th  | 138.9           | 10.7                                | .943                                 | 73.1         | 82.3     | 17.7   | 64.6     | 67.3           | .592            | 63.7       | 74        | NW by N and NNW       | 52              | "       | Chiefly clear, $\overline{\text{p}}$ .    |
| "      | 29th  | 142.5           | 10.8                                | .943                                 | 73.2         | 81.9     | 17.6   | 64.3     | 67.9           | .613            | 64.7       | 75        | NNW ...               | 44              | "       | Chiefly clear, $\overline{\text{p}}$ .    |

The mean pressure of the seven days ...

Inches.

The average pressure of the corresponding period for 24 years, S. G.'s Office ...

29.941

The total number of hours of bright sunshine ...

Hours.

60.0

The maximum possible number of hours of sunshine ...

79.6

The mean temperature of the seven days ...

O

74.6

The average temperature of the corresponding period for 24 years, S. G.'s Office ...

79.2

The extreme variation of temperature ...

22.3

The maximum temperature ...

85.5

The highest velocity of the wind in one hour ...

Miles.

10

The highest pressure of wind on one square foot ...

lbs.

Not measurable.

The mean relative humidity ...

%.

73

The average relative humidity of the corresponding period for 24 years, S. G.'s Office ...

78

The total fall of rain from 23rd to 29th October 1887 ...

Inches.

Nil

The average fall of the corresponding period for 24 years, S. G.'s Office ...

1.70

The total fall from 1st January to 29th October 1887 ...

57.81

The average fall of the corresponding period for 24 years, S. G.'s Office ...

64.35

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The month of the rain-gauge is one foot above the ground.

$\equiv$  fog,  $\Delta$  dew.

A. PEDLER,

for Off. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA ;  
Calcutta, the 31st October 1887.

Results of the Thermometrical Observations taken at the Meteorological Office,  
Chowringhee, from 23rd to 29th October 1887.

| MONTH.  | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|---------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|         |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.   |       |              |          |        |          |                | Inches.         |            | %         | Inches. |
| October | 23rd  | 70.8         | 88.8     | 18.0   | 72.3     | 71.8           | .674            | 67.5       | 66        | Nil.    |
| "       | 24th  | 77.4         | 87.8     | 10.4   | 68.1     | 69.7           | .624            | 65.3       | 66        | "       |
| "       | 25th  | 77.2         | 88.0     | 10.8   | 68.1     | 68.1           | .565            | 62.4       | 61        | "       |
| "       | 26th  | 73.2         | 84.4     | 11.2   | 66.4     | 68.1           | .620            | 65.1       | 76        | "       |
| "       | 27th  | 71.6         | 81.0     | 9.4    | 63.9     | 67.6           | .624            | 65.3       | 81        | "       |
| "       | 28th  | 74.5         | 84.9     | 10.4   | 64.9     | 68.7           | .625            | 65.3       | 73        | "       |
| "       | 29th  | 74.4         | 85.9     | 11.5   | 64.1     | 69.4           | .653            | 66.6       | 76        | "       |

The mean temperature of the seven days

The extreme variation of temperature

The maximum temperature

The mean relative humidity

The total fall of rain from 23rd to 29th October 1887

The mean temperature and humidity are obtained by applying to the mean of the 10a. 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,

The 31st October 1887.

A. PEDLER,

for Offg. Meteorological Reporter to the Govt. of India.



MEMORANDUM.\*

The principal Municipalities in Bengal returned, during the week ending 1st October 1887, the birth and death-rates of 15·6 and 22·9 per 1,000 of population, respectively, as opposed to 18·6 and 23·0 per 1,000, respectively, in the preceding week ending 24th September, indicating a considerable falling off in the registration of births.

2. The highest proportions of births and deaths were returned from the following Municipalities :—

| <i>Births.</i> |     |     |                  | <i>Deaths.</i>      |     |     |                  |
|----------------|-----|-----|------------------|---------------------|-----|-----|------------------|
|                |     |     | Ratio per mille. |                     |     |     | Ratio per mille. |
| Monghyr        | ... | ... | 30·7             | Gya                 | ... | ... | 45·8             |
| Gya            | ... | ... | 28·7             | Suburbs of Calcutta | ... | ... | 43·4             |
| Durbhanga      | ... | ... | 28·3             | Beaulcah            | ... | ... | 42·0             |
|                |     |     |                  | Puri                | ... | ... | 42·0             |
|                |     |     |                  | Monghyr             | ... | ... | 39·8             |
|                |     |     |                  | Serampore           | ... | ... | 35·3             |
|                |     |     |                  | Kishnaghur          | ... | ... | 32·2             |

3. The mortality from the principal death-causes was as follows, in comparison with that in the preceding week :—

|                  |     |     |     | Ratio per mille during the weeks ending— |                      |
|------------------|-----|-----|-----|--|----------------------|
|                  |     |     |     | 1st October 1887.                        | 24th September 1887. |
| Cholera          | ... | ... | ... | 1·2                                      | 1·5                  |
| Small-pox        | ... | ... | ... | ...                                      | ...                  |
| Fever            | ... | ... | ... | 10·4                                     | 9·3                  |
| Bowel-complaints | ... | ... | ... | 4·1                                      | 3·9                  |
| Injury           | ... | ... | ... | ·4                                       | ·4                   |
| Other causes     | ... | ... | ... | 6·8                                      | 7·9                  |

The above figures denote chiefly that there was a noticeable enhancement in the death-rate from fever with a sensible diminution in that from the diseases coming under the head of "Other causes."

4. Of the diseases above named, eliminating small-pox, from which no death was reported, injury, the casualties from which were nowhere large, and bowel-complaints, which proved conspicuously fatal only in the Puri town, viz. at the rate of 12·6 per 1,000 of population, cholera, fever, and "other causes" caused the highest mortality in the following Municipalities :—

| <i>Cholera.</i>     |     |                  | <i>Fever.</i> |     |                  | <i>Other Causes.</i> |     |                 |
|---------------------|-----|------------------|---------------|-----|------------------|----------------------|-----|-----------------|
|                     |     | Ratio per mille. |               |     | Ratio per mille. |                      |     | Ratio per mill. |
| Monghyr             | ... | 7·2              | Beaulcah      | ... | 31·5             | Gya                  | ... | 19·8            |
| Suburbs of Calcutta | ... | 2·9              | Kishnaghur    | ... | 26·5             | Serampore            | ... | 19·6            |
|                     |     |                  | Purneah       | ... | 24·3             | Suburbs of Calcutta  | ... | 13·6            |
|                     |     |                  |               |     |                  | Puri                 | ... | 12·6            |

5. The mortality referable to *Sex, Class and Age* stood as follows :—

| <i>According to Sex.</i>                        |     |                  | <i>According to Class.</i> |     |                  | <i>According to Age.</i> |     |                  |
|---|-----|------------------|----------------------------|-----|------------------|--------------------------|-----|------------------|
|   |     | Ratio per mille. |                            |     | Ratio per mille. |                          |     | Ratio per mille. |
| Males   | ... | 24·2             | Christians                 | ... | 34·8             | Under 1 year             | ... | 202·4            |
| Females   | ... | 21·5             | Hindus                     | ... | 24·0             | 1 and under 5 years      | ... | 30·8             |
| Ratio of male deaths to every 100 female deaths | 127 |                  | Mahomedans                 | ... | 20·2             | 5 " " 10 "               | ... | 14·7             |
|   |     |                  |                            |     |                  | 10 " " 15 "              | ... | 10·4             |
|   |     |                  |                            |     |                  | 15 " " 20 "              | ... | 7·8              |
|   |     |                  |                            |     |                  | 20 " " 30 "              | ... | 15·2             |
|   |     |                  |                            |     |                  | 30 " " 40 "              | ... | 17·1             |
|   |     |                  |                            |     |                  | 40 " " 50 "              | ... | 13·9             |
|   |     |                  |                            |     |                  | 50 " " 60 "              | ... | 31·1             |
|   |     |                  |                            |     |                  | 60 years and upwards     | ... | 45·9             |

R. LIDDERDALE, M.D., *Deputy Surgeon-General.*

The 28th October 1887.

*Sanitary Commissioner for Bengal.*

\* Note.—The publication of these statistics has been unavoidably delayed for want of the figures of the Howrah and Arrah Municipalities till the 27th October 1887.

| DISTRICTS. |  | NAMES OF MUNICIPALITIES. |  | POPULATION. |  | BIRTHS.    |  |  |  | MORTALITY ACCORDING TO—                          |  |              |  |  |  |  |  |  |  |  |  | Sex. |  |   |  |        |  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------|--|--------------------------|--|-------------|--|------------|--|--|--|--|--|--------------|--|--|--|--|--|--|--|--|--|------|--|---|--|--------|--|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|            |  |                          |  |             |  | NUMBER OF— |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | Ratio of male births to every 100 female births. |  | DEATHS FROM— |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |      |  | Ratio of deaths per 1,000 of population per annum in the previous week. |  | Males. |  | Females. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|            |  |                          |  |             |  |            |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |      |  |   |  |        |  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |  |                          |  |             |  |            |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |      |  |   |  |        |  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |  |                          |  |             |  |            |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |      |  |   |  |        |  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|            |  |                          |  |             |  |            |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |      |  |   |  |        |  |          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

\* A special census of the Province.

### MORTALITY ACCORDING TO-

[illegible]

**R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.**

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,

# PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statements showing quantities of Goods carried during the month of August 1887.

## ORISSA CIRCLE.

### TALDUNDAH CANAL SYSTEM.

LENGTH OF CANAL OPEN { TALDUNDAH CANAL 27 MILES.  
MACHIGONG „ 4 „

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |                 |               |         | PRIVATE.        |         |
|---------------------------|-----------------------------------|-------------------------------|-----------------|---------------|---------|-----------------|---------|
|                           |                                   | Quantity—Tons.                |                 |               | Value.  | Quantity.       | Value.  |
|                           |                                   | Up.                           | Down.           | Total.        | Rupees. | Tons.           | Rupees. |
| 6                         | 1. Grain ...                      | .....                         | 80              | 80            | 1,725   | 80              | 1,725   |
| ...                       | 2 Cotton ...                      | .....                         | .....           | .....         | .....   | .....           | .....   |
| 3                         | 3. Oilseeds ...                   | .....                         | 50              | 50            | 4,207   | 50              | 4,207   |
| .....                     | 4. Salt ...                       | .....                         | .....           | .....         | .....   | .....           | .....   |
| .....                     | 5. Piece-goods ...                | .....                         | .....           | .....         | .....   | .....           | .....   |
| 6                         | 6. Metal ...                      | .....                         | 87              | 87            | 108     | 87              | 108     |
| 7                         | 7. Building materials ...         | .....                         | 106             | 106           | 349     | .....           | .....   |
| 1                         | 8. Miscellaneous ...              | .....                         | 13              | 13            | 1,785   | 13              | 1,785   |
| .....                     | 9. Fuel ...                       | .....                         | .....           | .....         | .....   | .....           | .....   |
| .....                     | 10. Timber ...                    | .....                         | .....           | .....         | .....   | .....           | .....   |
| 1 raft                    | 11. Bamboos ..                    | .....                         | 200 No.         | 200 No.       | 3       | 200 No.         | 3       |
| 23 & 1 raft               | 12. Total ...                     | .....                         | { 336 & 200 No. | 336 & 200 No. | 8,177   | { 230 & 200 No. | 7,428   |
| 14                        | 13. Total of same month last year | .....                         | 157             | 157           | 1,787   | 72              | 1,663   |

|   | Up.    | Down.  | Total.    |   | Rs. A.   |
|---|--------|--------|-----------|---|----------|
| 14. Total number of boats plying cargo No.        | .....  | 23     | 23        | Total tollage of month—<br>24 + 25 + 26 ...         | 126 12   |
| 15. Total number of boats plying passenger No.    | 5      | .....  | 5         | Total tollage of same month last year ...           | 77 13 (  |
| 15½. Total number of empty boats ... No.          | 22     | 8      | 30        |   |          |
| 16. Total registered tonnage, cargo ...           | 126    | 588    | 714       |   |          |
| 17. Total registered tonnage, passenger ...       | 152    | 130    | 282       |   |          |
| 18. Ton-mileage ...                               | 1,894  | 8,034  | 9,928     |   |          |
| 19. Estimated value of cargo. Rs.                 | .....  | 8,174  | 8,174     |   |          |
| 20. Number of passengers. ...                     | 180    | .....  | 180       |   |          |
| 21. Rafts, bamboos c. ft.                         | .....  | 200    | 200       |   |          |
| 22. Do., bullahs „                                | .....  | .....  | .....     |   |          |
| 23. Estimated value of rafts. ...                 | .....  | 3      | 3         |   |          |
| 24. Tollage on boats Rs.                          | 32-1-0 | 94-9-0 | 126-10-0  |   |          |
| 25. Compounded tollage on boats ... Rs.           | .....  | .....  | .....     |   |          |
| 26. Tollage on rafts „                            | .....  | 0-2-0  | 0-2-0     |   |          |
| 27. Total tollage on boats per ton-mile ...       | .....  | .....  | 2-44 pies |   |          |
| 28. Total tollage on rafts per 100 cubic feet ... | .....  | .....  | .....     |   |          |
|   |        |        |           | 1. Balance not recovered on the 1st of the month .. | 74 2 0   |
|   |        |        |           | 2. Tollage per month ...                            | 126 12 0 |
|   |        |        |           | 3. Total ...  | 200 14 0 |
|   |        |        |           | 4. Amount credited in the accounts of the month ... | 181 11 0 |
|   |        |        |           | 5. Balance due at the end of the month ..           | 19 3 0   |

## KENDRAPARA CANAL SYSTEM.

LENGTH OF CANAL OPEN, 75 MILES.

| Number of boats or rafts. | Description.                      | TOTAL GOVERNMENT AND PRIVATE. |                  |                |            | PRIVATE.         |            | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|------------------|----------------|------------|------------------|------------|----------|
|                           |                                   | Quantity—Tons.                |                  |                | Value.     | Quantity.        | Value.     |          |
|                           |                                   | Up.                           | Down.            | Total.         | Rupees.    | Tons.            | Rupees.    |          |
| 95                        | 1. Grain ...                      | 263                           | 457              | 720            | 50,730     | 720              | 50,730     |          |
| .....                     | 2. Cotton .....                   | .....                         | .....            | .....          | .....      | .....            | .....      |          |
| 20.                       | 3. Oilseeds ..                    | 36                            | 185              | 221            | 26,220     | 221              | 26,220     |          |
| 20                        | 4. Salt ...                       | 57                            | 64               | 121            | 10,090     | 121              | 10,090     |          |
| .....                     | 5. Piece-goods ...                | .....                         | .....            | .....          | .....      | .....            | .....      |          |
| .....                     | 6. Metal .....                    | .....                         | .....            | .....          | .....      | .....            | .....      |          |
| 19                        | 7. Building materials             | 2                             | 194              | 196            | 500        | 156              | 440        |          |
| 143                       | 8. Miscellaneous ...              | 537                           | 514              | 1,051          | 1,63,320   | 1,048            | 1,63,240   |          |
| 4                         | 9. Fuel ...                       | 5                             | .....            | 5              | 20         | 5                | 20         |          |
| 7 rafts                   | 10. Timber ...                    | .....                         | 86 No.           | 86 No.         | 340        | 86 No.           | 340        |          |
| .....                     | 11. Bamboos ...                   | .....                         | .....            | .....          | .....      | .....            | .....      |          |
| 301 & 7 rafts             | 12. Total ...                     | 900                           | { 1,414 & 86 No. | 2,314 & 86 No. | { 2,51,220 | { 2,271 & 86 No. | { 2,51,080 |          |
| 458                       | 13. Total of same month last year | 2,604                         | 3,217            | 5,821          | 2,92,160   | 5,821            | 2,92,160   |          |

|   | Up.       | Down.      | Total.      |  | Rs. A. P.   |
|---|-----------|------------|-------------|--|-------------|
| Total number of boats plying cargo No.        | 139       | 162        | 301         | Total tollage of month—<br>24 + 25 + 26 ...          | 3,308 11 11 |
| Total number of boats plying passenger No.    | 33        | 36         | 69          | Total tollage of same month last year ...            | 3,455 7 3   |
| Total number of empty boats No.               | 167       | 101        | 268         | <i>Memorandum of Tollage.</i>                        |             |
| Total registered tonnage, cargo               | 1,616     | 2,491      | 4,107       |  | Rs. A. P.   |
| Total registered tonnage, passenger           | 705       | 1,471      | 2,176       | 1. Balance not recovered on the 1st of the month ... | 6,117 8 10  |
| Ton-mileage                                   | 68,026    | 92,202     | 1,60,228    | 2. Tollage per month ...                             | 3,308 11 11 |
| Estimated value of cargo Rs.                  | 1,24,290  | 1,26,590   | 2,50,880    | 3. Total ...   | 9,426 4 9   |
| Number of passengers                          | 1,087     | 933        | 2,020       | 4. Amount credited in the accounts of the month ...  | 3,992 6 9   |
| Rafts, bamboos c. ft.                         | .....     | .....      | .....       | 5. Balance due at the end of the month ...           | 5,433 14 0  |
| Do., timbers No.                              | .....     | 86         | 86          |  |             |
| Estimated value of rafts. ...                 | .....     | 340        | 340         |  |             |
| Tollage on boats Rs.                          | 1,495-9-0 | 1,743-1-11 | 3,238-10-11 |  |             |
| Compounded tollage on boats ... Rs.           | .....     | .....      | .....       |  |             |
| Tollage on rafts „                            | .....     | 70-1-0     | 70-1-0      |  |             |
| Total tollage on boats per ton-mile ...       | .....     | .....      | 3-9 pies    |  |             |
| Total tollage on rafts per 100 cubic feet ... | .....     | .....      | .....       |  |             |

## HIGH LEVEL CANAL, RANGE I.

LENGTH OF CANAL OPEN, 33 MILES.

| Number of boats & rafts. | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |       |        |         | PRIVATE.  |         | REMARKS. |
|--------------------------|---------------------------------------|-------------------------------|-------|--------|---------|-----------|---------|----------|
|                          |                                       | Quantity—Tons.                |       |        | Value.  | Quantity. | Value.  |          |
|                          |                                       | Up.                           | Down. | Total. | Rupces. | Tons.     | Rupces. |          |
| 81                       | 1. Grain ...                          | 225                           | ..... | 225    | 20,090  | 225       | 20,090  |          |
| .....                    | 2. Cotton ...                         | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| .....                    | 3. Oilseeds ...                       | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| 61                       | 4. Salt ...                           | .....                         | 335   | 335    | 27,960  | 335       | 27,960  |          |
| .....                    | 5. Piece-goods ...                    | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| .....                    | 6. Metal ...                          | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| 2                        | 7. Building materials ...             | 13                            | ..... | 13     | 90      | 13        | 90      |          |
| 74                       | 8. Miscellaneous ...                  | 139                           | 145   | 284    | 47,820  | 284       | 47,820  |          |
| 9                        | 9. Fuel ...                           | 36                            | ..... | 36     | 110     | 36        | 110     |          |
| .....                    | 10. Timber ...                        | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| .....                    | 11. Bamboos ...                       | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| 227                      | 12. Total ...                         | 413                           | 480   | 893    | 96,070  | 893       | 96,070  |          |
| 266                      | 13. Total of same month last year ... | 1,114                         | 905   | 2,019  | 55,565  | 1,930     | 55,565  |          |

|   | Up.     | Down.   | Total.   |  | Rs. A. P. |
|---|---------|---------|----------|--|-----------|
| Total number of boats plying cargo No.        | 137     | 90      | 227      | Total tollage of month--<br>24 + 25 + 26 ...         | 587 12 3  |
| Total number of boats plying passenger No.    | 2       | 2       | 4        | Total tollage of same month last year ...            | 580 4 0   |
| Total number of empty boats No.               | 33      | 83      | 116      | <i>Memorandum of Tollage.</i>                        |           |
| Total registered tonnage, cargo ...           | 934     | 775     | 1,709    |  |           |
| Total registered tonnage, passenger ..        | 11      | 15      | 26       |  |           |
| Ton-mileage ...                               | 9,849   | 15,560  | 25,409   |  |           |
| Estimated value of cargo ...                  | 53,560  | 42,510  | 96,070   |  |           |
| Number of passengers ...                      | 2       | 10      | 12       |  |           |
| Rafts, bamboos C. ft.                         | .....   | .....   | .....    |  |           |
| Do., bullahs No.                              | .....   | .....   | .....    |  |           |
| Estimated value of rafts Rs.                  | .....   | .....   | .....    |  |           |
| Tollage on boats ..                           | 286-7-9 | 301-4-6 | 587-12-3 |  |           |
| Compounded tollage on boats Rs.               | .....   | .....   | .....    |  |           |
| Tollage on rafts ..                           | .....   | .....   | .....    |  |           |
| Total tollage on boats per ton-mile ...       | .....   | .....   | 4-4 pies |  |           |
| Total tollage on rafts per 100 cubic feet ... | .....   | .....   | .....    |  |           |
|   |         |         |          | 1. Balance not recovered on the 1st of the month ... | 257 6 9   |
|   |         |         |          | 2. Tollage per month ...                             | 587 12 3  |
|   |         |         |          | 3. Total ...   | 845 3 0   |
|   |         |         |          | 4. Amount credited in the accounts of the month ...  | 703 11 3  |
|   |         |         |          | 5. Balance due at the end of the month ...           | 141 7 9   |

## HIGH LEVEL CANAL, RANGE II.

LENGTH OF CANAL OPEN, 12½ MILES.

| Number of<br>boats<br>rafts. | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |                    |                  |          | PRIVATE.            |          | REMARKS. |
|------------------------------|--------------------------------------|-------------------------------|--------------------|------------------|----------|---------------------|----------|----------|
|                              |                                      | Quantity—Tons.                |                    |                  | Value.   | Quantity.           | Value.   |          |
|                              |                                      | Up.                           | Down.              | Total.           | Rupees.  | Tons.               | Rupees.  |          |
| 34                           | 1. Grain ...                         | 104                           | 7½                 | 111½             | 5,264    | 111½                | 5,264    |          |
| .....                        | 2. Cotton ...                        | .....                         | .....              | .....            | .....    | .....               | .....    |          |
| 24                           | 3. Oilseeds ...                      | 9½                            | 98                 | 107½             | 8,129    | 107½                | 8,129    |          |
| 9                            | 4. Salt ...                          | .....                         | 64                 | 64               | 8,990    | 64                  | 8,990    |          |
| 7                            | 5. Piece-goods ...                   | .....                         | 12                 | 12               | 3,420    | 12                  | 3,420    |          |
| .....                        | 6. Metal ...                         | .....                         | .....              | .....            | .....    | .....               | .....    |          |
| 61                           | 7. Building materials ...            | .....                         | 575½               | 575½             | 99       | .....               | .....    |          |
| 18                           | 8. Miscellaneous ...                 | 4½                            | 59                 | 63½              | 9,595    | 63½                 | 9,595    |          |
| .....                        | 9. Fuel ...                          | .....                         | .....              | .....            | .....    | .....               | .....    |          |
| .....                        | 10. Timber ...                       | .....                         | .....              | .....            | .....    | .....               | .....    |          |
| 1 raft                       | 11. Bamboos ...                      | .....                         | 400 No.            | 400 No.          | 48       | 400 No.             | 48       |          |
| 153 &<br>1 raft              | 12. Total ...                        | 118                           | { 816 &<br>400 No. | 934 &<br>400 No. | { 35,545 | { 358½ &<br>400 No. | { 35,446 |          |
| 228                          | 13. Total of same<br>month last year | 1,494                         | 388                | 1,882            | 42,251   | 921                 | 41,999   |          |

|  | Up.     | Down.   | Total.   |  | Rs. A. P. |
|--|---------|---------|----------|--|-----------|
| Total number of boats plying cargo No.           | 35      | 118     | 153      | Total tollage of month—<br>24 + 25 + 26 ...                | 396 1 6   |
| Total number of boats plying passenger No.       | .....   | 2       | 2        | Total tollage of same<br>month last year ...               | 284 7 9   |
| Total number of empty boats No.                  | 41      | 103     | 144      |  |           |
| Total registered tonnage, cargo ...              | 236     | 1,632   | 1,868    |  |           |
| Total registered tonnage, passenger ...          | .....   | 9       | 9        | Memorandum of Tollage.                                     |           |
| Ton-milage ...                                   | 14,442  | 14,952  | 29,394   |  | Rs. A. P. |
| Estimated value of cargo Rs.                     | 5,821   | 29,676  | 35,497   | 1. Balance not recovered<br>on the 1st of the<br>month ... | 27 3 6    |
| Number of passengers ...                         | 122     | 127     | 249      | 2. Tollage per month ...                                   | 396 1 6   |
| Rafts, bamboos No.                               | .....   | 400     | 400      |  |           |
| Do., bullocks ..                                 | .....   | .....   | .....    |  |           |
| Estimated value of rafts Rs.                     | .....   | 48      | 48       | 3. Total ...   | 423 5 0   |
| Tollage on boats ..                              | 96-13-6 | 298-3-6 | 395-1-0  |  |           |
| Compounded tollage on<br>boats ... Rs.           | .....   | .....   | .....    | 4. Amount credited in<br>the accounts of the<br>month ...  | 360 12 3  |
| Tollage on rafts ..                              | .....   | 1-0-6   | 1-0-6    |  |           |
| Total tollage on boats per<br>ton-mile ...       | .....   | .....   | 2-6 pies |  |           |
| Total tollage on rafts per<br>100 cubic feet ... | .....   | .....   | 0-4-0    | 5. Balance due at the end<br>of the month ...              | 62 8 9    |

HIGH LEVEL CANAL, RANGE III.  
LENGTH OF CANAL OPEN, 19½ MILES.

| Number of<br>boats<br>or rafts.                | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |         |         | PRIVATE.   |           | REMARKS   |
|--|--------------------------------------|-------------------------------|---------|---------|--|-----------|-----------|
|  |                                      | Quantity—Tons of cargo.       |         |         | Value.   | Quantity. |           |
|  |                                      | Up.                           | Down.   | Total.  | Rupees.  | Tons.     |           |
| 21   | 1. Grain ...                         | 47½                           | 9       | 56½     | 3,753  | 56½       | 3,753     |
| .....  | 2. Cotton ...                        | .....                         | .....   | .....   | .....  | .....     | .....     |
| 2  | 3. Oilseeds ...                      | .....                         | 7½      | 7½      | 856  | 7½        | 856       |
| 5  | 4. Salt ...                          | .....                         | 29      | 29      | 3,332  | 29        | 3,332     |
| .....  | 5. Piece-goods ...                   | .....                         | .....   | .....   | .....  | .....     | .....     |
| .....  | 6. Metal ...                         | .....                         | .....   | .....   | .....  | .....     | .....     |
| 22   | 7. Building materials ...            | .....                         | 222½    | 222½    | 77   | .....     | .....     |
| 10   | 8. Miscellaneous ...                 | 3                             | 44      | 47      | 8,902  | 47        | 8,902     |
| .....  | 9. Fuel ...                          | .....                         | .....   | .....   | .....  | .....     | .....     |
| .....  | 10. Timber ...                       | .....                         | .....   | .....   | .....  | .....     | .....     |
| .....  | 11. Bamboos ...                      | .....                         | .....   | .....   | .....  | .....     | .....     |
| 60   | 12. Total ...                        | 50½                           | 312     | 362½    | 16,920   | 140       | 16,843    |
| 145  | 13. Total of same<br>month last year | 870                           | 394     | 1,264   | 19,278   | 338       | 19,278    |
|  |                                      | Up.                           | Down.   | Total.  |  |           | Rs. A. P. |
| Total number of boats ply-<br>ing cargo No.    |                                      | 19                            | 41      | 60      | Total tollage of month—<br>24 + 25 + 26 ...                |           | 156 3 0   |
| Total number of boats ply-<br>ing passenger No |                                      | .....                         | 1       | 1       | Total tollage of same<br>month last year ...               |           | 193 11 6  |
| Total number of empty<br>boats ...             |                                      | 44                            | 27      | 71      | Memorandum of Tollage.                                     |           |           |
| Total registered tonnage,<br>cargo ...         |                                      | 101                           | 624     | 725     |  |           |           |
| Total registered tonnage,<br>passenger ...     |                                      | .....                         | 8       | 8       |  |           |           |
| on-mileage ...                                 |                                      | 3,976                         | 7,209   | 11,185  | 1. Balance not recovered<br>on the 1st of the<br>month ... |           | 11 9 9    |
| Estimated value of cargo ...                   |                                      | 3,105                         | 13,815  | 16,920  | 2. Tollage per month ...                                   |           | 156 3 0   |
| umber of passengers ...                        |                                      | 97                            | 126     | 223     | 3. Total ...   |           | 167 12 9  |
| fts, bamboos c. ft.                            |                                      | .....                         | .....   | .....   | 4. Amount credited in<br>the accounts of the<br>month ...  |           | 166 13 3  |
| , bullahs "                                    |                                      | .....                         | .....   | .....   | 5. Balance due at the end<br>of the month ...              |           | 0 15 6    |
| Estimated value of rafts Rs.                   |                                      | .....                         | .....   | .....   |  |           |           |
| lage on boats "                                |                                      | 39-13-3                       | 116-5-9 | 156-3-0 |  |           |           |
| npounded tollage on<br>boats Rs.               |                                      | .....                         | .....   | .....   |  |           |           |
| lage on rafts "                                |                                      | .....                         | .....   | .....   |  |           |           |
| al tollage on boats per<br>on-mile ...         |                                      | .....                         | .....   | 2-7 pie |  |           |           |
| al tollage on rafts per<br>00 cubic feet ...   |                                      | .....                         | .....   | .....   |  |           |           |



## SOUTH-WESTERN CIRCLE.

## MIDNAPORE CANAL.

LENGTH OF CANAL OPEN, 53 MILES.

| Number of<br>boats<br>or rafts.                  | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |                          |                             |  | PRIVATE.                    |           |
|--|---------------------------------------|-------------------------------|--------------------------|-----------------------------|--|-----------------------------|-----------|
|  |                                       | Quantity—Tons.                |                          |                             | Value.   | Quantity.                   | Value.    |
|  |                                       | Up.                           | Down.                    | Total.                      | Rupees.  | Tons.                       | Rupees.   |
| 1,029  | 1. Grain ...                          | 6,574                         | 796                      | 7,370                       | 3,36,112   | 7,370                       | 3,36,112  |
| .....  | 2. Cotton ...                         | .....                         | .....                    | .....                       | .....  | .....                       | .....     |
| 46   | 3. Oilseeds ...                       | 20                            | 307                      | 327                         | 35,435   | 327                         | 35,435    |
| 141  | 4. Salt ...                           | .....                         | 1,660                    | 1,660                       | 1,22,981   | 1,660                       | 1,22,981  |
| 21   | 5. Piece-goods ...                    | 17                            | 8                        | 25                          | 45,350   | 25                          | 45,350    |
| 29   | 6. Metal ...                          | 57                            | 88                       | 145                         | 1,07,420   | 145                         | 1,07,420  |
| 45   | 7. Building materials ...             | 152                           | 101                      | 253                         | 2,574  | 253                         | 2,574     |
| 638  | 8. Miscellaneous ...                  | 1,189                         | 1,328                    | 2,517                       | 3,33,614   | 2,517                       | 3,33,614  |
| 42   | 9. Fuel ...                           | 114                           | 321                      | 435                         | 5,060  | 435                         | 5,060     |
| 19 rafts   | 10. Timber ...                        | 2,174 c. ft.                  | 51 c. ft.                | 2,225 c. ft.                | 1,446  | 2,225 c. ft.                | 1,446     |
| 4 "  | 11. Bamboos ...                       | 700 "                         | 137 "                    | 837 "                       | 74   | 837 "                       | 74        |
| 1,991<br>&<br>3 rafts                            | 12. Total ...                         | 8,123<br>&<br>2,874 c. ft.    | 4,609<br>&<br>188 c. ft. | 12,732<br>&<br>3,062 c. ft. | 9,90,066   | 12,732<br>&<br>3,062 c. ft. | 9,90,066  |
| 1,989<br>&<br>30 rafts                           | 13. Total of same<br>month last year. | 7,758<br>&<br>4,930 c. ft.    | 4,880<br>&<br>100 c. ft. | 12,638<br>&<br>5,030 c. ft. | 12,56,072  | 12,638<br>&<br>5,030 c. ft. | 12,56,072 |
|  |                                       | Up.                           | Down.                    | Total.                      |  |                             |           |
| i. Total number of boats plying cargo No.        |                                       | 1,257                         | 734                      | 1,991                       | Total tollage of month—<br>24 + 25 + 26 ...                |                             |           |
| ii. Total number of boats plying passenger No.   |                                       | 568                           | 566                      | 1,134                       | Total tollage of same<br>month last year ...               |                             |           |
| . Total number of empty ...                      |                                       | 502                           | 821                      | 1,323                       |  |                             |           |
| . Total registered tonnage, cargo ...            |                                       | 18,123                        | 11,099                   | 29,222                      | Memorandum of Tollage.                                     |                             |           |
| . Total registered tonnage, passenger ...        |                                       | 2,609                         | 2,059                    | 4,668                       |  |                             |           |
| Total registered tonnage, empty ...              |                                       | 1,944                         | 3,300                    | 5,244                       |  |                             |           |
| Ton-mileage ...                                  |                                       | 4,27,196                      | 2,69,618                 | 6,96,814                    | 1. Balance not recovered<br>on the 1st of the<br>month ... |                             |           |
| Estimated value of cargo Rs.                     |                                       | 4,42,687                      | 5,45,859                 | 9,88,546                    |  |                             |           |
| Number of passengers No.                         |                                       | 5,188                         | 6,946                    | 12,134                      |  |                             |           |
| Rafts, bamboos c. ft.                            |                                       | 700                           | 137                      | 837                         | 2. Tollage per month ...                                   |                             |           |
| Do., bullahs "                                   |                                       | 2,174                         | 51                       | 2,225                       |  |                             |           |
| Estimated value of rafts. ...                    |                                       | 1,508                         | 12                       | 1,520                       | 3. Total ...   |                             |           |
| Tollage on boats Rs                              |                                       | 6,135-8-0                     | 4,463-0-6                | 10,598-8-6                  |  |                             |           |
| Compounded tollage on<br>boats ... Rs.           |                                       | .....                         | .....                    | .....                       |  |                             |           |
| Tollage on rafts "                               |                                       | 33-13-9                       | 2-11-6                   | 36-9-3                      | 4. Amount paid into<br>treasury during the<br>month ...    |                             |           |
| Total tollage on boats per<br>ton-mile Pie       |                                       | .....                         | .....                    | 2-9 pios                    |  |                             |           |
| Total tollage on rafts per<br>100 cubic feet Ru. |                                       | .....                         | .....                    | 1-3-2                       | 5. Balance due at the end<br>of the month ...              |                             |           |

## ARRAH CANAL SYSTEM.

LENGTH OF CANAL OPEN, 65 MILES.

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE.  |          | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|-------|--------|----------|-----------|----------|----------|
|                           |                                   | Quantity—Tons.                |       |        | Value.   | Quantity. | Value.   |          |
|                           |                                   | Up.                           | Down. | Total. | Rupees.  | Tons.     | Rupees.  |          |
| 41                        | 1. Grain ...                      | 16                            | 283   | 299    | 14,998   | 299       | 14,998   |          |
| .....                     | 2. Cotton ...                     | 9                             | ..... | 9      | 5,817    | 9         | 5,817    |          |
| 13                        | 3. Oilseeds ...                   | 13                            | 92    | 105    | 6,887    | 105       | 6,887    |          |
| 20                        | 4. Salt ...                       | 114                           | 13    | 127    | 11,702   | 127       | 11,702   |          |
| .....                     | 5. Piece-goods ...                | 8                             | ..... | 8      | 10,651   | 8         | 10,651   |          |
| 1                         | 6. Metal ...                      | 7                             | 1     | 8      | 311      | 3         | 294      |          |
| 22                        | 7. Building materials ...         | 54                            | 147   | 201    | 2,130    | 156       | 1,130    |          |
| 90                        | 8. Miscellaneous ...              | 167                           | 558   | 725    | 33,093   | 565       | 28,818   |          |
| 11                        | 9. Fuel ...                       | 32                            | 59    | 91     | 1,350    | 64        | 875      |          |
| .....                     | 10. Timber ...                    | 1                             | ..... | 1      | 78       | 1         | 78       |          |
| Rafts {                   | Bullahs ...                       | .....                         | 8     | 8      | 48       | 7         | 39       |          |
|                           | 11. Bamboos ...                   | .....                         | 5     | 5      | 102      | 1         | 18       |          |
| 198                       | 12. Total ...                     | 421                           | 1,166 | 1,587  | 87,167   | 1,345     | 81,307   |          |
| 205                       | 13. Total of same month last year | 317                           | 974   | 1,291  | 2,11,782 | 1,169     | 2,10,960 |          |

|   | U       | Down.   | Total.   |  | Rs. A. P.  |
|---|---------|---------|----------|--|------------|
| 14. Total number of boats plying cargo No.        | 72      | 126     | 198      | Total tollage of month—<br>24 + 25 + 26 ...          | 1,531 11 3 |
| 15. Total number of boats plying passenger No.    | 15      | 12      | 27       |  |            |
| 15½. Total number of empty boats No.              | 80      | 28      | 108      | Total tollage of same month last year ...            | 1,242 12 3 |
| 16. Total registered tonnage, cargo ...           | 777     | 1,958   | 2,735    | Memorandum of Tollage.                               |            |
| 17. Total registered tonnage, passenger ...       | 341     | 346     | 687      |  |            |
| 17½. Total registered tonnage, empty ...          | 275     | 67      | 342      |  | Rs. A. P.  |
| 18. Ton-mileage ...                               | 27,686  | 82,285  | 1,09,971 | 1. Balance not recovered on the 1st of the month ... | 59 3 9     |
| 19. Estimated value of cargo Rs.                  | 38,406  | 48,611  | 87,017   | 2. Tollage per month ...                             | 1,531 11 3 |
| 20. Number of passengers No.                      | 875     | 1,011   | 1,886    |  |            |
| 21. Rafts, bamboos c. ft.                         | .....   | 825     | 825      | 3. Total ...   | 1,590 15 0 |
| 22. Do., bullahs „                                | .....   | 650     | 650      |  |            |
| 23. Estimated value of rafts Rs.                  | .....   | 150     | 150      | 4. Amount credited in the accounts of the month ...  | 1,427 9 3  |
| 24. Tollage on boats „                            | 238-4-0 | 644-0-3 | 882-4-3  |  |            |
| 25. Compounded tollage on boats Rs.               | 324-0-0 | 324-0-0 | 648-0-0  | 5. Balance due at the end of the month ...           | 168 5 9    |
| 26. Tollage on rafts „                            | .....   | 0-1-7   | 1-7-0    |  |            |
| 27. Total tollage on boats per ton-mile ...       | .....   | .....   | 2-6 pies |  |            |
| 28. Total tollage on rafts per 100 cubic feet ... | .....   | .....   | 0-1-6    |  |            |

## BUXAR CANAL SYSTEM.

LENGTH OF CANAL OPEN, 67 MILES.

| Number of boats or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |         |         |  | PRIVATE.  |           | REMARKS. |
|---------------------------|---|-------------------------------|---------|---------|--|-----------|-----------|----------|
|                           |   | Quantity—Tons.                |         |         | Value.   | Quantity. | Value.    |          |
|                           |   | Up.                           | Down.   | Total.  | Rupees.  | Tons.     | Rupees.   |          |
| 7                         | 1. Grain ...                                  | 1                             | 78      | 79      | 7,400  | 79        | 7,400     |          |
| .....                     | 2. Cotton ...                                 | .....                         | .....   | .....   | .....  | .....     | .....     |          |
| 6                         | 3. Oilseeds ...                               | .....                         | 81      | 81      | 10,675   | 81        | 10,675    |          |
| 3                         | 4. Salt ...                                   | 16                            | .....   | 16      | 2,229  | 16        | 2,229     |          |
| .....                     | 5. Piece-goods ...                            | 3                             | .....   | 3       | 5,110  | 3         | 5,110     |          |
| .....                     | 6. Metal ...                                  | 1                             | .....   | 1       | 750  | 1         | 750       |          |
| 22                        | 7. Building materials ...                     | 4                             | 241     | 245     | 9,065  | .....     | .....     |          |
| 18                        | 8. Miscellaneous ...                          | 6                             | 159     | 165     | 13,298   | 165       | 13,298    |          |
| 2                         | 9. Fuel ...                                   | .....                         | 20      | 20      | 172  | 20        | 172       |          |
| Rafts {                   | 10. Timber ...                                | .....                         | 14      | 14      | 225  | 14        | 225       |          |
|                           | 11. Bamboos ...                               | .....                         | 1       | 1       | 15   | 1         | 15        |          |
| 58                        | 12. Total ...                                 | 31                            | 594     | 625     | 48,939   | 380       | 39,874    |          |
| 105                       | 13. Total of same month last year             | 96                            | 1,502   | 1,598   | 1,43,952   | 1,396     | 1,36,402  |          |
|                           |   | Up.                           | Down.   | Total.  |  |           | Rs. A. P. |          |
| 14.                       | Total number of boats plying cargo No.        | 4                             | 54      | 58      | Total tollage of month—<br>24 + 25 + 26 ...          |           | 500 5 5   |          |
| 15.                       | Total number of boats plying passenger No.    | 11                            | 10      | 21      |  |           |           |          |
| 15½.                      | Total number of empty boats No.               | 46                            | 6       | 52      | Total tollage of same month last year ...            |           | 680 1 3   |          |
| 16.                       | Total registered tonnage, cargo ...           | 37                            | 776     | 813     |  |           |           |          |
| 17.                       | Total registered tonnage, passenger ...       | 249                           | 221     | 470     |  |           |           |          |
| 17½.                      | Total registered tonnage, empty ...           | 135                           | 22      | 157     |  |           |           |          |
| 18.                       | Ton-mileage ...                               | 8,096                         | 31,554  | 39,650  | Memorandum of Tollage.                               |           |           |          |
| 19.                       | Estimated value of cargo Rs.                  | 8,850                         | 39,849  | 48,699  |  |           | Rs. A. P. |          |
| 20.                       | Number of passengers No.                      | 703½                          | 559     | 1,262½  | 1. Balance not recovered on the 1st of the month ... |           | 37 13 0   |          |
| 21.                       | Rafts, bamboos c. ft.                         | .....                         | 100     | 100     |  |           |           |          |
| 22.                       | Do., bullahs "                                | .....                         | 1,033   | 1,033   | 2. Tollage per month ...                             |           | 500 5 5   |          |
| 23.                       | Estimated value of rafts Rs.                  | .....                         | 240     | 240     |  |           |           |          |
| 24.                       | Tollage on boats "                            | 41-1-3                        | 259-1-6 | 300-2-9 | 3. Total ...   |           | 538 2 5   |          |
| 25.                       | Compounded tollage on boats Rs.               | 75-0-0                        | 123-0-2 | 198-0-2 |  |           |           |          |
| 26.                       | Tollage on rafts "                            | .....                         | 2-2-6   | 2-2-6   | 4. Amount credited in the accounts of the month ...  |           | 517 5 2   |          |
| 27.                       | Total tollage on boats per ton-mile ...       | .....                         | .....   | 2¼ pies |  |           |           |          |
| 28.                       | Total tollage on rafts per 100 cubic feet ... | .....                         | .....   | 0-3-0   | 5. Balance due at the end of the month ...           |           | 20 13 3   |          |

**ABSTRACT FOR THE MONTH OF AUGUST 1887, AS COMPARED WITH THE CORRESPONDING MONTH OF THE PREVIOUS YEAR.**

| CANAL.                       | TRAFFIC, 1887-88. |                      |    | TRAFFIC, 1886-87. |                      |    | REMARKS. |    |    |          |    |   |
|------------------------------|-------------------|----------------------|----|-------------------|----------------------|----|----------|----|----|----------|----|---|
|                              | During the month. | To end of the month. |    | During the month. | To end of the month. |    |          |    |    |          |    |   |
| <i>Orissa Circle.</i>        | Rs.               | A.                   | P. | Rs.               | A.                   | P. | Rs.      | A. | P. |          |    |   |
| Taldnnda Canal System ...    | 126               | 12                   | 0  | 2,034             | 12                   | 6  | 77       | 13 | 0  | 1,462    | 1  | 7 |
| Kendrapara Canal System      | 3,308             | 11                   | 11 | 14,123            | 12                   | 1  | 3,455    | 7  | 3  | 17,081   | 13 | 4 |
| High Level, Range I ...      | 587               | 12                   | 3  | 2,338             | 5                    | 8  | 580      | 4  | 0  | 2,686    | 14 | 0 |
| Ditto, " II ...              | 396               | 1                    | 6  | 1,499             | 3                    | 0  | 284      | 7  | 9  | 1,541    | 7  | 0 |
| Ditto, " III ...             | 156               | 3                    | 0  | 476               | 0                    | 3  | 193      | 11 | 6  | 975      | 2  | 3 |
| Total Orissa Circle ...      | 4,575             | 8                    | 8  | 20,472            | 1                    | 1  | 4,591    | 11 | 6  | 23,747   | 6  | 2 |
| <i>South-Western Circle.</i> |                   |                      |    |                   |                      |    |          |    |    |          |    |   |
| Midnapore Canal ...          | 10,635            | 1                    | 9  | 50,249            | 7                    | 0  | 10,039   | 12 | 9  | 51,303   | 5  | 9 |
| Hidgellie Tidal Canal ...    | 4,882             | 6                    | 0  | 26,107            | 11                   | 3  | 4,170    | 1  | 6  | 29,891   | 7  | 0 |
| Total South-Western Circle   | 15,517            | 7                    | 9  | 76,357            | 2                    | 3  | 14,209   | 14 | 3  | 81,194   | 12 | 9 |
| <i>Sone Circle.</i>          |                   |                      |    |                   |                      |    |          |    |    |          |    |   |
| Patna Canal System ...       | 1,891             | 12                   | 6  | 13,215            | 0                    | 6  | 2,227    | 9  | 9  | 9,011    | 1  | 6 |
| Arrah ditto ...              | 1,531             | 11                   | 3  | 7,489             | 1                    | 1  | 1,242    | 12 | 3  | 8,362    | 14 | 7 |
| Buxar ditto ...              | 500               | 5                    | 5  | 3,726             | 11                   | 5  | 680      | 1  | 3  | 3,744    | 5  | 1 |
| Total Sone Circle ...        | 3,923             | 13                   | 2  | 24,430            | 13                   | 0  | 4,150    | 7  | 3  | 21,118   | 5  | 2 |
| GRAND TOTAL ...              | 24,016            | 13                   | 7  | 1,21,260          | 0                    | 4  | 22,952   | 1  | 0  | 1,26,060 | 8  | 1 |

**GOVERNMENT TRANSPORT SERVICE.**

| CANAL.                  | TRAFFIC, 1887-88. |        |                 |                      |        |                 | TRAFFIC, 1886-87. |        |                 |                      |        |                 |
|-------------------------|-------------------|--------|-----------------|----------------------|--------|-----------------|-------------------|--------|-----------------|----------------------|--------|-----------------|
|                         | During the month. |        |                 | To end of the month. |        |                 | During the month. |        |                 | To end of the month. |        |                 |
|                         | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. |
| <i>Orissa Circle.</i>   | No.               | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A. P.       | No.               | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A. P.       |
| High Level ...          | 404               | 415    | 531 15 7        | 1,590                | 2,390  | 2,137 4 10      | 682               | 1,104  | 765 3 2         | 5,048                | 11,398 | 5,876 15 8      |
| Total Orissa Circle ... | 404               | 415    | 531 15 7        | 1,590                | 2,390  | 2,137 4 10      | 682               | 1,104  | 765 3 2         | 5,048                | 11,398 | 5,876 15 8      |

**TOTAL NAVIGATION RECEIPTS.**

| CANAL.                | EARNINGS, 1887-88. |    |    |                      |    |    | EARNINGS, 1886-87. |    |    |                      |    |    | REMARKS. |
|-----------------------|--------------------|----|----|----------------------|----|----|--------------------|----|----|----------------------|----|----|----------|
|                       | During the month.  |    |    | To end of the month. |    |    | During the month.  |    |    | To end of the month. |    |    |          |
|                       | Rs.                | A. | P. | Rs.                  | A. | P. | Rs.                | A. | P. | Rs.                  | A. | P. |          |
| Orissa Canals ...     | 5,107              | 8  | 3  | 22,609               | 5  | 11 | 5,356              | 14 | 8  | 29,624               | 5  | 10 |          |
| Midnapore Canal       | 10,635             | 1  | 9  | 50,249               | 7  | 0  | 10,039             | 12 | 9  | 51,303               | 5  | 9  |          |
| Hidgellie Tidal Canal | 4,882              | 6  | 0  | 2,6107               | 11 | 3  | 4,170              | 1  | 6  | 29,891               | 7  | 0  |          |
| Sone Canals ...       | 3,923              | 13 | 2  | 24,430               | 13 | 0  | 4,150              | 7  | 3  | 21,118               | 5  | 2  |          |
| Total                 | 24,548             | 13 | 2  | 1,23,397             | 5  | 2  | 23,717             | 4  | 2  | 1,31,937             | 7  | 9  |          |

F. J. E. SPRING,  
Under-Secy. to the Govt. of Bengal.

Calcutta,  
The 31st October 1887.

CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 29th October 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO. |     |     | WEEK ENDING SATURDAY, THE<br>29TH OCTOBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>30TH OCTOBER 1886. |                     |          |
|------------------|-----|-----|---|---------------------|----------|---|---------------------|----------|
|                  |     |     | Number of<br>boats.                             | Weight of<br>cargo. | Tollage. | Number of<br>boats.                             | Weight of<br>cargo. | Tollage. |
|                  |     |     | No.   | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy   | ... | ... | 885   | 1,17,435            | 1,841    | 561   | 51,140              | 751      |
| Jute             | ... | ... | 201   | 1,57,625            | 3,025    | 161   | 75,130              | 1,347    |
| Firewood         | ... | ... | 179   | 82,547              | 1,164    | 165   | 67,750              | 997      |
| Other articles   | ... | ... | 1,269   | 2,53,975            | 4,108    | 952   | 2,09,535            | 3,227    |
| Total            | ... | ... | 2,624   | 6,11,582            | 10,138   | 1,839   | 4,03,555            | 6,322    |

# Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 23rd October 1887, on 1,513½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                | (Other earnings estimated). | Total earnings.   | TRAFFIC TRAIN-MILES RUN. |              |            |
|---|-----------------------|--------------------|----------------------------------|----------------|-----------------------------|-------------------|--------------------------|--------------|------------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.      |                             |                   | Coaching.                | Merchandise. | Total.     |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.      | Rs. A. P.                   | Rs. A. P.         |                          |              |            |
| Total traffic for the week ...                              | *218,371              | *2,41,300 1 0      | 20,10,608 20                     | 4,87,809 13 0  | 15,07 7 0                   | 7,47,931 4 0      | 61,684½                  | 80,969½      | 142,654½   |
| Or per mile of railway ...                                  | .....                 | 161 0 10           | .....                            | 323 5 0        | 10 5 8                      | 491 1 0           | .....                    | .....        | .....      |
| For previous 15 weeks of half-year ...                      | 3,036,376             | 37,63,292 1 0      | 3,22,84,353 30                   | 68,01,410 6 2  | 2,48,459 4 9                | 1,08,73,161 11 11 | 988,807½                 | 1,206,901½   | 2,195,709½ |
| Total for 16 weeks ...                                      | 3,873,747             | 40,07,582 2 0      | 3,13,04,952 10                   | 73,49,510 2 2  | 2,64,130 11 9               | 1,10,21,092 12 11 | 1,063,492½               | 1,287,871½   | 2,351,363½ |
| COMPARISON.   |                       |                    |                                  |                |                             |                   |                          |              |            |
| Total for corresponding week of previous year ...           | 324,504               | 2,77,943 13 3      | 22,36,941 30                     | 5,89,539 10 6  | 17,340 13 11                | 8,54,624 7 8      | 65,016                   | 88,302       | 153,318    |
| Per mile of railway corresponding week of previous year ... | .....                 | 183 7 4            | .....                            | 390 3 3        | 11 7 2                      | 561 1 9           | .....                    | .....        | .....      |
| Total to corresponding date of previous year ...            | 3,784,338½            | 41,22,978 11 11    | 3,40,87,710 20                   | 82,14,064 10 6 | 2,84,963 12 0               | 1,20,23,007 2 5   | 1,118,254                | 1,459,678    | 2,577,932  |

\* The decrease in coaching traffic is principally at Allahabad, Cawn, o e and Mokumeh.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 23RD OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 23RD OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 1,513                                       | 8,54,624  | 564              | 1,513½                                      | 7,47,931  | 494              | 1,515  | 2,64,00,180     | 578              | 1,513½   | * 2,40,28,640   | 546              | .....                   | 13,77,549               |

\* Deducted Rs. 7,747 on account of differences between the approximate and audited figures to week ended 10th September 1887.

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 22nd October 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | (Other earnings estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 10,984                | 5,665 3 0          | 23,946 10                        | 1,763 2 0   | 41 0 0                      | 7,469 5 0       | 1,928                    | 466          | 2,394  |
| Or per mile of railway ...                                  | 192                   | 99 0 8             | 418 30                           | 31 13 2     | 0 11 6                      | 130 9 4         | .....                    | .....        | .....  |
| For previous 15 weeks of half-year ...                      | *220,657              | *1,10,114 5 0      | *3,52,369 20                     | *35,979 5 0 | *56 1 0                     | 1,55,059 11 0   | 27,601½                  | 10,756½      | 38,358 |
| Total for 16 weeks ...                                      | 231,641               | 1,24,779 8 0       | 5,76,015 30                      | 37,932 7 0  | 607 1 0                     | 1,65,129 0 0    | 29,429½                  | 11,222½      | 40,652 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 11,113½               | 5,901 4 2          | 36,306 20                        | 8,064 1 0   | 27 11 0                     | 9,053 0 2       | *1,682                   | 991          | 2,573  |
| Per mile of railway corresponding week of previous year ... | 194                   | 104 3 6            | 634 30                           | 53 9 1      | 0 7 9                       | 158 4 4         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 250,773               | 1,17,846 15 9      | 6,70,634 20                      | 41,743 1 0  | 624 12 6                    | 1,80,214 13 3   | 30,709                   | 12,404       | 43,113 |

\* Added number of passengers 7,311 and Rs. 6,207  
+ Ditto mds. 20,046 and .. 448  
+ Ditto .. .. 81 } on account of difference between the approximate and audited returns to week ended 10th Sept. 1887.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 23RD OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 23RD OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 57½   | 9,053     | 158              | 57½   | 7,469     | 131              | 57½  | 3,12,904        | 180              | 57½  | *2,82,888       | 1.....           | .....                   | 30,514                  |

\* Added Rs. 4,739 on account of differences between the approximate and audited figures to week ended 10th S

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 22nd October 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week...                           | 3,705                 | 440 8 0            | 8,858 30                         | 231 15 0    | 5 13 0                      | 687 4 0         | 416½                     | 77           | 493½   |
| Or per mile of railway                                  | 37 7 4                | .....              | .....                            | 19 5 3      | 0 7 9                       | 67 4 4          | .....                    | .....        | .....  |
| For previous 15 weeks of half-year                      | *44,246               | *7,378 0 0         | †1,30,597 10                     | †2,882 15 0 | ‡95 1 0                     | 10,336 0 0      | 6,004½                   | 1,636        | 7,640½ |
| Total for 16 weeks                                      | 40,951                | 7,827 8 0          | 1,30,166 0                       | 3,114 14 0  | 100 14 0                    | 11,043 4 0      | 6,425                    | 1,612        | 8,037  |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year           | 2,604½                | 453 0 4            | 11,123 20                        | 215 0 0     | 6 14 9                      | 674 15 1        | 383                      | 110          | 493    |
| Per mile of railway corresponding week of previous year | .....                 | 37 12 0            | .....                            | 17 14 8     | 0 9 3                       | 56 3 11         | .....                    | .....        | .....  |
| Total to corresponding date of previous year            | ‡42,923½              | 7,239 14 5         | 1,44,672 10                      | 3,058 10 0  | 129 10 0                    | 10,485 2 5      | 6,524                    | 1,646        | 8,170  |

\* Added number of passengers 84 and deducted Rs. 177 }  
 † Deducted mds. 1,014 and .. 92 } on account of difference between the approximate and audited returns to week ended 10th  
 ‡ Ditto .. 25 } September 1887.

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 22ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 12  | 675       | 56               | 12  | 687       | 57               | 12   | 27,007          | 80               | 12   | *25,643         | 74               | .....                   | 2,064                   |

\* Deducted Rs. 204 on account of differences between the approximate and audited figures to week ended 10th September 1887.

## SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 22nd October 1887, on 74½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|--------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.    | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week...                           | 5,568                 | 3,746 12 0         | 59,796 30                        | 2,360 2 0    | 96 11 0                     | 6,203 9 0       | 654                      | 964½         | 1,622½  |
| Or per mile of railway                                  | .....                 | 50 1 6             | .....                            | 31 8 10      | 1 4 8                       | 83 15 0         | .....                    | .....        | .....   |
| For previous 15 weeks of half-year                      | *79,625               | *28,031 13 9       | †13,41,015 0                     | †54,032 10 0 | †1,610 10 0                 | 1,14,275 1 9    | 10,538                   | 23,343       | 33,881  |
| Total for 16 weeks                                      | 85,093                | 62,378 9 9         | 14,00,811 36                     | 56,392 12 0  | 1,707 5 0                   | 1,20,478 10 9   | 11,202                   | 24,367½      | 35,569½ |
| COMPARISON.   |                       |                    |                                  |              |                             |                 |                          |              |         |
| Total for corresponding week of previous year           | 8,375                 | 5,761 6 2          | 95,281 10                        | 3,478 6 0    | 203 6 3                     | 9,443 2 5       | 755                      | 1,328        | 1,083   |
| Per mile of railway corresponding week of previous year | .....                 | 77 0 5             | .....                            | 46 8 0       | 2 11 6                      | 126 3 11        | .....                    | .....        | .....   |
| Total to corresponding date of previous year            | 85,708½               | 61,020 9 7         | 13,35,159 20                     | 46,024 7 9   | 1,003 15 0                  | 1,08,348 0 4    | 11,488                   | 17,514       | 29,002  |

\* Deducted number of passengers 271 and Rs. 311 }  
 † Ditto mds. 9,257 and .. 411 } on account of difference between the approximate and audited returns to week ended 10th September 1887.  
 ‡ Added .. 201 }

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 22ND OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 74½   | 9,443     | 126              | 74½   | 6,204     | 83               | 74½  | 2,05,623        | 95               | 74½  | *2,34,480       | 108              | 28,857                  | .....                   |

\* Deducted Rs. 431 on account of differences between the approximate and audited figures to week ended 10th September 1887.

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 22nd October 1887, on 22½ miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|--------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.    | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 11,03                 | 3,770 12 0         | 3,970 20                         | 150 3 0      | 3 6 0                       | 3,030 5 0       | 918                      | 50           | 968    |
| Or per mile of railway ...                                  | .....                 | 169 14 0           | .....                            | 7 0 4        | 0 2 5                       | 177 0 0         | .....                    | .....        | .....  |
| For previous 15 weeks of half-year ...                      | *251,380              | *64,617 0 0        | *62,545 10                       | *12,182 13 0 | *74 0 0                     | 60,873 13 0     | 14,239½                  | 742½         | 14,982 |
| Total for 16 weeks ...                                      | 265,314               | 68,396 12 0        | 66,515 30                        | 2,339 0 0    | 77 0 0                      | 70,813 2 0      | 15,157½                  | 793½         | 15,950 |
| COMPARISON.   |                       |                    |                                  |              |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 15,310½               | 3,370 5 2          | 4,201 10                         | 153 5 0      | 4 3 0                       | 4,020 13 2      | 940                      | 23           | 968    |
| Per mile of railway corresponding week of previous year ... | .....                 | 173 15 2           | .....                            | 6 15 8       | 0 3 0                       | 181 1 10        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 237,087½              | 63,920 7 0         | 47,335 10                        | 1,724 10 0   | 82 11 0                     | 65,727 13 0     | 15,606                   | 338          | 15,944 |

\* Added No. of passengers 8,117 and deducted Rs. 2,680½  
† Ditto mds. 40 and " 51½ } on account of difference between the approximate and audited returns to week ended 10th September 1887.  
‡ Ditto " 2

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 23RD OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 23RD OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½   | 4,030     | 181              | 22½   | 3,039     | 177              | 22½  | 1,38,402        | 215              | 22½  | *1,47,885       | 229              | 9,423                   | .....                   |

\* Deducted Rs. 2,624 on account of differences between the approximate and audited figures to week ended 10th September 1887.

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 22nd October 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 1,798                 | 847 6 0            | 1,42,102 0                       | 8,710 7 0   | 21 0 0                      | 9,587 13 0      | 355                      | 803          | 1,218  |
| Or per mile of railway ...                                  | .....                 | 20 2 10            | .....                            | 207 0 8     | 0 8 0                       | 223 4 6         | .....                    | .....        | .....  |
| For previous 15 weeks of half-year ...                      | *32,081               | *13,006 1 6        | *1,77,402 10                     | *12,245 0 0 | *230 5 0                    | 26,451 13 6     | 5,242                    | 4,124        | 9,366  |
| Total for 16 weeks ...                                      | 33,879                | 14,813 7 6         | 3,19,504 10                      | 20,965 0 0  | 261 5 0                     | 36,039 12 6     | 5,597                    | 4,927        | 10,524 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,369½                | 1,104 4 6          | 35,005 20                        | 2,307 5 0   | 20 11 0                     | 3,522 4 6       | 193                      | 479          | 672    |
| Per mile of railway corresponding week of previous year ... | .....                 | 26 4 8             | .....                            | 57 1 3      | 0 7 11                      | 83 13 10        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 40,869½               | 17,510 10 0        | 1,06,695 10                      | 19,637 7 0  | 419 13 6                    | 37,567 14 6     | 4,908                    | 5,004        | 9,912  |

\* Deducted number of passengers 6 and added Rs. 19½  
† Ditto mds. 181 and " 120 } on account of difference between the approximate and audited returns to week ended 10th Sept. 1887.  
‡ Ditto " 69

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 23RD OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 23RD OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 42  | 3,522     | 84               | 42  | 9,588     | 228              | 42   | 63,680          | 52               | 42   | 83,832 *        | 69               | 20,152                  | .....                   |

\* Deducted Rs. 169 on account of differences between the approximate and audited figures to week ended 10th September 1887.



## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B. Dacca, K. AND D., AND ASSAM-BRAH sections).

Approximate Return of Traffic for week ended 15th October 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |              | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------|----------------------------------|---------------|---|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.    | Weight carried.                  | Receipts.     |   |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.    | Mds. s.                          | Rs. A. P.     | Rs. A. P.   | Rs. A. P.       |                          |              |         |
| Total traffic for the week...                                 | 103,432               | 51,509 0 0   | 6,26,933 0                       | 1,74,510 0 0  | 14,223 0 0  | 2,40,302 0 0    | 19,863                   | 25,313       | 45,190  |
| Or per mile of railway ...                                    | 160                   | 80 0 0       | 972 0                            | 270 0 0       | 2 0 0†  | 352 0 0         | .....                    | .....        | .....   |
| For previous 14 weeks of half-year ...                        | 1,644,402             | 7,09,984 0 0 | 89,99,429 0                      | 17,17,545 0 0 | 2,25,084 0 0                                      | 26,53,213 0 0   | 284,148                  | 333,978      | 618,126 |
| Total for 15 weeks ...  | 1,747,834             | 7,61,533 0 0 | 96,26,362 0                      | 18,92,055 0 0 | 2,39,307 0 0                                      | 28,93,515 0 0   | 304,031                  | 359,291      | 663,322 |
| COMPARISON.   |                       |              |                                  |               |   |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 134,161*              | 52,540 0 0   | 5,09,243 0                       | 1,05,398 0 0  | 10,855 0 0  | 1,68,963 0 0    | 18,150                   | 21,972       | 40      |
| Per mile of railway corresponding period of previous year ... | 221                   | 87 0 0       | 840 0                            | 171 0 0       | .....   | 261 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 1,755,202             | 7,44,490 0 0 | 74,70,131 0                      | 11,14,028 0 0 | 1,65,212 0 0                                      | 23,23,728 0 0   | 271,764                  | 305,160      | 576,914 |

\* Rs. 34,750 monthly tickets.

† Steam-boat earnings, Rs. 13,000, have been excluded from the calculation.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 15TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 15TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 606   | 1,68,063  | 277              | 645   | 2,49,302  | 373              | 606  | 41,47,163       | 246              | 645  | 16,80,175*      | 260              | 5,21,069                | .....                   |

\* Audited up to 30th June 1887.

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 15th October 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week...                                 | 19,673                | 7,159 0 0          | 46,082 0                         | 3,069 0 0  | 26 0 0                      | 10,494 0 0      | 3,786                    | 1,350        | 5,736  |
| Or per mile of railway ...                                    | 157                   | 58 0 0             | 569 0                            | 24 0 0     | .....                       | 84 0 0          | .....                    | .....        | .....  |
| For previous 14 weeks of half-year ...                        | 334,953               | 1,10,149 0 0       | 6,22,861 0                       | 39,073 0 0 | 1,588 0 0                   | 1,50,801 0 0    | 50,622                   | 25,643       | 76,265 |
| Total for 15 weeks ...  | 354,626               | 1,17,309 0 0       | 6,68,943 0                       | 42,082 0 0 | 1,614 0 0                   | 1,61,295 0 0    | 54,408                   | 27,593       | 82,000 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 22,917*               | 7,134 0 0          | 15,136 0                         | 1,099 0 0  | 16 0 0                      | 8,240 0 0       | 3,478                    | 988          | 4,466  |
| Per mile of railway corresponding period of previous year ... | 183                   | 57 0 0             | 121 0                            | 9 0 0      | .....                       | 66 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 351,007               | 1,14,761 0 0       | 2,88,937 0                       | 22,949 0 0 | 358 0 0                     | 1,38,068 0 0    | 50,620                   | 21,010       | 60,639 |

\* 5,600 monthly tickets.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 15TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 15TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125   | 8,240     | 66               | 125   | 10,404    | 84               | 125  | 3,13,620        | 90               | 125  | 3,36,330*       | 93               | 12,704                  | .....                   |

\* Audited up to 30th June 1887.

## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 15th October 1887, on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 9,728                 | 3,926 0 0          | 19,162 0                         | 2,118 0 0  | 30 0 0                      | 6,074 0 0       | 2,101                    | 803          | 2,904  |
| Or per mile of railway ...                                    | 113                   | 46 0 0             | 223 0                            | 24 0 0     | .....                       | 70 0 0          | .....                    | .....        | .....  |
| For previous 14 weeks of half-year ...                        | 153,553               | 52,278 0 0         | 2,24,831 0                       | 17,909 0 0 | 1,064 0 0                   | 71,911 0 0*     | 31,011                   | 14,639       | 45,650 |
| Total for 15 weeks ...  | 163,281               | 56,204 0 0         | 2,43,993 0                       | 19,787 0 0 | 1,094 0 0                   | 77,985 0 0      | 33,172                   | 15,442       | 48,614 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 8,698                 | 3,198 0 0          | 8,250 0                          | 664 0 0    | 34 0 0                      | 4,196 0 0       | 2,156                    | 714          | 2,870  |
| Per mile of railway corresponding period of previous year ... | 100                   | 37 0 0             | 96 0                             | 11 0 0     | .....                       | 48 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 146,404               | 46,803 0 0         | 1,16,864 0                       | 13,154 0 0 | 4,036 0 0                   | 64,593 0 0      | 23,016                   | 10,078       | 34,593 |

\* Audited up to week ending 30th June 1887.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 15TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 15TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Es.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 86  | 4,196     | 49               | 86  | 6,074     | 70               | 56   | 1,30,993        | 54               | 86   | 1,12,711*       | 59               | 11,718                  |                         |

\* Audited up to 30th June 1887.

## ASSAM-BEHAR STATE RAILWAY.

(PUANEH SECTION.)

*Approximate Return of Traffic for week ended 15th October 1887, on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,499                 | 1,050 0 0          | 4,276 0                          | 377 0 0    | 12 0 0                      | 1,439 0 0       | 723                      | 364          | 1,082  |
| Or per mile of railway ...                                    | 64                    | 27 0 0             | 110 0                            | 10 0 0     | .....                       | 37 0 0          | .....                    | .....        | .....  |
| For previous 14 weeks of half-year ...                        | 43,442                | 15,076 0 0         | 1,46,047 0                       | 11,914 0 0 | 312 0 0                     | 30,262 0 0      | 9,752                    | 5,676        | 15,428 |
| Total for 15 weeks ...  | 45,941                | 16,126 0 0         | 1,50,323 0                       | 12,291 0 0 | 324 0 0                     | 31,801 0 0      | 10,480                   | 6,040        | 16,520 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 15TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 15TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 15TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 39  | 1,439     | 37               | .....                                       | .....     | .....            | 39   | 72,036*         | 66               | .....  | .....           | .....            | 72,036                  | .....                   |

\* Audited up to 30th June 1887.

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ended 22nd October 1887, on 249 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week on 249 miles open                    | 30,557½               | 12,588 4 2         | 1,23,541 20                      | 11,363 11 6   | 3,253 5 1                   | 27,205 4 9      | 5,431                    | 4,649        | 10,080  |
| Or per mile of railway  | 147                   | 50 9 0             | 499 0                            | 45 10 0       | 2 10 0                      | 98 13 0*        | .....                    | .....        | .....   |
| For previous 15 weeks of half-year                              | 572,661½              | 1,99,015 11 10     | 17,14,220 20                     | 1,53,480 4 6  | 49,656 10 11                | 4,07,152 11 3   | 94,951                   | 69,508       | 164,459 |
| Total for 16 weeks  | 609,228               | 2,11,604 0 0       | 18,41,771 0                      | 1,69,844 0 0  | 52,910 0 0                  | 4,34,358 0 0    | 100,382                  | 74,157       | 174,539 |
| COMPARISON.   |                       |                    |                                  |               |                             |                 |                          |              |         |
| Total for corresponding week of previous year on 248 miles open | 32,594                | 11,380 10 4        | 98,411 10                        | 9,536 2 0     | 2,732 0 4                   | 23,637 12 8     | 4,949                    | 3,680        | 8,629   |
| Per mile of railway corresponding week of previous year         | 132                   | 46 3 0             | 400 0                            | 38 12 0       | 1 0 0                       | 95 5 0*         | .....                    | .....        | .....   |
| Total to corresponding date of previous year                    | 527,313½              | 1,75,006 6 11      | 17,54,434 0                      | 1,75,481 15 9 | 48,237 9 1                  | 3,98,785 15 9   | 82,281                   | 67,814       | 150,095 |

\* Steam-hoat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 23RD OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 23RD OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 240   | 25,634    | 96               | 249   | 27,205    | 109              | 240  | 8,46,913        | 119              | 24965  | 9,28,391        | 120              | 81,478                  | .....                   |





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, NOVEMBER 9, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## RESOLUTION ON THE ADMINISTRATION REPORT OF THE ORISSA DIVISION FOR THE YEAR 1886-87.

### GENERAL DEPARTMENT—MISCELLANEOUS.

*Calcutta, the 15th September 1887.*

#### RESOLUTION.

#### READ—

The General Administration Report of the Orissa Division for the year 1886-87.

The Commissioner Mr. C. T. Metcalfe, C.S.I., who submits the report for the year 1886-87, has been in charge of the Division since the end of 1884, but the changes among the district officers were unusually numerous in the year, in Cuttack five and in Pooree three changes of Collectors having occurred. Mr. R. Porch, Collector of Pooree, died early in the year.

2. *Annual tours.*—Mr. Metcalfe was absent from head-quarters for 130 days, a large number of which were spent in the Tributary States and the Khondmals. In Cuttack the tour of the District Officer fell short of the prescribed period by eight days, and this is excused by the frequent changes in the office of Collector. In Balasore also there was a deficiency of 15 days, for which Mr. Grant, who showed a decided want of activity, spending only 48 days in the interior during the ten months of his charge, must be held responsible. In Pooree Mr. Porch and Mr. Savage were in camp for 122 days. All the Sub-divisional Officers, except the Sub-divisional Officer of Jajpur, whose deficiency was due to illness, were on tour for 120 days or more. Mr. Davidson's tour in Bhuddruck was apparently particularly complete and well-planned.

3. *Weather and crops.*—During the year under report the rainfall was more copious and the outturn of crops larger in all three districts of the Division than in the preceding year. In Cuttack the outturn of the rice crop is said to have been larger than in any season during the last eight or ten years, but the *rabi* crops were damaged by untimely rain; in Pooree fair average crops are reported, and in Balasore the crops are said to have been very good. Estimates of the crops in annas are given for sub-divisions in the report, but the system of computation prescribed in the orders of the Government of India of 1885 does not appear to have been followed, and the attention of the Commissioner and of District Officers of this Division is drawn to those orders.

4. *Public health.*—There was a slight increase in the mortality reported in Balasore and Pooree, but a decrease in Cuttack; in the lastnamed district there was a marked decrease in the number of deaths from cholera. In Pooree public health was fair, and the increase in registered deaths is attributed to improved registration. In Balasore the prevalence of fever in the Bhuddruck sub-division, and an outbreak of cholera at Chandbally, account for the higher death-rate. The importance of taking steps towards improvement in sanitation at Chandbally and at Bhuddruck and Dharamsala and along the Grand Trunk Road is urged by the Commissioner, and the Lieutenant-Governor will be glad to receive definite proposals on the subject. The town of Pooree, in the sanitary conditions of which, to quote Mr. Metcalfe, the whole of Hindustan is interested, is at present particularly unhealthy both to natives and Europeans, and the first necessary step towards improvement appears to be to obtain for the town a better supply of pure water.

Vaccination operations were carried on extensively and with fair success in Cuttack, but in Pooree half of the small number of vaccinations were unsuccessful. In Balasore vaccination was confined to the municipality.

5. *Material condition of the people.*—On this subject Mr. Metcalfe writes as follows :—

“The material condition of the people was generally good throughout the Division, except a small portion of the districts of Cuttack and Balasore, which had been swept over by the sea-wave of September 1885. The calamity that befell the people who live on the sea coast was so great, and the damage suffered by them so serious, that it would be impossible to expect them to recover fully from the effect of it within the course of a year, but I may notice that the prompt measures taken to replace what they had lost were so well-planned and effective that the people have nearly got over all their difficulties and are now recovering their former condition rapidly.”

The price of common rice was lower than in the preceding year, averaging 17 seers, 20 seers, and 24 seers per rupee, respectively, in the head-quarter stations of Cuttack, Pooree, and Balasore. The rate of wages remained stationary, except in Balasore, where the wages of skilled carpenters, blacksmiths, and tailors appear to have fallen.

6. *Manufactures, Trade, and Commerce.*—Under the head of manufactures there is nothing worthy of note except the salt industry, and this the returns show to be in a declining state, the total quantity of locally manufactured salt sold on which duty was paid falling from 4,77,094 maunds to 2,35,657 maunds. This decrease is due to more strict supervision of the local manufacture on the transfer of the Salt Department to the management of the Madras authorities; the improvements introduced affected the prospects of making illicit profit at the expense of the Government revenue, and many of the manufacturers accordingly resigned their licenses. The Commissioner thinks that there is no reason why the manufacture should not revive on a sounder footing, but in the meantime a great impetus has been given to import of salt from Gairam and Liverpool. In Balasore the imports of Liverpool salt during the year amounted to 1,43,397 maunds, or three times the quantity imported in the preceding year.

The aggregate value of the trade of the Orissa ports fell from Rs. 1,80,20,315 in 1885-86 to Rs. 1,52,50,814 in the year under review, or by 15.36 per cent. In the years 1883-85, there was an unusual advance caused by exceptional circumstances in sea-borne trade at all the ports, and although this has not been maintained, the figures for the present year for the Balasore ports, to which the trade of Cuttack has been diverted, compare favourably with those of earlier years. The passenger traffic at every port shows a steady increase since

1882-83, and owing to the increase in the number of steamers which ply between Calcutta and Chandbally, and to the keen competition for passengers, pilgrims were sometimes able to obtain passages last year at the rate of 8 annas per head only.

Regarding internal trade no statistics are available (except of the Orissa canals traffic which the Commissioner does not mention), but considerable development of this trade is noticed.

7. *Public feeling.*—Of local matters, the Pooree temple suit and questions of canal irrigation appear to have excited most general interest. On the former subject the Collector of Pooree writes that public opinion on the spot was to the effect that Government was fully justified in the course adopted. The assessment and collection of water-rates continued to cause considerable discontent in Cuttack, and this was aggravated during the year by the insufficient supply of canal water. The Jubilee of the Queen-Empress was celebrated in all the districts with much enthusiasm.

8. *Police and Crime.*—The conduct of the regular police, as shown by the decrease in the number of punishments, departmental and judicial, was good, but the actual results of their working were not very successful. The total number of cognizable and non-cognizable cases decreased from 12,738 to 11,783, but the percentage of convictions to arrest was under 60 per cent. in all the districts. In the Sessions Court the results of the Pooree district were worst, only 38 per cent. of the cases tried having resulted in convictions.

The condition of the rural police of this Division, who are still appointed and maintained under the old Regulation XX of 1817, is under the consideration of Government.

9. *Civil Justice.*—The figures under this head show very slight fluctuation in litigation for money, moveables, and titles. An improvement in the relations between landlord and tenant is argued from the very considerable decrease from 9,114 in 1885-86 to 7,516 during the past year in the number of rent suits. This decrease was general in every district, and in every class of rent proceedings, except execution cases in Cuttack, where an increase under this head is said by the Collector to have been probably caused by the lower selling price of rice on account of which the ryots had difficulty in satisfying decrees out of Court.

10. *Employment of Muhammadans.*—The information called for by Government on this subject was not fully supplied from any of the districts of the Division. The Commissioner thinks that in inferior service the number of Muhammadans is sufficient, but that more Muhammadans should be appointed on the occurrence of vacancies in superior service when qualified men are available. It is noticed that the percentage of Muhammadans at school as compared with Hindus continues to be greater in this Division than the population percentage, and that Muhammadans hold their own with Hindus in the departmental examinations. This is encouraging evidence of the gradual removal of what has always been considered to be the chief obstacle in the way of the advancement of Muhammadans in the service of Government.

11. *Land Revenue and Administration.*—The land revenue administration of the year was satisfactory. The percentage of total collections on the gross demand rose from 87·8 to 95·8, the balance at the close of the year was reduced from Rs. 2,12,240 to Rs. 70,696, and the results of khas tehsil were very much better than in the preceding year. Land registration, however, is still in arrear in Cuttack, and the disposal of partition cases did not, in any district of the Division, keep pace with institutions.

The forest revenue in Khoorda increased from Rs. 19,450 in 1885-86 to Rs. 20,424-1-6 in 1886-87, while the expenditure, it is satisfactory to observe, fell from Rs. 9,158 to Rs. 6,087-7-1.

12. *Stamps, Excise, and Income-tax.*—All the districts show an increase in the revenue from stamps, the divisional aggregate being Rs. 32,950 in advance of the results of the preceding year. The comparatively high average amount of fine imposed on convictions under the stamp law, viz. Rs. 28, appears to show that offences of this nature are properly dealt with. The total receipts from Excise advanced from Rs. 5,16,224 to Rs. 5,29,512, the increase being chiefly under the heads tari, opium, and ganja, while the revenue from

country spirits decreased. The income-tax collections amounted to Rs. 51,901 as against Rs. 36,581 realised in the preceding year from the license-tax.

13. *Irrigation*.—The state of the collections from irrigation works in Cuttack and Balasore requires the closest attention. Only 51 per cent. of the total demand was realised, and the following are the reasons stated by the Deputy Superintendent and quoted by the Commissioner for these unsatisfactory results :—

- (1) The want of power to enforce assessments ;
- (2) The leniency with which the certificate law was applied ; and
- (3) The unwillingness of lessees to pay assessment on unirrigated areas, and on areas on which the supply was deemed insufficient.

This subject will be separately considered in the Irrigation Department.

14. *Monetary arrangements*.—There was a considerable decrease in both the receipts and issues of currency notes in all the districts of the Division, and attention is called to an order, passed by the Accountant-General, which put a temporary stoppage to the encashment of notes at the Pooree Treasury. Enquiry will be made on this subject by the Financial Department.

The increase in the number and value both of money-orders issued and paid is ascribed to the facilities afforded by the Postal Department, and also to the introduction of the rules permitting payment of revenue by money-orders to the amount of Rs. 50.

15. *Roads and communications*.—No new roads were undertaken. In Outtack and Pooree due attention appears to have been paid to repairs, but in Balasore more money is much wanted for the improvement of village communications.

The Commissioner's remarks with regard to the unpunctual running of the postal mails will be brought to the notice of the Postmaster-General.

16. *Education*.—The number of pupils in schools of all classes under the cognizance of the Department fell from 127,750 to 122,660, the loss being mainly confined to unaided pathsalas. The results of the University and departmental examinations were on the whole good. The Commissioner remarks that the increase of 6 girls' schools and 17 pupils indicates a hopelessly slow rate of progress in female education ; it is, however, so far satisfactory in that it shows no retrograde movement such as has occurred in other divisions.

17. *Local Committees and Conduct of Zemindars*.—Municipal Committees appear in Orissa, as in other divisions, to have had the largest share of success. Of the District Road Cess Committees, the best account is from Pooree, while the account from Cuttack is disappointing.

18. The Commissioner speaks favourably of the conduct of the zemindars of the Division, and makes special mention of acts of public liberality on the part of Raja Syamananda De Bahadoor, Baboo Rajaram Das, and Baboo Gobind Bullav Roy Mohasoy in Balasore in commemoration of Her Majesty's Jubilee, and of the general liberality of the Raja of Parikud in Pooree and of Rai Badyanath Pundit Bahadoor in Cuttack.

By order of the Lieutenant-Governor of Bengal,

W. C. MACPHERSON,

*Offg. Secretary to the Govt. of Bengal.*

## RESOLUTION ON THE REPORT ON THE CHARITABLE DISPENSARIES IN BENGAL FOR THE YEAR 1886-87.

### RESOLUTION.

MEDICAL.

*Dated Darjeeling, the 1st November 1887.*

READ—

The Report on the Charitable Dispensaries in Bengal for the year 1886.

Read also—

The Report for 1885 and the Resolution recorded thereon.

There does not appear to be any feature of particular importance in the administration of charitable dispensaries in Bengal during the year 1886. Perhaps the principal question which has presented itself for the consideration



of Government has been in connection with the method of recruitment of Assistant Surgeons for the Provincial establishment. Hitherto this has been done by transfer from the Imperial list, but the Lieutenant-Governor understands that the officers in the large supernumerary list which resulted from the old system under which, previous to 1883, Government undertook to provide for all passed candidates have now been absorbed; and the time has apparently arrived when recruitment should, as in case of Civil Hospital Assistants, be made locally from licentiates of the Medical Schools. Another question of considerable importance was alluded to in last year's Resolution, on perusal of Dr. Cowie's expression of opinion that the time had come when those desirous of studying medicine should be required to contribute more largely towards their education than is the rule at present. The Inspector-General of Civil Hospitals was invited to express more fully, and at an early date, his views regarding the propriety of increasing the fees paid by the recipients of Medical education in this province; but as the report was not submitted by him until the end of August, and as there is a considerable diversity of opinion among the officers consulted, it is impossible to refer further to the matter at present.

2. On the 31st December 1885 there were 233 dispensaries under Government supervision, and another was opened at Daudnugger, in the district of Gya, during the year under review. It is reported that only one dispensary has been transferred to municipal management, and that no institution has been abolished throughout 1886.

3. The following table compares the work done in dispensaries during the last two years:—

|               | IN-DOOR.  |           |           |            |             |             |             |               |                   |        | OUT-DOOR.  |             |             |               |                 |                 |                 |                  |                    |        |
|---------------|-----------|-----------|-----------|------------|-------------|-------------|-------------|---------------|-------------------|--------|------------|-------------|-------------|---------------|-----------------|-----------------|-----------------|------------------|--------------------|--------|
|               | Under 25. | 25 to 50. | 50 to 75. | 75 to 100. | 100 to 250. | 250 to 500. | 500 to 750. | 750 to 1,000. | Upwards of 1,000. | Total. | Under 250. | 250 to 500. | 500 to 750. | 750 to 1,000. | 1,000 to 2,500. | 2,500 to 5,000. | 5,000 to 7,500. | 7,500 to 10,000. | Upwards of 10,000. | Total. |
| 1886          | 14        | 16        | 12        | 13         | 49          | 21          | 4           | 1             | 2                 | 131    | ...        | ...         | 3           | 7             | 76              | 85              | 30              | 17               | 16                 | 234    |
| Percentage... | 10.89     | 12.21     | 9.10      | 9.16       | 37.40       | 16.08       | 3.05        | .76           | 1.53              | ...    | ...        | ...         | 1.28        | 2.79          | 52.48           | 56.32           | 12.82           | 7.27             | 6.84               | ...    |
| 1885          | 17        | 14        | 20        | 11         | 44          | 19          | 6           | 3             | 2                 | 136    | ...        | ...         | 3           | 6             | 78              | 77              | 33              | 16               | 16                 | 229    |
| Percentage... | 12.5      | 10.29     | 14.71     | 8.09       | 32.35       | 13.97       | 4.41        | 2.21          | 1.47              | ...    | ...        | ...         | 1.31        | 2.02          | 54.06           | 53.62           | 14.41           | 6.99             | 6.99               | ...    |

The total number of dispensaries which received in-door patients was 131 against 136 in the previous year, and there was a falling off in house-practice to the extent of 946 patients, while the ratio of mortality was 14.48 against 15.59 in 1885. The number of out-patients treated is, on the other hand, larger than that recorded in any year during the previous decade. There was also a large increase of 46,127 patients apparent in the returns of most districts in the total number of in-door and out-door cases treated at all the public charities in Bengal; but the figures continue to show that these institutions are not, as a rule, resorted to by the people as largely as might be wished; that the proportion of the population having recourse to them is still exceedingly low, and that the attendance at all but a few hospitals bears no relation to the presence or absence of epidemic disease in the different districts of the province. It is, however, gratifying to learn that in Dr. Cowie's opinion these charities are gaining in popularity, that there are apparently signs that the value of European medical science is being appreciated, and that more satisfactory work is being on the whole done.

4. Fair attention seems to have been paid to inspection by Civil Surgeons, and it is said that the reports submitted were carefully prepared and sufficiently searching. Six dispensaries were not inspected at all. This is an improvement on last year's return, but the Lieutenant-Governor trusts that in future all dispensaries in the province may be inspected. Supervision of the work done should in no case be limited to a perusal of the returns submitted by Civil Hospital Assistants, and regular inspection, a part of the duty of Civil Surgeons, which is clearly defined by the rules, ought invariably to be insisted upon. It is observed that, in spite of the remark made incidentally in paragraph 4 of last year's Resolution, the Inspector-General has again omitted to state how many institutions were inspected by himself during the year.

5. The total income and expenditure of the dispensaries during the year are shown below :—

| <i>Income.</i>   |     |     |     | Rs.      | A. | P. |
|--|-----|-----|-----|----------|----|----|
| Cash balance on 1st January 1886   | ... | ... | ... | 34,012   | 14 | 5  |
| From Government—   |     |     |     |          |    |    |
| As salaries  | ... | ... | ... | 15,551   | 13 | 6  |
| „ registers and forms  | ... | ... | ... | 1,397    | 3  | 11 |
| „ European medicines   | ... | ... | ... | 690      | 12 | 3  |
| For diet of police cases   | ... | ... | ... | 1,874    | 0  | 1  |
| Sale of medicines  | ... | ... | ... | .....    |    |    |
| Special allowances   | ... | ... | ... | 1,292    | 14 | 5  |
| Total  | ... | ... | ... | 20,806   | 12 | 2  |
| From local and other funds   | ... | ... | ... | 54,823   | 0  | 9  |
| „ municipal funds  | ... | ... | ... | 1,58,491 | 12 | 10 |
| Interest on investments  | ... | ... | ... | 32,422   | 9  | 11 |
| Sale of securities or withdrawal of deposits                               | ... | ... | ... | 23,542   | 6  | 8  |
| European subscriptions   | ... | ... | ... | 15,266   | 5  | 6  |
| Native ditto   | ... | ... | ... | 1,05,492 | 8  | 7  |
| Total income   | ... | ... | ... | 4,44,858 | 6  | 10 |
| <i>Expenditure.</i>  |     |     |     |          |    |    |
| On establishment   | ... | ... | ... | 2,16,045 | 14 | 5  |
| „ bazar medicines  | ... | ... | ... | 9,357    | 12 | 11 |
| „ European medicines, whether from Government store or purchased otherwise | ... | ... | ... | 46,705   | 1  | 1  |
| „ diet   | ... | ... | ... | 37,493   | 11 | 10 |
| „ miscellaneous charges  | ... | ... | ... | 29,646   | 7  | 7  |
| „ buildings and repairs  | ... | ... | ... | 46,325   | 13 | 4  |
| Invested during the year   | ... | ... | ... | 29,357   | 13 | 4  |
| Total expenditure  | ... | ... | ... | 4,14,932 | 10 | 6  |
| Cash balance on 31st December 1886   | ... | ... | ... | 29,925   | 12 | 4  |

The opening balance on 1st January 1886, as shown above, is less by Rs. 2,728 than the closing balance of 1885 as given in that year's report. The explanation is somewhat confused, but the gist of it appears to be that an actual deficit was shown by six dispensaries.

6. The total receipts from Government amounted to Rs. 20,806 against Rs. 18,659 in the preceding year, Rs. 6,783 of the amount having been contributed to municipal dispensaries. After deduction, however, of the cost of registers and forms and diet of police cases, the contribution which Government makes to institutions that are now considered to be municipal is Rs. 4,164 in 1886 against Rs. 2,570 in 1885. The Government contribution towards the remaining dispensaries was Rs. 14,023, or Rs. 407 more than in the previous year.

7. The receipts from local sources amounted to Rs. 54,823 against Rs. 1,18,685 in 1885, the large decrease being due to the fact that last year the Monghyr dispensary alone received Rs. 68,000 as sale proceeds of house property belonging to that institution. Subscriptions to municipal institutions show a very large falling off, while those towards other institutions rose considerably, although not to the same extent. The amount received by the sale of securities and withdrawal of deposits was Rs. 23,542 against Rs. 25,389 in 1885, the interest on the investments reached the sum of Rs. 32,423 against Rs. 30,890, and municipalities contributed Rs. 1,58,492 against Rs. 1,43,574 in the preceding year.

8. The gross expenditure on dispensaries, exclusive of the amounts invested, was Rs. 3,85,575, showing a total decrease of Rs. 999, there being a rise under three heads and a falling off under the remaining three. Rupees 29,357 were invested during the year under review.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

Offg. Chief Secy. to the Govt. of Bengal.

# RESOLUTION ON THE ADMINISTRATION REPORT OF THE REGISTRATION DEPARTMENT FOR THE YEAR 1886-87.

## RESOLUTION.

### REGISTRATION.

*Darjeeling, the 3rd November 1887.*

**READ—**

The Report on the Administration of the Registration Department for the year 1886-87.

**Read also—**

The Reports for the years 1884-85 and 1885-86, and the orders of Government recorded thereon.

Under the instructions contained in the Resolution of the Government of India, dated 15th July 1887, the Registration Report will not again be prepared in full until the year 1890, statistical returns and brief commentaries in the shape of notes being submitted in the intermediate years. The report now submitted is a practical illustration of the fact that it is not necessary every year to make detailed comments regarding minute variations in the numbers of different sorts of documents registered. The present report, however, is longer than that for last year, as the Inspector-General has fully considered the general effect of the Bengal Tenancy Act on registration.

The following table shows the number of registrations, receipts, expenditure, and number of registration offices during the years since 1880-81:—

| YEARS.          | NUMBER OF REGISTRATIONS.       |           |                      |         | Total receipts. | Total expenditure. | Surplus.     | Number of registration offices. |
|-----------------|--------------------------------|-----------|----------------------|---------|-----------------|--------------------|--------------|---------------------------------|
|                 | Affecting immoveable property. |           | Other registrations. | Total.  |                 |                    |              |                                 |
|                 | Compulsory.                    | Optional. |                      |         |                 |                    |              |                                 |
| 1880-81 ... ..  | 317,877                        | 133,900   | 104,457              | 556,233 | Rs. 9,16,681    | Rs. 5,27,200       | Rs. 3,96,472 | 297                             |
| 1881-82 ... ..  | 303,823                        | 132,475   | 100,780              | 537,084 | 9,11,920        | 4,98,514           | 4,13,406     | 287                             |
| 1882-83 ... ..  | 307,009                        | 146,521   | 101,011              | 555,141 | 9,48,104        | 4,96,180           | 4,52,924     | 285                             |
| 1883-84 ... ..  | 331,706                        | 163,064   | 105,332              | 601,002 | 9,74,711        | 5,04,755           | 4,69,956     | 285                             |
| 1884-85 ... ..  | 374,730                        | 193,911   | 119,839              | 688,380 | 10,74,601       | 5,54,110           | 5,20,391     | 290                             |
| 1885-86 ... ..  | 384,032                        | 211,384   | 126,485              | 723,001 | 10,88,177       | 5,68,365           | 5,19,812     | 292                             |
| 1886-87 ... ..  | 376,808                        | 194,518*  | 127,123              | 698,539 | 10,31,485       | 5,64,274           | 4,67,211     | 300                             |
| Increase ... .. |                                |           | 638                  |         |                 |                    |              | 8                               |
| Decrease ... .. | 9,134                          | 16,866    | .....                | 25,362  | 56,692          | 4,091              | 52,601       | .....                           |

\* These figures include some deeds the registration of which has now become compulsory under the Bengal Tenancy Act.

There has thus been a decrease in operations and receipts, half the decrease in receipts being due to the High Court having cancelled, from the 1st October 1886, their rules requiring a search to be made before an application is filed for the sale of immoveable property under attachment in execution of a decree, with a view to ascertain whether the property is subject to any encumbrances.

2. *Registrations of all classes.*—The following table shows the registrations of different classes during the year as compared with 1885-86:—

|  |  | 1885-86.      | 1886-87. |
|--|--|---------------|----------|
|  | (A)—Compulsory.  |               |          |
| Registrations affect-<br>ing immoveable<br>property. | Instruments of sale, &c., of immoveable property, of value<br>Rs. 100 and upwards ... .. | 47,165        | 46,793   |
|  | Instruments of mortgage of immoveable property, of value<br>Rs. 100 and upwards ... ..   | 58,824        | 58,648   |
|  | Perpetual leases ... ..  | 87,236        | 78,706   |
|  | Other leases under section 17 ... ..   | 180,939       | 180,840  |
|  | Other compulsory registrations ... ..  | 11,868        | 11,851   |
|  | Total compulsory registrations affecting immoveable<br>property ... ..                   | 386,032       | 376,898  |
|  |  |               |          |
|  |  | (B)—Optional. |          |
|  | Instruments for sale, &c., of immoveable property, of value<br>less than Rs. 100 ... ..  | 120,381       | 108,981  |
|  | Instruments of mortgage of immoveable property, of value less<br>than Rs. 100 ... ..     | 77,638        | 72,355   |
|  | Leases for one year and less ... ..  | 6,100         | 6,423    |
|  | Miscellaneous documents ... ..   | 7,265         | 6,759    |
|  | Total optional registrations affecting immoveable property...                            | 211,384       | 194,518  |
|  | Total registrations affecting immoveable property ...                                    | 597,416       | 571,416  |
|  |  |               |          |

|   |   |                                  |     |     |       | 1886-87. | 1886-87. |
|---|---|----------------------------------|-----|-----|-------|----------|----------|
| (C).  |   |                                  |     |     |       |          |          |
| Registrations other than those affecting immoveable property. | { | Obligations for payment of money | ... | ... | ...   | 89,501   | 89,795   |
|   |   | All other registrations          | ... | ... | ...   | 35,198   | 36,393   |
|   |   | Total of (C) class               |     |     | ...   | 124,699  | 126,188  |
| (D).  |   |                                  |     |     |       |          |          |
| Number of wills registered                                    |   | ...                              | ... | ... | 1,749 | 1,886    |          |
| Ditto of written authorities                                  |   | ...                              | ... | ... | 37    | 46       |          |
| Grand Total of all Registrations                              |   |                                  |     |     | ...   | 723,901  | 698,539  |

81·8 per cent. of the total registrations related to immoveable property against 82·52 in the previous year. The effect of section 54 of the Transfer of Property Act, 1882, and of sections 12 and 18 of the Bengal Tenancy Act, in making certain registrations compulsory was noticed last year. As the Government of India have only recently sanctioned the proposed alterations in statistical statements II and IV, the Inspector-General has continued to show such registrations as optional.

3. *Registration of leases.*—The total number of leases registered during the year under report and three previous years has been as follows:—

| CLASS OF LEASE.                        |    | 1883-84. | 1884-85. | 1885-86. | 1886-87. |
|--|----|----------|----------|----------|----------|
| Perpetual leases (compulsory)          | .. | 75,552   | 85,519   | 87,236   | 78,766   |
| Leases for terms of years (compulsory) | .. | 164,571  | 175,045  | 180,939  | 180,840  |
| Leases for one year or less (optional) | .. | 4,952    | 5,363    | 6,100    | 6,423    |

The decrease in perpetual leases is worthy of notice. As many as 61,982 were registered in the seven districts of Chittagong (20,437), Backergunge (10,438), Furroedpore (8,038), 24-Pergunnahs (6,727), Jessore (6,207), Noakhally (5,759), and Khulna (4,376). The reasons given for variations in different districts are inconsistent and contradictory. For instance, if landlords, as is stated to be the case in the 24-Pergunnahs, have generally accepted the position in which the Tenancy Act has placed them in regard to "settled" ryots, this fact would operate everywhere towards an increase of perpetual leases. The decrease is fully accounted for by the returns of three districts, viz, Chittagong, Noakhally and Jessore, in which the practice of subinfeudation has been carried to a great extent. It is partly nominal, owing to a change introduced in Jessore in the system of classifying leases for indefinite periods. So far as the decrease is real, it is attributed by two out of the three Registrars concerned, among other causes, to the operation of section 85 (2) of the Bengal Tenancy Act, which debars occupancy ryots from granting perpetual leases. The Inspector-General considers that even under the former law occupancy ryots had not the right to sublet in perpetuity; but he does not contradict the statement of the Registrar of Chittagong that, as a matter of fact, they did execute leases of this character in great numbers; and the registration returns would not be affected by any question as to the validity of the documents.

The number of term leases has remained almost stationary. The only fluctuation that deserves particular notice occurred in Chota Nagpore, where the number of such leases rose from 4,553 to 11,065, an increase of 143·02 per cent. This increase was due to the registration of 6,732 leases granted by the Court of Wards to the ryots of the Chota Nagpore Estate. The Inspector-General gives the explanations of Registrars regarding district variations, but he makes scarcely any comments on these explanations; and the same remark applies to the statistics given regarding the value of leases. Practically very little change has taken place in the proportion of leases to counterparts.

4. *Registered sales of estates, tenures, and ryotti holdings.*—Statement XII shows the number of estates and tenures transferred by registered deeds, and the classes of persons by whom they were purchased. Statement XIII gives similar information regarding ryotti holdings. The figures given in the report are unaccompanied by any comment, and no reason is assigned for the large decreases in the number of sales of revenue-free properties, and of intermediate tenures of all kinds. In the former case the numbers fell from 27,177 to 23,905, and in the latter from 29,885 to 26,336. The following statement

shows the number and classes of purchasers of ryotti holdings at fixed rates during the past two years :—

| YEAR.          | Trans-<br>actions. | PURCHASERS.                                    |  |                     |        |         |                      |
|----------------|--------------------|--|--|---------------------|--------|---------|----------------------|
|                |                    | Mahajans,<br>traders, or<br>money-<br>lenders. | Landlords<br>of holdings<br>transferred. | Other<br>landlords. | Ryots. | Others. | Total<br>purchasers. |
| 1885-86 ... .. | 26,479             | 4,386  | 843                                      | 7,424               | 14,085 | 6,941   | 28,678               |
| 1886-87 ... .. | 24,731             | 3,791  | 786                                      | 2,564               | 13,500 | 7,315   | 27,896               |

The Inspector-General does not attempt to assign any cause for the large decrease Ryots continued to be the principal purchasers, being 49·3 per cent. of the whole number. The total purchase-money shows an average 11·6 years' purchase against ten years' purchase in the previous year. The purchasers of ryotti holdings with rights of occupancy were as follows :—

|  | 1885-86.      | 1886-87.      |
|--|---------------|---------------|
| 1. Mahajans, traders, or money-lenders ...   | 6,725         | 6,458         |
| 2. Landlords of the holdings transferred ... | 1,186         | 1,000         |
| 3. Other landlords ... ..                    | 3,155         | 3,315         |
| 4. Ryots ... ..                              | 38,919        | 37,662        |
| 5. Others, including those unspecified ...   | 8,802         | 8,079         |
|  | <u>58,787</u> | <u>56,564</u> |

No reason is assigned for the decrease.

5. *Deeds affecting immoveable property of less than Rs. 100 in value.*—Under this head there has been a decrease of 9·46 per cent. in deeds of sale, and of 6·8 per cent. in instruments of mortgage. An increase in Mymensingh and Chittagong is said to be due to the prevailing impression that, since the Tenancy Act came into force, no deed of sale is valid unless registered. The District Registrar of Chittagong further adds that it is very easy to get an unregistered deed set aside by the courts in favour of a deed subsequently executed and registered. These are causes from which one would be led to expect a general increase. The real reasons for a general decrease appear to be the increased solvency of the ryots, and the additional expense entailed by the Tenancy Act on account of landlord's fees and process fees.

6. *Effect of the Tenancy Act on registration.*—It is remarkable that the provisions of section 29 of the Bengal Tenancy Act, which require that contracts by which rents are enhanced must be in writing and registered, have not produced any appreciable effect on the returns. But perhaps it would have been unreasonable to have expected that any effect which the Act may produce in altering the rooted custom in this respect should be immediate. The Inspector-General considers that the restriction placed on sub-leasing by section 85 has reduced the number of registrations of such transactions, and this seems most probable. In requiring the registering officers to take the landlord's fees from persons registering documents by which sub-tenures are transferred, and to transmit these sums to District Collectors for the zemindars, the Act has imposed a novel and irksome duty on the department, not unattended with expense. The Registrars report unfavourably of the working of this provision, which they consider to be unpopular both with landlords and tenants. A similar representation has been received from the Board of Revenue. This portion of the law was framed mainly in the interests of the zemindars; and although there is some reason to believe that they are not altogether satisfied with its practical effect, they have not as yet intimated any desire for its repeal, a measure advocated by some officers of Government. This, however, is a matter that more nearly concerns the Revenue Department, and a copy of paragraphs 54-56 of the Inspector-General's Report will be communicated to that department.

7. *Bonds.*—Out of 125,188 instruments relating to moveable property. 89,795, or 71·72 per cent., were money bonds. As many as 29,314, or 32·64 of the whole, were registered in Jessore alone, the 24-Pergunnahs coming next with 8,612.

8. *Refusals to register, prosecutions, &c.*—There were 3,555 refusals to register against 3,639 in the previous year. There were only 370 appeals against these refusals, and registration was ordered in 215 cases. There were 58 prosecutions against 78 in the preceding year: of these, 39 were for making false statements and 23 for false personation: 1,974 deeds were impounded as compared with 2,192 in 1885-86. Stamps were adjudged insufficient in 1,526, correct in 298 cases, and 150 cases were pending at the close of the year. It is not stated if any prosecutions were instituted under the Stamp Act. Seventy-six deeds were discredited by Civil Courts, of which 32 were discredited on grounds connected with registration.

9. *Registration operations in different divisions.*—The following table shows the number of registrations and the fees realized in each of the different divisions of the Province:—

| DIVISION.     |     |     |     | Registration. | Total fees realized. | Percentage of registrations on the whole. |
|---------------|-----|-----|-----|---------------|----------------------|---|
|               |     |     |     |               | Rs.                  |   |
| Presidency    | ... | ... | ... | 164,210       | 2,51,081             | 23·51                                     |
| Dacca         | ... | ... | ... | 123,654       | 1,69,131             | 17·7                                      |
| Chittagong    | ... | ... | ... | 115,585       | 1,21,297             | 16·55                                     |
| Burdwan       | ... | ... | ... | 108,777       | 1,45,225             | 15·57                                     |
| Patna         | ... | ... | ... | 68,923        | 1,61,553             | 9·87                                      |
| Rajshahye     | ... | ... | ... | 45,087        | 66,732               | 6·46                                      |
| Bhagulpore    | ... | ... | ... | 36,606        | 63,233               | 5·24                                      |
| Chota Nagpore | ... | ... | ... | 20,592        | 26,276               | 2·94                                      |
| Orissa        | ... | ... | ... | 15,105        | 22,565               | 2·16                                      |
| Total         |     |     |     | 698,539       | 10,27,093*           | 100·00                                    |

\* Exclusive of the receipts and expenditure of the Registrar of Joint-Stock Companies and the Office of the Inspector-General of Registration. The total expenditure was Rs. 5,02,674.

As compared with last year, there was a decrease in the number of registrations in every division with the exception of the Rajshahye and the Chota Nagpore Divisions, and, as has been stated above, the increase in Chota Nagpore was due to an abnormal cause. The total expenditure during the year under report was Rs. 5,64,274 as compared with Rs. 5,68,365 in the preceding year.

10. *Registration offices and inspections.*—There were 300 offices open at the close of the year as compared with 292 at its commencement. Twelve sub-divisional sub-registry offices were converted into rural offices during the year, and a saving will be thereby caused to Government. The number of inspections was sufficient. It is not necessary to consider the remarks made as to the additional work thrown on registration offices by the Bengal Tenancy Act, as the Inspector-General is about to address Government separately on this matter. The proposal to levy registration fees by means of stamps is still under consideration.

11. *Operations under the Mahomedan Marriage Registration Act.*—The following table illustrates the working of the Act since its introduction:—

| YEARS.  | Number of districts in which the Act was in force. | Number of offices open on the 31st March last. | Number of marriages registered. | Number of divorces other than <i>kholas</i> registered. | Number of <i>kholas</i> registered. | Total number of ceremonies registered. |
|---------|--|--|---------------------------------|---|-------------------------------------|--|
| 1876-77 | 14   | 77   | 2,555                           | 402   | 161                                 | 3,118                                  |
| 1877-78 | 14   | 103  | 7,391                           | 1,404   | 595                                 | 9,390                                  |
| 1878-79 | 14   | 103  | 8,161                           | 1,705   | 771                                 | 10,637                                 |
| 1879-80 | 14   | 107  | 7,137                           | 2,097   | 623                                 | 9,857                                  |
| 1880-81 | 14   | 106  | 5,777                           | 1,874   | 779                                 | 8,430                                  |
| 1881-82 | 14   | 107  | 4,951                           | 2,239   | 667                                 | 7,857                                  |
| 1882-83 | 14   | 112  | 5,008                           | 2,247   | 766                                 | 8,061                                  |
| 1883-84 | 14   | 112  | 4,273                           | 2,315   | 895                                 | 7,483                                  |
| 1884-85 | 14   | 112  | 3,913                           | 2,540   | 957                                 | 7,410                                  |
| 1885-86 | 14   | 112  | 3,993                           | 2,422   | 1,109                               | 7,524                                  |
| 1886-87 | 14   | 112  | 3,926                           | 2,179   | 1,147                               | 7,252                                  |

The total number of ceremonies registered fell from 7,524 in 1885-86 to 7,252 in the year under review, the latter being the smallest number recorded since the introduction of the Act. In only four districts out of the fourteen in which the Act was in force was there an increase. Chittagong continues to head the list with 2,811 ceremonials registered; in two other districts the number exceeded 700; in one it exceeded 650, and in a fifth 500; while in none of the remaining five did the number amount to 400. In Nuddea the Act may be said to be all but inoperative, only six ceremonials (three marriages and three ordinary divorces) having been registered during the year. The decrease was in the number both of marriages and of ordinary divorces registered; whilst there was a small increase of 38 in the number of *kholas* registered. With three exceptions, the Registrars of the districts in which the Act is in operation agree that the measure is not popular, and that the village headmen and mollahs, and even the zemindars themselves, are opposed to it; even in Backergunge, where it is said to be popular, the latter classes are reported to be "passive, neither being in favour of the Act nor opposing it." It is stated that the people do not attach much importance to the system, and do not place much confidence in it; that well-to-do Mahomedans think it derogatory to resort to this method of registration; and that the system involves considerable trouble and expense to the parties, who consequently prefer to register their marriage deeds in the ordinary Registration Offices, more especially since *kabinnamahs* have been exempted from the payment of stamp duty. The want of local influence on the part of the persons who have been appointed to the office of Kazi is also mentioned as one of the causes of the unpopularity of the system. In this connection, it may be noted that one of the Marriage Registrars, who is a local Talukdar and Honorary Magistrate, and who consequently possesses some local influence, appears to have registered an unusually large number of ceremonials. Looking to these facts and figures, the Inspector-General of Registration is of opinion that, so long as the registration of Mahomedan marriages and divorces remains voluntary, the working of the Act will not be more satisfactory than it is at present unless, as in the case just cited, the Marriage Registrar happens to be a man of local influence. He thinks it would be advisable now to try, in some districts, the effect of making the Act compulsory. "This," Mr. Blyth observes, "would bring the fact of the existence of the Act more prominently before the people, and would compel them to accept the advantages which at present they do not care for or understand, while the expense on their part which would be involved would add but very little in the first instance to the sums which they at present waste on their ceremonials, and would ultimately save much money which would be otherwise spent in criminal cases, in connection with marriages or divorces." This matter has recently been under the consideration of Government in connection with a similar proposal submitted by Nawab Meer Mahomed Ali of Furreedpore. The Lieutenant-Governor then decided not to go back from the decision of his predecessor to give the revised rules a five years' trial, and that he could not propose compulsory legislation unless he found that there was a really unanimous call for it on the part of all sections of the Mahomedan community. Sir Steuart Bayley sees no reason to modify this decision.

12. Mr. Bourdillon was in charge of the Department in April and May, but, owing to ill-health, was not able to make any inspections. Mr. Collier was in charge for a short time. From the 19th July 1886 to the 25th February 1887 Mr. Blyth was in charge, and Mr. Bourdillon again for the remainder of the year. The number of inspections made by Mr. Blyth (23) is perhaps hardly adequate; but it is an improvement on the number (21) made by his predecessor. Mr. Bourdillon was in charge for 11 months out of 1885-86, but Mr. Blyth has been in charge for only seven months of the year under report. The names of the officers specially noticed by the Inspector-General will be noted in the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

*Offg. Chief Secretary to the Govt. of Bengal.*



**RESOLUTION ON THE REPORT OF THE COMMITTEE FOR THE  
MANAGEMENT OF THE CALCUTTA ZOOLOGICAL GARDENS  
FOR THE YEAR 1886-87.**

REVENUE DEPARTMENT—MISCELLANEOUS (F).

*Calcutta, the 8th November 1887.*

**RESOLUTION.**

**READ—**

The Report of the Committee for the Management of the Calcutta Zoological Gardens for the year 1886-87.

THE total income of the Gardens from all sources during 1886-87, including the Government grant of Rs. 20,000 and the opening balance of Rs. 6,933, amounted to Rs. 47,541 against Rs. 46,338 in the preceding year. The income from donations and subscriptions was Rs. 5,989, and entrance fees amounted to Rs. 7,141, against Rs. 2,946 and Rs. 7,664 respectively in the previous year: the receipts derived from the Fête and Fancy Fair were considerably less than were obtained under the same heads in 1885-86. The generous donation of Rs. 5,000 made to the Gardens by the Nawab Bahadur of Moorshedabad is especially to be noticed.

The expenditure for the year amounted to Rs. 40,650 against Rs. 39,406 in 1885-86. Establishment cost Rs. 9,148, food of animals Rs. 8,339, purchase of animals Rs. 1,550, transport of animals Rs. 2,616 (including Rs. 869, cost of sending a rhinoceros to the London Zoological Gardens), and construction and repair of buildings and roads Rs. 14,003. The opening balance of the year was Rs. 6,933. The closing balance was Rs. 6,891, but from this balance, the Committee had to meet liabilities to the extent of Rs. 5,622 on account of works undertaken in the latter part of the year. The necessity for strict economy of management therefore continues to exist.

The principal works undertaken during 1886-87 were the construction of an enclosure at a cost of Rs. 2,480 for a young hippopotamus, which was presented to the Gardens; the draining of the tank in the Buckland enclosure; the construction of a wooden bungalow for the Superintendent of the Gardens, and the reconstruction or improvement of servants' houses.

The number of visitors to the Gardens who paid entrance fees was 97,099, which was the lowest on record. The total for the preceding year was 108,944, and the average for the past six years has been 127,313. Besides the paying visitors, however, pupils from schools were admitted into the Gardens free of charge on many days, and on the 16th February 1887, the day of celebration of the Jubilee of the Queen-Empress, more than 5,000 children, with their teachers, from the various educational institutions of Calcutta and its Suburbs were admitted into the Gardens without charge.

The most important additions made to the menagerie were a Malayan tiger, an American bison, two lionesses, a pair of young lions, an ant-eater (South American), and an orang-outang (since dead). The list of animals presented during the year shows that the public continue to take interest in the Gardens. Several valuable animals died during the year; the principal losses being the young hippopotamus and the giraffe.

The Committee express regret that the funds at their disposal are inadequate for the maintenance of the Gardens in as satisfactory a condition as could be desired. In recent years the Committee's invested securities have been reduced from Rs. 20,000 to Rs. 4,800, and it is evident that the finances of the Gardens have to be carefully managed, and that all the pecuniary support which the public can give will be exceedingly welcome.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

*Secretary to the Govt. of Bengal.*



RESOLUTION ON THE GENERAL ADMINISTRATION REPORT OF THE  
CHITTAGONG DIVISION FOR THE YEAR 1886-87.

GENERAL DEPARTMENT—MISCELLANEOUS.

Calcutta, the 8th November 1887.

RESOLUTION.

READ—

The General Administration Report of the Chittagong Division for the year 1886-87.

The Report is submitted by Mr. D. R. Lyall, who officiated as Commissioner throughout the year, with the exception of three months preceding the cold weather, when he was on privilege leave, and Mr. A. Manson acted for him.

2. Mr. Lyall and Mr. Manson were on tour for 81 days, and visited all the head-quarters and sub-divisional stations; 43 days were spent in the Hill Tracts. The

District Officers' tours were sufficient, with the exception of that of the Collector of Noakholly, in whose case the deficiency appears to have been due to a change of officers during the camping season. The amount of touring done by the sub-divisional officers was also generally satisfactory, and some days were spent in camp by the Joint and Assistant Magistrates in Chittagong and Tipperah.

3. The rainfall was ample everywhere, and generally above the average.

Weather and crops and public health.

Tipperah suffered severely from floods, due more to the heavy rainfall in Cachar, Sylhet and Hill Tipperah and the consequent overflowing of the Megna, than to the fall in the district itself. In Brahmanbariah and the northern thanas of the Sudder sub-division part of the *aus* crop was totally destroyed, and the *amun* and jute also suffered to some extent. In Noakholly, Chittagong and the Hill Tracts crops generally were very good. The outturn of the division as a whole was, in the Officiating Commissioner's opinion, certainly an average one, if not rather above the average, and but for the floods in Tipperah, and for the ravages of rats in parts of the Hill Tracts, there would have been a bumper yield. The year is said to have been decidedly healthy in Chittagong, fairly healthy in the Hill Tracts, and normally healthy in Noakholly; in Tipperah an increase in the death-rate is ascribed to the long-continued floods. Chittagong was remarkably free from cholera, and the deaths registered from this disease in Noakholly were less numerous than in the preceding year; but in Tipperah the deaths from cholera increased. Mortality from small-pox was very small in this division, as in the preceding year; in the Chittagong district, which is as yet unprotected by vaccination, only one death was registered under this head.

4. The ordinary condition of the people of this division compares favour-

Material condition of the people.

ably with that of the inhabitants of other parts of these provinces, and the year under review was one of agricultural prosperity, except in the northern parts of the Tipperah district. The partial loss of the crops in the northern portion of Tipperah has been noticed above. This part of the district had suffered from deficient harvests in recent years, and since the beginning of the year the condition of the people has been carefully watched by the local officers. Charitable relief on a small scale was administered by the Government officers before the *amun* harvest of 1886 was reaped, and at the end of October the Commissioner visited the affected tracts. Mr. Lyall found that, while there were cases of individual distress, nothing like famine or even high prices was to be feared, and that labourers could not be got to work on the roads. Accounts of distress in parts of the district having been published in some of the newspapers, careful house-to-house enquiries were made by the Collector in May last, and he was able to report that no ground existed for serious anxiety. A full *boro* harvest was reaped: the *aus* crop harvested in July last was also very good. Throughout the division wages of labour continued to be high during the year. The price of common rice was lower than in the preceding year in Noakholly and in South

Tipperah, but was dearer in Chittagong and the Hill Tracts, and in the Brahmanbariah sub-division. In Brahmanbariah common rice was dearest in October, when it was sold at 14 seers 10 chuttacks, and cheapest in January, when it was sold at 19 seers 7 chuttacks per rupee.

Under the head of immigration and emigration, it is reported that 200 families of Ramburia Mughls sold their property in Arracan, and emigrated to Backergunge, travelling through Chittagong; the emigrants said that they were leaving Arracan on account of repeated failure of their crops caused by salt water. Emigration to the Hill Tracts is due to the efforts made to put down *jooming* in the Chittagong district, and Mr. Lyall, in describing the movement as being of considerable importance, says:—

“Three hundred and eighty-five persons (consisting of 91 Mughls, 138 Tipperahs, 66 Riangs, and 90 Chakmas) came from Hill Tipperah, and 123 (consisting of 7 Mughls, 46 Tipperahs, 2 Riangs and 68 Chakmas) went to that place. Twenty-three Mughls are also said to have gone to Chittagong. Many of the men who have come from Hill Tipperah left the Hill Tracts some seven years ago without notice, and are under the rules liable for joom-tax for the period of their absence. In some cases this has been realized in full, and in others in part; so it is quite clear they have strong reasons for wishing to come back.

“The facility men have for going to Hill Tipperah and *vice versa*, and thus eluding taxation in both countries, has my attention, and proposals will shortly be submitted on the subject. The usual cause of emigration is disputes with headmen and indebtedness.”

5. The total value of the trade of the Chittagong port rose from Manufacture, Trade and Commerce. Rs. 2,15,47,444 in 1884-85 and Rs. 2,09,11,093 in 1885-86, to Rs. 2,30,73,318. The increase is entirely due to the jute trade, which was to some extent diverted to Calcutta in the previous year, by the temporary lowering of freights between Naraingunge and the metropolis, owing to the competition of the steamer companies. Mr. Lyall states that the battle between Calcutta and Chittagong for the Naraingunge jute trade has been now decided in favour of the latter; but he considers the freight to Chittagong too low, and mentions that it hardly pays the working expenses of the brig owners, so that a sufficient number of these vessels are not being built to replace those lost on the dangerous voyage. The export of tea increased in quantity from 956,732lbs. in 1885-86 to 1,034,995lbs., but the Custom-house valuation fell from Rs. 6,83,723 to Rs. 5,84,307. Nearly all the tea was dispatched to Calcutta, the direct exports to England amounting to 3,15lbs. only. The value of rice exported was Rs. 11,46,314, against Rs. 42,06,016 in the previous year. Several causes are given for the decline, but it seems superfluous to go beyond the statement that, owing to the loss of crops by the flood of the Megna, rice could be exported at a cheaper rate from other Indian ports. The chief exports—jute, tea, and rice—are balanced only to a small extent by the imports of salt, oil and piece-goods. The imports of salt seem irregular: they amounted to 22,153 tons in 1884-85, to 9,878 tons in 1885-86, and to 12,884 in 1886-87. The value of the oil imported from foreign ports was Rs. 2,36,139: it was nearly all kerosine, was entirely disposed of, and the trade is in a flourishing state. In the piece-good imports there was a decrease as shown in the following statement:—

|             |     |     |     | 1885-86.  | 1886-87.  | Decrease. |
|-------------|-----|-----|-----|-----------|-----------|-----------|
|             |     |     |     | Rs.       | Rs.       | Rs.       |
| Yarn twist  | ... | ... | ... | 1,93,532  | 1,84,537  | 8,995     |
| Piece-goods | ... | ... | ... | 18,02,775 | 15,86,408 | 2,16,367  |

Mr. Lyall's review of the trade is valuable, but would be more useful if the facts had been brought together in a figured statement, showing the quantity and value of exports and imports of different staples.

6. The Jubilee of the Queen-Empress was celebrated with enthusiasm in every district. In regard to other matters there was no display of public feeling in Noakholly or the Hill Tracts; but in the Chittagong and Tipperah districts some interest in the Tenancy Act, amounting, however, only to a state of expectancy, and in Tipperah some stir in connection with Local Self-Government,

are noticed by the Commissioner. In the last-named district men's minds were chiefly occupied with the subject of the floods.

7. The Chittagong Division continues to be comparatively free from serious crime except arson, and the bulk of the criminal work consists of non-cognizable cases, which increased largely in number in Chittagong district on account of the misinterpretation by the Joint-Magistrate of orders of the Sessions Judge directing further enquiries into a number of cases which had been rejected, as equivalent to orders to issue process on every petition. There was an increase under the head of dacoities, which, however, are described as technical and not organised. Close attention should be paid by the Police and Magistrates to cases of fire-raising and threats of fire-raising which always present serious difficulties, and are not at present successfully dealt with in this division. The conduct of the regular police was, on the whole, good; but, as usual, little detective ability was displayed. The working of the Chowkidari Act was hindered by the want of a sufficient number of Magistrates.

8. Civil suits were more numerous than during the previous year in Chittagong and Noakholly, but fewer were instituted in Tipperah. In Chittagong a large proportion of the increase was due to suits of the Small Cause Court type in matters connected with trade. The number of rent-suits has risen in Chittagong by 9·6 per cent., in Noakholly by 78 per cent., and fallen in Tipperah by 5·8 per cent. The increase under this head in Chittagong, and the falling off in Tipperah, are alike ascribed to the effects of the Bengal Tenancy Act; but the Commissioner finds a more probable explanation of the decrease of litigation in Tipperah in the floods, which gave the people other things to think of, and on account of which landlords forbore to press their ryots. After all, the variations are in each case so slight as scarcely to require explanation, and the increase in the one district, as well as the falling off in the other, is not confined to rent suits, but extends to litigation of every class.

9. The current demand of Land Revenue for the division rose from Rs. 25,38,555 to Rs. 25,57,112, chiefly on account of re-settlements, and the percentage of collections improved, except in Tipperah, where there was a slight falling off, due to the heavy floods and the consequently impoverished state of the ryots; there was also a general improvement in arrear collections. The Lieutenant-Governor notices with much satisfaction the further improvement in the khas management of the Government mehals in Chittagong, the credit of which is due to Mr. Manson, who is successfully accomplishing what was at one time declared by Sir Henry Ricketts to be a hopeless task.

10. The total Excise Revenue of the division shows a falling off of Rs. 43,191, due, in Chittagong, where it is largest, to the decreased sale of opium in Cox's Bazar, the result of the decision of Government to place a limit on the sales in the sub-division, with a view to prevent smuggling into Arracan. From Stamps the revenue realized was Rs. 13,357 in advance of the preceding year. With regard to prosecutions for evasion of the Stamp Law, Mr. Lyall remarks that many officers, to judge from the wording of their decisions and the sentences inflicted, seem to think that the offender is worthy of sympathy, and that it is a hardship that he should be prosecuted at all. Sir Steuart Bayley trusts that such an error of judgment is not really very common among magisterial officers: in so far as it may be prevalent, the facts should be brought to the notice of Government in specific cases. The Income-tax demand for the division, as finally assessed, amounted to Rs. 88,773, as against Rs. 54,155 assessed under the License-tax Act in the preceding year. The unusual number of objections in the Chittagong district, and the considerable reductions in the original assessments both there and in Tipperah, are unsatisfactory. There was a large increase of revenue from the salt duty on account of larger imports to replenish stocks.

11. Roads are reported to be in good order in Noakholly, but to be exceedingly bad in Chittagong. In Tipperah the chief road of the district, which runs from Daudkandi to Comillah, suffered much from the floods. Mr. Lyall recurs throughout

his report to the advantages to be gained in the opening up of the division by construction of a railway. He thinks that such a project would readily be taken up by English capitalists if it had the recommendations of the Government of India. The project is at present the subject of correspondence between the Government of India and the Lieutenant-Governor of Bengal.

12. The returns of the Education Department show a very large increase in the numbers of schools and pupils in Chittagong, a considerable increase in Noakholly, and a considerable decrease in Tipperah. The increase in Chittagong is attributed to better supervision by a strengthened staff of Sub-Inspectors, and the decrease in Tipperah to the exclusion from the returns of schools not rewarded, and also to pupils being kept away from school by the floods. Mr. Lyall's remarks, to the effect that more distinct rules appear to be required with regard to inclusion of primary schools in the returns, will be brought to the notice of the Director of Public Instruction. As Mr. Lyall points out, the practice as to including or excluding primary schools which do not come up to a certain standard has varied in recent years, and this renders it difficult to test by the returns the progress made in this most important branch of education. Mr. Lyall considers that the returns should show all schools known to exist, those of an inferior class being distinguished, but not ignored. The remarks made in the report as to the doubts entertained as to the character of the returns of female education will be communicated for enquiry to the Director of Public Instruction.

13. Under the head of Committees, Mr. Lyall notices only Municipal Committees, and gives credit to the Municipal Commissioners generally for taking an interest in their duties, but, on the other hand he expresses an opinion that the conservancy of the town of Chittagong is not so well looked after as before the new Municipal Commissioners came into office.

The important zemindars of the division are for the most part non-resident, and nothing new is reported with regard to them. The public spirit and liberality of Faizunnissa Chowdhurani and her husband, and of the Nawab of Dacca, are favourably mentioned.

The statement of the number of Muhammadans employed in Government service shows that the orders of Government have received proper attention in this division, and it is satisfactory to learn that an increased determination on the part of Muhammadans not to linger behind their contemporaries is observed.

14. The Lieutenant-Governor thanks Mr. Lyall for his excellent report, which shows a thorough grasp of administrative questions, while it is at the same time concise. The remarks as to the conduct of officers will be communicated to the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

*Secretary to the Government of Bengal.*

# RESOLUTION ON THE BOARD'S REPORT ON THE LAND REVENUE ADMINISTRATION OF THE LOWER PROVINCES OF BENGAL FOR 1886-87.

## REVENUE DEPARTMENT—LAND REVENUE.

*Darjeeling, the November 1887.*

### RESOLUTION.

#### READ---

The Board's Report on the Land Revenue Administration of the Lower Provinces of Bengal for 1886-87.

The Report is submitted under the orders of Mr. Halliday, who, however, was in charge only for a short part of the period to which it refers. The Land Revenue Department of the Board was administered by Mr. Reynolds during the year, and the Land Acquisition and Partition Departments by Mr. Cockerell, with intervals in each case of absence on leave of no great length.

2. The current demand on account of the four classes into which estates are divided is shown below—

Land Revenue Demand.

| CLASS OF ESTATE.                | CURRENT DEMAND. |             |
|---------------------------------|-----------------|-------------|
|                                 | 1885-86.        | 1886-87.    |
|                                 | Rs.             | Rs.         |
| Permanently settled estates ... | 3,22,99,680     | 3,22,97,484 |
| Temporarily ditto ...           | 27,14,912       | 27,26,304   |
| Government estates ...          | 21,97,439       | 22,36,201   |
| Ryotwari tracts ...             | 8,21,318        | 8,35,309    |
| Total                           | 3,80,33,379     | 3,80,95,298 |
| Increase during the year ...    | Rs. 61,919      |             |

It was noticed in the Resolution on the Report of the previous year that there was a diminution in the rate of development of the land revenue, owing to the greater moderation now exercised in enhancing rents, and the greater readiness to reduce them when they are found to be excessive. This tendency continued to be felt during 1886-87, the increment being less than half that which was annually gained on the average of the years before 1884-85. It is, however, somewhat in excess of the increase during the last two years; and in future it is probable that the elasticity of this branch of the revenue will be maintained by the more active policy which it is proposed to adopt in the matter of surveys and re-settlements. To the current demand of Rs. 3,80,95,298 must be added an arrear of Rs. 25,13,482, making the total demand Rs. 4,06,08,780.

3. The remissions, which amounted to Rs. 1,77,733, or .43 on the demand, include corrections in the accounts made by cancelling double assessments on the same lands, and similar alterations having the effect of excluding sums never due, but which were entered by mistake. Under orders recently issued by Government, these changes will not hereafter be shown as remissions. The remissions made by Government voluntarily, classified as "of grace," amounted to Rs. 83,390, as against Rs. 38,072 in 1884-85, and Rs. 56,458 in 1885-86. In so far as the increased remissions are due to concessions granted to ryots on account of poverty, or exceptional misfortunes, such as the destruction of crops in low lands by salt water from the Satpukuria khal, in the 24-Pergunnahs, they command the entire approval of the Lieutenant-Governor. Indeed discriminating and prompt remissions in such cases are not only of the greatest service to the ryots, but are also in the long run advantageous to the revenue. But it would seem that even in this class of remissions are included some items which should more properly appear under other heads in the account. Further information will be requested as to the sum of Rs. 6,668 said to have been remitted in Midnapore on account of Barua allowance, of the five per cent. remissions to the mundals of estate Boita, and of the annual remission of Rs. 1,478 "on account of over-assessment of certain

tenants of the Cuttack khas mehal." Payments to mundals and others should not ordinarily be entered as remissions, and a remission made every year on account of original over-assessment seems to imply the necessity of reducing the demand.

4. In the Resolution on last year's Report the Lieutenant-Governor was compelled to notice a general falling off in the work

**Collections.**

of revenue collections, which was not satisfactorily explained; and certain instances of apparent remissness were indicated. Attention was subsequently drawn by the Government of India to the expediency of making the collections during the year 1886-87 as complete as possible. Sir Stuart Bayley is glad to observe that the instructions issued have been followed by a general improvement in the results obtained. The receipts during the year amounted to Rs. 3,84,07,773, and thus compares favourably with the current demand of Rs. 3,80,95,298. There has been, therefore, a considerable decrease in the outstanding balances, as appears from the following statement:—

| CLASS OF ESTATE.               | Current demand<br>of<br>1886-87.<br>Rs. | BALANCES.       |                 |
|--------------------------------|---|-----------------|-----------------|
|                                |   | 1885-86.<br>Rs. | 1886-87.<br>Rs. |
| Permanently settled estates... | 3,22,97,484                             | 9,03,603        | 7,87,572        |
| Temporarily ditto ...          | 27,26,304                               | 5,10,711        | 4,97,438        |
| Government estates ..          | 22,36,201                               | 9,59,385        | 6,50,442        |
| Ryotwari tracts ..             | 8,35,309                                | 82,187          | 87,822          |
| Total ...                      | 3,80,95,298                             | 24,55,886       | 20,23,274       |

Diminution of balances during 1886-87 ... Rs. 4,32,612

The Board attribute the improvement to the greater attention paid by revenue officers to this part of their work under the stimulus of the instructions of Government. This is eminently satisfactory, and the acknowledgments of the Lieutenant-Governor are due to the officers to whose exertions the change is due. But it is to be observed that the improvement has not been universal, and that, if it is to be maintained, adequate notice must be taken of cases in which failure has occurred, and no satisfactory explanation is forthcoming. Sir Stuart Bayley entirely agrees with the Board that the explanation of the Collector of Patna is not to the point, and will be glad to receive in due course a full statement of the reasons why, in that district, collections amounted only to 88 per cent. of the gross demand, and the balances have increased from Rs. 1,44,022 to Rs. 1,92,340. In some other instances, also, the explanations submitted are imperfect, and indicate that the arrangements for collection were not made with due care and forethought. Thus, it is said that in Lohardugga the work was unfavourably affected by the fact of there having been no tehsildar for five months of the year, and that in Furreedpore the short collection is due to the settlement of estates with retrospective effect—statements which only throw the necessity for explanation one step further back, by suggesting that those responsible for the revenue did not take proper measures to secure the appointment of a tehsildar, and to make the settlement of estates in proper time. The interval between the close of the financial year and the date of the submission of the annual report is sufficient to enable the Board to clear up such matters in most cases, and the Lieutenant-Governor hopes that in future the explanations given will be of such a character as to indicate whether blame does or does not attach to the officers concerned.

5. Taking the results obtained on estates of different classes separately, it may be remarked that the power of revenue officers to expedite collections on permanently-settled estates is almost confined to those under the management of the Court of Wards, and on these the outstanding balance has decreased from Rs. 1,52,659 at the end of 1885-86 to Rs. 1,12,803—an improvement attributed by the Board to the orders issued on the subject by Government. This matter was commented on in last year's Resolution, and will be referred to again in the review of the Court of Wards' report; but the Lieutenant-Governor cannot accept the degree of progress made during the year as altogether satisfactory. On temporarily-settled estates there has been a considerable improvement with regard to those held by farmers, and the disappointing

results on those managed direct owing to the recusancy of proprietors, are in great part attributable to the large reductions made by orders of Government on the Majnamutta and Jellamutta estates. These reductions, however, should have taken place from the 16th September 1885, under the orders contained in Government letter No. 1874T—R, dated 12th October 1885, and it is not understood why they had not been effected up to the end of the year 1886-87. The reduction of balances has been most marked on Government estates, the outstandings on which have been reduced from Rs. 9,51,385 to Rs. 6,50,442, the collections being 102·6 per cent. on the current demand. But, on the other hand, the balances have slightly increased on ryotwari tracts, owing to a falling off in the collections in two districts, Julpigoree and Lohardugga, very inadequately explained.

6. The realizations of road cess were also in excess of the current demand, and there has been a diminution of Rs. 77,219 in the outstanding balances. Similar results were obtained in Midnapore and Shahabad in regard to water-rates, and it seems probable that collections were everywhere facilitated by the favourable agricultural results of the year, although this is not stated by the Board. In Sarun, where the demand is very small, and in Orissa, the water-rate collections were bad owing to special causes.

7. The financial results of the direct management of Government and other estates during the year must be pronounced satisfactory. The annual rental shows an increase of over one lakh and a quarter: it now amounts to Rs. 28,58,803, and the collections were in excess of this sum, being Rs. 29,63,798. The percentage of collections to rental during the last ten years has been on the average 99·5 per cent.; so that, although there has always been an outstanding balance of considerable amount, the actual income has during the period been very little less than the demand. The cost of management during the year was 7·3 per cent. on the demand, against 7·1 per cent. in the previous year. The large number of these estates (they amount to 1,617), and the fact that many of them have become Government property because they were in so declining a state as to be unable to pay the revenue assessed, renders it most difficult to introduce generally a system of management which can be considered satisfactory in every respect, and the Lieutenant-Governor hopes that all revenue officers will interest themselves in securing the best results obtainable under the circumstances by making such ameliorations as it may be within their power to carry out. The sum available for improvements, roads, and education being small (it was this year Rs. 58,174), there is the more reason to see that it is economically and judiciously spent. The Board's report gives some account of the distribution of the funds assigned for these purposes, but does not afford the information necessary for forming any opinion as to whether the best use has been made of the money. The agency of the Director of Agriculture may in future be used for the supervision of such expenditure, as also for considering and summarising reports as to the results of agricultural experiments tried on Government estates.

8. The Lieutenant-Governor notices with pleasure that the experimental measure of permitting in two divisions the payment of land revenue by money-orders has proved a success, and he has lately authorized its extension to the province generally. The system is convenient to those who live at a distance from the district head-quarters, or who have reason to dread any exaction or detention at the treasury. Its operation should be attentively watched with a view to the introduction of any improvement in detail which experience may indicate as desirable. It is noticed that out of 6,682 money-orders received during the year, 111 were rejected as not giving full particulars, or as out of time; and in the necessity for making such rejections may possibly be found the chief obstacle to the working of the system. Every effort should be made to prevent such an incident as the sale of an estate for arrears of revenue in consequence of the rejection of a money-order on technical grounds. The Bengal Tenancy Act empowers the Local Government to make rules, either generally or for any specified local area, authorizing tenants to send



their rent by postal money-orders, and the Lieutenant-Governor proposes to consider the advisability of exercising this power as soon as the working of the system on the wider scale now sanctioned in regard to revenue has been ascertained. In observing and regulating the payment of revenue by postal money-orders, Collectors should not overlook its bearing on this important proposal.

9 The revision of the survey in Midnapore, completed during the year at a cost of Rs. 5,20,351, forcibly indicates the necessity of doing such work in the first instance through a competent department in such a manner as to avoid these costly and unsatisfactory revisions. The money has been in great part spent in correcting errors and omissions which should never have occurred in the original survey and settlement proceedings.

10. The report of the Board does not indicate whether work of this class is promptly and efficiently dealt with, but there seems to be reason for believing that there is considerable room for improvement. From Appendix V of last year's report it appears that 1,535 cases remained for disposal at the end of 1885-86, and the corresponding table in the present report shows only 812 as disposed of during 1886-87. Of the settlements effected, 191 were summary and on these there has been little or no increase of revenue, while 1,215 cases are entered as pending at the end of the year. The failure to complete the work was not due to want of funds, as it is stated that out of Rs. 1,17,380 assigned in the budget for settlements, only Rs. 58,027 were spent. In the absence of explanation, these figures would seem to indicate, what the Lieutenant-Governor understands to be in many instances the fact, that timely arrangements are not systematically made before the expiration of current settlements for their renewal, with the result that summary settlements have to be effected while measurement work is in progress, and sometimes even retrospective settlements. One instance is given in the Board's report of a settlement made with five years' retrospective effect, and it is added that, as might have been expected, the ryots ask for remission on the ground of limitation. The Lieutenant-Governor would be glad to receive a special report showing the present practice in this respect; and in particular indicating with regard to the 463 re-settlements effected in 1886-87 in what number of cases any interval occurred between the expiry of the last regular engagement (as distinguished from mere summary settlements) and the execution of that at present in force, with any suggestion that the Board may wish to offer for effecting an improvement in this respect. It is obvious that if, as the figures would seem to indicate, the majority of re-settlements are not arranged for beforehand, but remain pending even after the year in which they expire, there must be a considerable sacrifice of revenue during the interval.

11. The work of initial registration under Act VII (B.C.) of 1876 which remained to be done at the end of the previous year in certain districts was so small, and it has been pending so long, that it is not clear why it was not finished during 1886-87. It is hoped that it will be finally disposed of during the current year. These remarks do not apply to the Cuttack district, as to the large amount of cases still pending in which special orders will shortly issue. The number of applications for changes in the register on account of successions by inheritance is very small when compared with that of entries, and cannot be reconciled with the average death-rate. Thus in the Presidency Division there were only 621 successions out of 62,724 interests registered, or less than one per cent. Rules designed to secure more complete registration have been drafted and are still under consideration; but in order to secure the advantage of a complete record of proprietary titles, it may ultimately be necessary to have recourse to legislation.

12. The number of estates which became liable to sale during the year for arrears of revenue was 14,456, of which 1,859 were in fact sold, against 1,770 in the preceding year. The Board consider that the law has been worked with moderation, if anything with too great leniency, and quote the opinions of the Collectors of



Midnapore and Backergunge, to the effect that too great indulgence has been exercised. The law and the Government orders in force on the subject leave to Collectors a discretion in the matter which the Lieutenant-Governor expects them to exercise with care and discrimination, and he certainly is not disposed to approve any recurrence to the practice condemned by his predecessors and by the Board, of selling estates for very trifling or for obviously accidental arrears. A reference to these orders will, however, show that they by no means compel a Collector to accept all arrears tendered after the latest day fixed by law for payment. The Board may with advantage enquire as to the statement of the Collector of Shahabad that sales in his district are in part attributable to the unsuitability of the dates fixed for the payment of revenue, although it does not appear how the 28th March, almost at the end of the financial year, can be an inconvenient period for paying a public demand.

13. The report of the Board shows that 7,364 acres were acquired for public purposes during the year at a cost of Rs. 4,99,888, or about Rs. 68 an acre. This is a branch of the administration which requires very careful supervision to prevent undue delay, particularly where extra establishments are employed, and the payment of excessive prices. The report does not indicate how far the Board has been successful in these respects.

14. The number of certificates filed during the year was 177,618 against 199,262 in 1885-86, and the disposals exceeded the institutions, so that the balance pending was less at the end of the year than at its commencement. So far the working of this department was satisfactory; but, on the other hand, the number of cases in which it was necessary to proceed to the actual sale of property increased from 6,284 to 9,112. Sir Steuart Bayley was struck during his tour by the great and unexplained variations between the numbers of certificates filed in different districts. No department of the administration needs more careful supervision than this, to prevent on the one hand the loss of Government dues by the failure to file necessary certificates, and on the other harsh and careless proceedings, in which legal steps are taken at great cost to the defendants for the recovery of small dues which could have been obtained on demand judiciously made, or after a short delay.

15. The Board properly observe that the time which has elapsed since the Bengal Tenancy Act came into operation in November 1885 has not been sufficiently long to admit of a decided expression of opinion as to the working of a measure of such importance, and add that "it is doubtful whether its provisions are as yet sufficiently appreciated either by the zemindars or the ryots; even where they are understood, there is, as might be expected, a feeling of hesitation on either side to have free recourse to them." The effects of the Act on its first introduction are not, however, without importance, even if they afford a very uncertain indication of its ultimate success, and the Lieutenant-Governor is glad to learn that the local officers, whose opinions on the subject were originally very diverse, are now for the most part unanimous in accepting the measure as an improvement. The only exception to this view of the general operation of the Act mentioned by the Board concerns Ohittagong, a district in which special conditions prevail. Even in this instance the objection to the working of the Act is not supported by the Board, and does not appear to be founded on actual experience of its operation. Applications have been received from the Collector of Balasore in Cuttack, and the Deputy Commissioner of Lohardugga in Chota Nagpore, for the extension of the Act to these districts, and the latter was supported by the Commissioner, and by a petition signed by persons of position. Sir Steuart Bayley has, however, no present intention of introducing the Act in Orissa, and intends to await further reports as to its working before taking any final action on the communication from Lohardugga. The views of the Board on the working of the measure are expressed in very guarded language, which would be applicable to most laws, as to the policy of enacting which there has been much discussion. "It may be said generally," the Board remark, "that if the fears of its opponents

have not been realized, neither, on the other hand, has it proved an immediate panacea for all the difficulties which surround the relations between landlord and tenant." It is stated in the report that, generally speaking, existing relations between landlord and tenant have improved during the year; and though many cases are specified in which there have been serious differences, these do not alter the opinion expressed by the Board as to the direction in which events have on the whole tended. Some of the worst disputes have occurred in the Chota Nagpore Division, where the Act is not in force

16. The introduction of a new form of receipt, in which the landlord is

Rent receipts.

bound to specify the area and annual rental of the holding, if he is in a position to do so, is the part of the Act which has produced the most immediate and striking impression. Its ultimate object is of very great importance, being no less than the removal of the principal grievance of the ryots, and the main difficulty of courts in deciding suits for arrears, namely, the uncertainty which almost everywhere exists as to the rents which are actually in force. That this object cannot be easily attained is proved by the failure of successive enactments on the subject for the best part of a century; and there was considerable apprehension that the somewhat drastic provisions of the new law might lead at their first introduction to very serious complications. At one time it seemed as if this fear might be in some measure realized; and, as noticed in the Resolution on last year's report, the Lieutenant-Governor found it necessary to direct the Board to issue a circular to Collectors calling on them to explain to the ryots the real significance of the Act in this respect. The Board state that misunderstandings and complaints on the subject have since subsided, and this is evidently the fact, taking the province as a whole; but the Collector of Backergunge thinks that there is still some difficulty in making the ryots understand the point, and recommends a verbal change in the form of receipt in order to make it more clear to them. A further report will be required on this subject.

17. With regard to the extent to which the new receipt forms have been introduced, it is observed that over four and a half million were sold by Government during the year, and that as private presses sell at cheaper rates, they have presumably done a much larger business. Manuscript forms are, moreover, as valid in law as those printed, and must be frequently used. It seems, therefore, that very considerable progress has been made; and perhaps this is as much as could have been fairly expected under all the circumstances of the case. The Collector of Dinagepore states that the knowledge that the ryot is bound to pay nothing but what is entered on the receipt is now generally widespread; the Collector of Furreedpore that the printed forms have done much to prevent fraud; the Collector of Mymensing that they are making their way, but slowly; the Collector of Bhagulpore that "the operation of the Act in its most important provision, namely, the issue of proper receipts, has been more extensive than I could have hoped for at this time last year." Even the statement of the Joint-Magistrate of Mozufferpore, that complaints are frequent that the landlords do not give receipts for rent, is in one respect hopeful, as if this old abuse has now become a subject of general complaint, it is the more likely to be remedied. On the other hand, it is equally evident from the reports that the use of the receipts is by no means universal. Probably they are not as yet given in the majority of cases. It is possible that as the novelty of the Act wears off they may fall into disuse, and that further remedial measures may be necessary; but the weight of opinion seems to be on the side of those who anticipate that the forms will by degrees receive the sanction of general custom. As to the statement made in the Mozufferpore report, that receipt forms for rent have in some cases been used as a lever of enhancement, by inducing the ryots to accept a document upon which an enhanced rental has been entered, it is observed that the forms were not expected to prevent enhancement with the consent of the tenants, nor could they do so in the nature of things; and that under the old law an enhanced rent would with equal or greater facility have been entered on any receipts which the ryots might have been willing to accept. This statement is, however, made not as an objection to the law as to receipts, but as an argument in favour of supplementing its provisions by a record of rights.

18. The following table has been prepared by the Board to show the working of certain sections of the Act which immediately concern revenue officers:—

| 1          | 2                                 | 3   | 4                                 | 5  | 6   | 7   | 8  | 9   | 10  | 11  | 12   |   |  |
|------------|-----------------------------------|---|-----------------------------------|--|---|---|--|---|---|---|--|---|--|
| DIVISION.  | TRANSFER OF TENURES.              |   |                                   | Commutation of rent payable in kind, section 44. | Appraising of produce where rent is paid in kind, sections 68 and 76. | Registration of improvements, section 90. | Certificates of Collectors as to acquisition of land for building or other purposes, section 84. | Notices of requisition of land by landlords, section 87(2). | Written permission to landlords to measure land under section 84. | Application by Collector for appointment of common managers under section 83. | Applications made for the survey and record of rights under chapter X. | Applications made for the survey and record of proprietors' private lands under chapter XI. | Local enquiries held by order of a court, section 158. |
|            | (a)<br>Voluntary, section 12 (3). | (b)<br>By decree sale, sections 13 (2), 14. | (c)<br>By succession, section 15. |  |   |   |  |   |   |   |  |   |  |
| Burdwan    | 10,008                            | 295   | 3                                 | 31   | 21  | 345                                       | .....  | 9   | .....   | .....   | 7  | 1   | 1  |
| Presidency | 22,378                            | 1,085                                       | 10                                | 6  | .....   | 31  | 1  | .....   | .....   | .....   | 3  | .....   | 2  |
| Rajshahye  | 8,511                             | 154   | 9                                 | .....  | .....   | 1   | .....  | 25  | .....   | .....   | 2  | .....   | .....  |
| Dacca      | 4,678                             | 1,467                                       | 40                                | .....  | .....   | 1   | 3  | .....   | .....   | 1   | 7  | 1   | .....  |
| Chittagong | 13,380                            | 378   | 15                                | .....  | .....   | 31  | .....  | 338   | 1   | .....   | 5  | .....   | 13   |
| Patna      | 8,716                             | 10  | 9                                 | 5  | 307   | 204                                       | 35   | 160   | .....   | .....   | .....  | .....   | 102  |
| Bhagalpore | 4,706                             | 76  | 4                                 | .....  | 98  | 305                                       | .....  | 4   | .....   | .....   | .....  | 1   | 54   |
| Total      | 67,666                            | 3,400                                       | 90                                | 42   | 484   | 978                                       | 39   | 538   | 1   | 1   | 25   | 3   | 172  |

The Hon'ble Judges of the High Court have consented to supply Collectors with returns of the litigation under the Act in Civil Courts, and those should be embodied in future reports. The most numerous transactions were the issue of notices, and payments of landlords' fees in respect to the transfers of tenures, under which heading is also included transfers of ryots' holdings at fixed rates, and it is doubtful how far the result of this provision of the law has been advantageous. At first some administrative difficulties were felt in carrying out the prescribed procedure, but these have since been surmounted. It is said that there is a general feeling of repugnance on the part of landlords to accept the fees, and should this continue it will constitute a more serious objection to the continuance of a provision of the law to which no importance is attached in the interests of the ryots.

19. The Commissioner of the Presidency Division supports a proposal that in future price-lists of staples, prepared with a view to the future determination of rent-rates, shall be prepared monthly instead of fortnightly. The opinion of the Board will be solicited on this suggestion, which receives some countenance from the fact that no one has hitherto shown a practical interest in these lists, when locally published as required by the Act, by lodging an objection under section 39(3). It is of course possible that the subject may excite more attention hereafter as the important, though remote, consequences of inaccuracies in these statements come to be more fully understood.

20. The Lieutenant-Governor attaches much importance to prompt compliance with reasonable applications from landlords or tenants for surveys and the preparation of records of right. It is not stated why three such applications made in the Presidency Division were refused, and it does not appear that the work has been commenced in any case, except in one in which the Board were themselves the applicants in their capacity as the Court of Wards. This affords a sufficient explanation of the fact that only 25 cases were instituted during the year, and it seems unnecessary to assume, as the Board do, that landlords have been deterred from making more numerous applications by the elaborate and expensive character of a procedure which is certainly more summary and cheap than any process of ascertaining and fixing rents which has hitherto been in force in Bengal. Indeed it is somewhat remarkable that under the circumstances twenty-five such applications should have been received. During the winter which has now commenced several surveys of this kind will be taken in hand, notably that of the Srinagar and Banaili Raj estates, which extend over an area of half a million acres. No suitable opportunity should be lost of complying with the applications of those interested in land for surveys to be made at their expense. It is only after those concerned have observed the effects of such operations that any general recourse can be expected to the means afforded by the new law for securing a settlement of all agrarian disputes.

21. The report of this interesting survey has not as yet been received by the Government of Bengal, and detailed comments seem unnecessary on the abstract given by the Board. It is stated that, without the help of the Bengal Tenancy Act, a very large proportion of the Behar ryots would not have been able to prove the possession of occupancy rights, and it follows that in litigation they could have derived no advantage from any claim they might advance to such rights. Before the Settlement Officer more than 90 per cent. of the cultivators established their claim to that position, or to one superior. This indicates an effect of the Act which, though it cannot be felt immediately, must have the greatest ultimate importance, namely, the establishment of the great body of the ryots in full legal possession of a privileged position, to which they had formerly a moral and customary claim, without being able to prove their title before a Court.

22. The Lieutenant-Governor cannot consider as satisfactory the account given of the extent to which the junior members of the Civil Service were instructed in survey work. It is by no means sufficient to make over to such an officer cases which may include measurement by amins: he should, where it can be arranged, have the advantage of the teaching of an expert in the field. Still less can the experience acquired during the year by an officer of over fourteen years' standing be accepted as an illustration of the training of a junior. The surveys which will during the ensuing cold season be carried out under the supervision of the Director of the Agricultural Department will afford the means of giving such training, and the Board will be requested to report how these opportunities can best be utilized.

23. The Lieutenant-Governor has much pleasure in acknowledging the valuable services rendered during the year by the Hon'ble Mr. Reynolds, C.S.I., Mr. Cockerell, C.S.I., and Mr. Halliday, as Members of the Board. The remarks of the Board as to the good conduct of certain revenue officers will be communicated to the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,  
Secretary to the Government of Bengal.

**ANNUAL REPORT ON THE WORKING OF THE JUTE WAREHOUSE AND  
FIRE-BRIGADE ACT IN THE HOWRAH MUNICIPALITY DURING THE  
YEAR 1886-87.**

The following is published for general information.

COLMAN MACAULAY,  
*Secretary to the Govt. of Bengal.*

No. 11T, dated Burdwan, the 15th October 1887.

From—E. V. WESTMACOTT, Esq., Offg. Commissioner of the Burdwan Division,  
To—The Secretary to the Government of Bengal, Municipal Department.

I HAVE the honour to submit a printed copy of the Annual Report on the working of the Jute Warehouse and Fire-Brigade Act within the Howrah Municipality during the year 1886-87.

2. The Municipal Commissioners have paid Rs. 4,320 to the Commissioner of Police, Calcutta. Of this sum, Rs. 200 were due as the outstanding balance of the year 1885-86, and the remaining Rs. 4,120 represent 80 per cent. of the fees realized during the year under report. But as Rs. 20 were realized by the Municipal Commissioners as fines, 80 per cent. of that amount, equivalent to Rs. 16, should also be paid to the Commissioner of Police under section 17 of the Act.

**THE JUTE WAREHOUSE AND FIRE-BRIGADE ACT.  
ANNUAL REPORT FOR 1886-87.**

I HAVE the honour to report on the working of the Licensed Warehouse and Fire-Brigade Act in this Municipality for the official year ending 31st March 1887.

There were 21 jute warehouses licensed during the year, showing a decrease of three warehouses which were petty ones, and the owners did not use them. There was, however, a large screw-house and warehouses established belonging to Messrs. Guzdar & Co., which only worked during the latter months of the year.

A classed list of warehouses which were licensed during the year is given in Appendix I.

The total receipts amounted to Rs. 5,150, as in last year, from license fees only, and from prosecutions Rs. 20, which is given in Appendix II. The above figures show no falling off.

The following is the expenditure in the inspection of warehouses during the year:—

|                      | 1886-87.   | 1885-86.   |
|----------------------|------------|------------|
|                      | Rs.        | Rs.        |
| 1 Inspector ... ..   | 600        | 600        |
| Contingencies ... .. | 2          | 1          |
| <b>Total</b> ... ..  | <b>602</b> | <b>601</b> |

The Fire-Brigade establishment still continues under the control of the Deputy Commissioner of Police.

There were altogether 18 fires during the year. The losses in most of the cases were inconsiderable. The fire-brigade attended all the fires, and did their best to put them down. A statement of particulars is given in Appendix III received from the Deputy Commissioner of Police, Calcutta.

The following is the expenditure incurred during the year irrespective of the amount expended by the Deputy Commissioner:—

|  | Rs.          | A.        | P.       |
|--|--------------|-----------|----------|
| Rent of Fire-brigade station ... ..                    | 782          | 14        | 3        |
| 80 per cent. paid to the Commissioner of Police ... .. | 4,320        | 0         | 0        |
| <b>Total</b> ... ..                                    | <b>5,102</b> | <b>14</b> | <b>3</b> |

E. V. WESTMACOTT,  
*Chairman.*

*The 19th July 1887.*

## APPENDIX I.

*Jute Warehouses for which Licenses were granted during the year 1886-87.*

| Register No. | NAMES OF OWNERS, &c. |  | Locality.                          | Description of premises.              | Annual valuation. | Amount of fee realized. | Date of payment.    | REMARKS. |
|--------------|----------------------|--|------------------------------------|---------------------------------------|-------------------|-------------------------|---------------------|----------|
| 1            | Owners               | Ganges Jute Manufacturing Co., Ltd.                                      | 445, Grand Trunk Road.             | 1 Warehouse and a batching house.     | Rs. 2,677         | Rs. 300                 | 13th April 1886.    |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 2            | Owners               | Foolchand, Mackun Lall.  | 129, Ghosery Road                  | 1 Warehouse and part of another.      | 480               | 50                      | Ditto.              |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 3            | Owners               | Seehpur Jute Manufacturing Co., Ltd.                                     | 7-1, Kawraparah Ghat Road.         | 1 Large warehouse                     | 3,000             | 300                     | 14th April 1886.    |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 4            | Owners               | Howrah Mills Co., Ltd.   | 435, Grand Trunk Road.             | 3 Warehouses and a batching house.    | 4,734             | 500                     | Ditto.              |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 5            | Owners               | Ditto.   | 227, ditto                         | 1 Screw-house and all the warehouses. | 4,160             | 500                     | 10th April 1886.    |          |
|              | Occupiers            | Ramkistopore Press Co., Ltd.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 6            | Owners               | Ghosery Cotton Mills Co., Ltd.   | 104, Old Ghosery Road.             | 4 Warehouses                          | 2,000             | 200                     | 17th ditto.         |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 7            | Owners               | Messrs. Anderson, Wright & Co., Agents for West's Patent Press Co., Ltd. | 7, Ooryahparah Lane.               | 6 Warehouses and 1 press-house.       | 5,360             | 600                     | 10th ditto.         |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 8            | Owners               | Nasmith's Patent Press Co., Ltd.   | 103, Old Ghosery Road.             | 1 Press-house and 5 warehouses.       | 11,000            | 1,200                   | 1st ditto.          |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 9            | Owners               | Gungannarain Chunder Harinuck Roy Foolchand.                             | 139, ditto                         | 2 Warehouses                          | 450               | 50                      | 30th ditto.         |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 10           | Owners               | Messrs. Harton & Co.   | 120, ditto                         | Portion of warehouses.                | 480               | 50                      | 1st May 1886.       |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 11           | Owners               | Gosery Jute Mills Chunda, Ramjee.  | 24, Joyabibi's Lane                | 1 Warehouse                           | 1,272             | 200                     | 5th ditto.          |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 12           | Owners               | East Indian Railway Co.  | Howrah Ghat Road                   | Portion of goods sheds.               | 1,200             | 200                     | 6th ditto.          |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 13           | Owners               | Koonj Lall   | 52, Howrah Road                    | 1 Warehouse                           | 150               | 50                      | 10th ditto.         |          |
|              | Occupiers            | Byjonath, Sorabjee.  |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 14           | Owners               | P. E. Guddar, Esq.   | Joyabibi's Lane                    | 3 Warehouses                          | 1,200             | 200                     | 1st April 1886.     |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 15           | Owners               | Mohuntjee and Joyramjee.   | Howrah Road                        | 1 Warehouse                           | 150               | 50                      | 19th August 1886.   |          |
|              | Occupiers            | Khurruck Mull Gofur Mull.  |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 16           | Owners               | Howrah Hydraulic Press Co., Ltd.   | 54, Rosemary Road                  | 4 Warehouses                          | 2,831             | 300                     | 25th ditto.         |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 17           | Owners               | Upendro Nath Mullick   | 146, Bhote Bagan Lane.             | 1 Warehouse                           | 49                | 50                      | 1st September 1886. |          |
|              | Occupiers            | Tran Nath Banerjee.  |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 18           | Owners               | Messrs. Apear & Co.  | 31, Rajnarain Roy Chowdhry's Ghat. | 2 Warehouses                          | 1,500             | 200                     | 18th June 1886.     |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 19           | Owners               | Modosuden Coondoo  | 9-1, Baboodanga Lane.              | 1 Warehouse                           | 120               | 50                      | 6th December 1886.  |          |
|              | Occupiers            | Poran Hazra Kirttybas Shamonto.  |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 20           | Owners               | Messrs. Ahmuty & Co.   | 36, Shalimar Road                  | 1 Ditto                               | 153               | 50                      | 18th January 1887.  |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
| 21           | Owners               | Sobul Chunder Mullick  | Bishop's College Road.             | 1 Ditto                               | 180               | 50                      | 27th ditto.         |          |
|              | Occupiers            | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Licenses             | Ditto.   |                                    |                                       |                   |                         |                     |          |
|              | Total                |  |                                    |                                       | .....             | 5,150                   |                     |          |

## APPENDIX II.

*Prosecutions under the Jute Warehouse Act IV of 1883 (B.C.) during the year 1886-87.*

| Sections of Act violated. | NATURE OF OFFENCE.                   | NO. OF PROSECUTIONS DURING THE YEAR.     |  |        | NO. OF PERSONS CONVICTED. |                        |                           | Amount of fines. | Average fine per case. | Maximum fine provided in Act. | REMARKS. |
|---------------------------|--------------------------------------|--|--|--------|---------------------------|------------------------|---------------------------|------------------|------------------------|-------------------------------|----------|
|                           |                                      | No. of cases pending from previous year. | No. of cases reported during the year. | Total. | No. of persons fined.     | No. of persons warned. | No. of persons acquitted. |                  |                        |                               |          |
| Section 11                | Using a warehouse without a license. | ...                                      | 2                                      | 2      | 1                         | ...                    | 1                         | Rs. 20           | .....                  | 500                           |          |

## APPENDIX III.

*Particulars of Fires during the year 1886-87.*

| No. | Date.         | Locality.                              | Duration of fire.                    | Approximate value of property destroyed. | Remarks showing nature of damage done, &c.   |
|-----|---------------|--|--------------------------------------|--|--|
|     | 1886.         |  |                                      | Rs.                                      |  |
| 1   | 12th April    | Kally Chowdry's Lane, Seebpur, Howrah. | 2 hours                              | 40                                       | 2 Thatched huts and a cow.   |
| 2   | 16th ..       | Tieciaparah, Howrah                    | Potty fires lasted for a short time. | 100                                      | 2 Tiled stables, one partially burnt, and a house.   |
| 3   | 18th ..       | Near Chunder Baboo's Bazar, Seebpore.  |                                      | 115                                      | 3 Golpatta houses.   |
| 4   | 18th ..       | Ghoosery Cotton Mills                  |                                      | 1,000                                    | 3,000 lbs. of cotton burnt.  |
| 5   | 9th May       | Tieciaparah, Howrah                    | Extinguished by the Mill people.     | 10                                       | 1 Tiled hut partially burnt.   |
| 6   | 20th July     | Howrah                                 | 25 minutes                           | 50                                       | 1 Thatched hut, 30 gallons of creosote and tar.  |
| 7   | 26th October  | Sulkeah                                | 1 hour                               | 60                                       | 1 Thatched hut.  |
| 8   | 25th November | Shibpore                               | 1 hour 45 minutes                    | 500                                      | 5 Ditto houses.  |
|     | 1887.         |  |                                      |  |  |
| 9   | 5th January   | Chowra Baste, Shibpore                 | 4 an hour                            | 10                                       | 1 Ditto hut partially.   |
| 10  | 12th ..       | Bajey Shibpore                         | 3½ hours                             | 200                                      | 2 Ditto huts and part of three huts.   |
| 11  | 13th ..       | Darogah Bagan, Sulkeah                 | 1½ hours                             | 700                                      | 1 Ditto hut, two cows, and a furniture shop.   |
| 12  | 2nd February  | Punchanuntolah, Grand Trunk Road.      | 8½ hours                             | 2,100                                    | 1 Tiled hut and a house containing 1,000 barrels of asphalt, 300 rosin, 200 portland cement and 200 cases whitening. |
| 13  | 10th February | Jangleparah                            | 1½ hours                             | 75                                       | 2 Huts and a thatched shed.  |
| 14  | 17th ..       | Shannahparah                           | 1½ hours                             | 10                                       | Part of a house.   |
| 15  | 28th ..       | Barooemarah                            | 45 minutes                           | 25                                       | 1 House.   |
| 16  | 9th March     | Khooroot Road                          | 1½ hours                             | 10                                       | 1 Thatched house.  |
| 17  | 16th ..       | Tieciaparah                            | 25 minutes                           | 50                                       | Ditto.   |
| 18  | 23rd ..       | Santrah Ghat                           | 1 hour 45 minutes                    | 200                                      | 2 Thatched houses.   |

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 5th November 1887.

| No.                | District and date of return. | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|--------------------|------------------------------|---------------------------------------|---|
| BENGAL.            |                              |                                       |   |
| Western Districts. |                              |                                       |   |
| BARDWAN DIV.       | 1 Burdwan, Nov. 5, '87       | Nil                                   | Weather—cloudy for the greater part of week, now bright and cool. <i>Amun</i> rice prospects improved by rain in Cutwa, where they have hitherto been worst. Prospects fair elsewhere, but more rain wanted. Prices of rice slightly higher in Raueegunge, stationary in Culna, and lower elsewhere. Fever prevalent. |
|                    | Culna ...                    | 0.09                                  |   |
|                    | Cutwa ...                    | 0.90                                  |   |
|                    | Raueegunge ...               | Nil                                   |   |
|                    | 2 Bankoora .. 5, '87         | Nil                                   |   |
| PRESIDENCY DIV.    | 3 Beerbhoom .. 5, '87        | Nil                                   | Cold weather has set in. Prospects of winter crops continue unfavourable. <i>Rubbi</i> sowings are nearly finished. Prices continue stationary. Public health good.   |
|                    | 4 Midnapur .. 5, '87         | 0.14                                  |   |
|                    | 5 Hooghly .. 5, ..           | Nil                                   |   |
|                    | Howrah .. 7, '87             | 0.07                                  |   |
|                    |                              |                                       |   |
| Central Districts. |                              |                                       |   |
| PRESIDENCY DIV.    | 6 24-M'ergsha. Nov. 8, '87   | 0.31                                  | Weather—clear and cool. A slight fall of rain this week. <i>Amun</i> expected to be a 12-anna crop for the district. Lands being ploughed for cold-weather crops. Public health generally good.   |
|                    | 7 Nuddea .. 5, ..            | Nil                                   |   |
|                    | 8 Khoolna .. 5, '87          | 0.31                                  |   |
|                    | 9 Jessore .. 5, ..           | 0.13                                  |   |
|                    | Jhenidah ...                 | 0.88                                  |   |
| RAJSHAHY DIV.      | 10 Moorshedabad .. 5, '87    | Nil                                   | Weather—cool and cloudy. <i>Amun</i> being harvested in some places. Prospects good. Sowing of winter crops going on. Fever still continues in the Jhenidah sub-division and cholera reported from the Magurah station.   |
|                    | Kandi ...                    | 0.03                                  |   |
|                    |                              | 0.06                                  |   |
|                    |                              | Nil                                   |   |
|                    |                              | 0.18                                  |   |
| DACA DIVISION.     | 11 Dinagepur .. 5, '87       | Nil                                   | Weather—seasonable. Standing crops doing well. <i>Haimanti</i> paddy good. Rice 20 to 24 seers per rupee. Public health fair.   |
|                    | 12 Rajshahye .. 5, '87       | Nil                                   |   |
|                    | Nattore ...                  | 0.30                                  |   |
|                    | 13 Rungpur .. 5, '87         | Nil                                   |   |
|                    | 14 Bogra .. 5, '87           | Nil                                   |   |
| DACA DIVISION.     | 15 Pubna .. 5, '87           | Nil                                   | Weather—fine and cool. State of <i>amun</i> crop satisfactory. Cold-weather crops being sown. Public health fair. Prices falling.   |
|                    | Serajgunj ...                | 0.09                                  |   |
|                    | 16 Darjeeling .. 5, '87      | Nil                                   |   |
|                    | 17 Julpigoree .. 5, ..       | Nil                                   |   |
|                    |                              |                                       |   |
| Eastern Districts. |                              |                                       |   |
| DACA DIVISION.     | 18 Dacca, Nov. 5, '87        | 1.11                                  | Weather—getting cool. Prospects of crops good. Winter crops being sown. Public health good.   |
|                    | Manickgunge ...              | 0.79                                  |   |
|                    | Munshigunge ...              | 1.25                                  |   |
|                    | Naraingunge ...              | 1.3                                   |   |
|                    | 19 Furreedpur .. 5, '87      | 0.25                                  |   |
| DACA DIVISION.     | 20 Goalundo .. 4, '87        | 0.15                                  | Weather—seasonable. Condition and prospects of crops on ground satisfactory. Winter crops being sown in the Goalundo sub-division. Public health fair; but some fever prevalent.  |
|                    | Madaripur ...                | 0.73                                  |   |
|                    | 21 Backergunge .. 4, '87     | 4.74                                  |   |
|                    | Mymensingh .. 4, '87         | 0.15                                  |   |
|                    | Kishoregunge ..              | 0.47                                  |   |



| No                                 | District and date of return.  | Rainfall at Sudder Station in inches | Character of the weather, state and prospects of the crops, and state of health at date   |
|------------------------------------|-------------------------------|--------------------------------------|---|
| <b>ENGAL—contd.</b>                |                               |                                      |   |
| <i>Eastern Districts—contd.</i>    |                               |                                      |   |
| 22                                 | Chittagong, Nov. 8, '87       | 4.29                                 | Weather—seasonable. Prospects of crops fair. Cholera still reported; public health otherwise good. Prices stationary.   |
| 23                                 | Noakholly „ 4, „              | 5.15                                 | Weather—rainy. This week's rainfall will do much good to <i>aman</i> crop. Public health fair.  |
| 24                                 | Foni „ „                      | 2.74                                 |   |
| 25                                 | Tipperah „ 3, „               | 0.85                                 | Weather—getting cool and seasonable. Prospects of crops satisfactory. Some rain has fallen and has done much good to paddy on high lands.   |
| 26                                 | Chandpur „ „                  | 0.40                                 |   |
| 27                                 | Chittagong Hill Tracts „ 1, „ | 0.50                                 | Weather—cloudy with drizzling rain in the latter part of the week. Rain has damaged cotton to some extent, but has improved the condition of plough-paddy and other cold-weather crops.   |
| 28                                 | Hill Tipperah „ 2, „          | 0.50                                 | Weather getting cold. Prospects of rice crop improved by rain. Cotton crop ripening; sufficient return expected. Sugarcane doing well. Public health good.  |
| <b>CHAR.</b>                       |                               |                                      |   |
| 26                                 | Patna „ 5, '87                | Nil                                  | Weather—clear and cool. Sowing of <i>rubbi</i> still going on. <i>Rahar</i> , cotton, wheat, barley and gram doing well. Poppy sowing also progressing. Public health good.   |
| 27                                 | Gya „ 5, „                    | Nil                                  | Weather—fair. Paddy has suffered to a large extent for want of rain. <i>Rubbi</i> is still being sown. Sowing of poppy has just commenced. Fever is still reported. Cholera reported from one or two thanas only.   |
| 28                                 | Shahabad „ 5, „               | Nil                                  | Weather—seasonable. Paddy crop doing well; in places it is coming into ear. <i>Rubbi</i> is still being sown. Prospects continue satisfactory. Public health generally good; some cholera reported from Sasseram.   |
| 29                                 | Durbhunga „ 5, „              | Nil                                  | Weather—getting cool. Prospects of <i>aghani</i> rice continue very favourable. <i>Rubbi</i> sowings are in progress. Tobacco looks promising. Prices remain stationary. Public health generally good.  |
| 30                                 | Mozufferpur „ 5, „            | Nil                                  | Weather—fine and rainless. Much of the rice has come into ear. <i>Rubbi</i> crops are mostly above ground. Prospects good. Fever rather prevalent.  |
| 31                                 | Saran „ 5, „                  | Nil                                  | Weather—fair. Mornings and evenings cool, days still warm for the time of the year. <i>Aghani</i> paddy in ear. <i>Rubbi</i> sowings almost completed; early sowings coming on well. Poppy sowings going on. Prospects of crops continue favourable. Public health on the whole good.                     |
| 32                                 | Chumparun „ 5, „              | Nil                                  | Weather—mornings and evenings pleasantly cool. Prospects of crops favourable. Sowing of <i>rubbi</i> crops is being pushed on. Paddy in ear. Fever prevalent to a small extent; public health otherwise good.   |
| 33                                 | Mouhays „ 5, „                | Nil                                  | Weather—fine and seasonable. <i>Rubbi</i> sowings still going on, and whatever has germinated looks well. Prospects of winter rice continue favourable. Public health generally good. Prices stationary.  |
| 34                                 | Bangulour „ 5, „              | Nil                                  | Weather—seasonable. <i>Rubbi</i> sowings going on steadily. Prospects of late rice very fair generally. About two annas of the crop in the Banka sub-division have suffered from a disease called <i>chickori</i> .   |
| 35                                 | Purneah „ 5, „                | Nil                                  | Weather—cool. Prospects of crops good.  |
| 36                                 | Maidan „ 5, „                 | Nil                                  | Weather—seasonable. Prospects of crops favourable. Fever still prevalent. Common rice selling at an average of 23 seers per rupee.  |
| 37                                 | Sonthal Pergas „ 5, „         | Nil                                  | Weather—clear. Mornings and evenings cool, but days still hot. Paddy will be about an average crop. Other crops doing well. Fever at Rajmahal; otherwise public health fair.  |
| <b>ISSA.</b>                       |                               |                                      |   |
| 38                                 | Cuttack „ 4, „                | Nil                                  | Weather—cloudy with slight rain. <i>Sarat</i> flowering. Rainfall of last week much benefited the crop. <i>Laghu sarad</i> is being cut. Common rice sells at 18½ seers per rupee in town. Fever prevails; public health otherwise good.  |
| 39                                 | Pooree „ 3, „                 | 1.95                                 | Weather—steady. Rain for three days. Late <i>sarat</i> in ear. <i>Laghu sarad</i> ripening. Prospects of crops in the Chilka tracts and Gopbhumna are bad. Common rice 20 seers 2 chittacks per rupee in the Sudder sub-division and 20 seers 3 chittacks in the Khordh sub-division. Public health good. |
| 40                                 | Balasore „ 4, „               | Nil                                  | Weather—cloudy. Early <i>sarat</i> rice ripening. Late <i>sarat</i> in ear. Slight rain has fallen throughout the district, but has not been sufficient for late <i>sarat</i> in some places. A few cases of fever still reported, public health otherwise good.  |
| <b>OTA NAGPORE.</b>                |                               |                                      |   |
| <i>South-West Frontier Agency.</i> |                               |                                      |   |
| 41                                 | Hazariwagh, Nov. 4, '87       | Nil                                  | Weather—seasonable; getting cold. Winter rice expected to average 10 to 12 annas. <i>Rubbi</i> being sown and has germinated in parts. Public health good.  |
| 42                                 | Lohardugga „ 5, „             | Nil                                  | Weather—cool and fair. No rain during the week. Prospects of winter paddy not favourable. <i>Rubbi</i> is being sown. Prices falling. General health good.  |
| 43                                 | Singhoom „ 4, „               | Nil                                  | Weather—cloudy. Rain has been insufficient for the crops which are giving an outturn of 8 to 10 annas. Rice 24 seers per rupee. Rain wanted for the <i>rubbi</i> crops. Fever prevalent; health otherwise good.   |
| 44                                 | Manbhoom „ 5, „               | Nil                                  | Weather—cold, clear and bright. Cold weather has fairly begun. About a 6-anna rice crop may be expected all round, or perhaps a little more. Public health good.  |

Published for general information.

## PRICES-CURRENT (retail) of Food-gr.

| Number.            | DISTRICTS.    | WHEAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | KANGHI OR KAKUN,<br>ITALIAN MILLET.<br>(Setaria italica.) |                        |                                    | GRAM, CHANA,<br>CHHOLA, KADALAY,<br>OR SUNAGA.<br>(Cicer arietinum.) |                        |                                    |
|--------------------|---------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|---|------------------------|------------------------------------|--|------------------------|------------------------------------|
|                    |               | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return.   | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. |
|                    |               |                 |                        |                                    |                 |                        |                                    |                  |                        |                                    |   |                        |                                    |  |                        |                                    |
| BENGAL.            |               |                 |                        |                                    |                 |                        |                                    |                  |                        |                                    |   |                        |                                    |  |                        |                                    |
| Western Districts. |               |                 |                        |                                    |                 |                        |                                    |                  |                        |                                    |   |                        |                                    |  |                        |                                    |
| 1                  | Burdwan       | 16 0            | 16 2                   | 14 8                               | No sale         |                        |                                    | 15 0             | 16 14                  | 15 4                               | ...   | ...                    | ...                                | 23 8   | 25 8                   | 20 0                               |
| 2                  | Bankura       | 15 8            | 15 0                   | 19 0                               | 20 0            | 20 0                   | 21 0                               | 17 0             | 16 0                   | 23 0                               | ...   | ...                    | ...                                | 19 8   | 19 8                   | 18 12                              |
| 3                  | Peerbhoom     | 16 8            | 16 8                   | 20 0                               | ...             | ...                    | ...                                | 16 8             | 16 8                   | 18 0                               | ...   | ...                    | ...                                | 25 0   | 26 4                   | 23 8                               |
| 4                  | Midnapore     | 15 0            | 15 0                   | 18 0                               | ...             | ...                    | ...                                | 14 0             | 18 0                   | 15 0                               | ...   | ...                    | ...                                | 18 0   | 18 0                   | 17 0                               |
| 5                  | Hoochly       | 14 0            | 14 0                   | 6 0                                | ...             | ...                    | ...                                | 10 0             | 10 0                   | 10 0                               | ...   | ...                    | ...                                | 21 0   | 21 0                   | 19 0                               |
| 6                  | Howrah        | 15              | ...                    | 15 4                               | ...             | ...                    | ...                                | 13 2             | 13 0                   | 12 4                               | ...   | ...                    | ...                                | 22 0   | 22 12                  | 20 0                               |
| Central Districts. |               |                 |                        |                                    |                 |                        |                                    |                  |                        |                                    |   |                        |                                    |  |                        |                                    |
| 7                  | Calcutta      | 14 4            | 15 4                   | 15 0                               | 20 0            | 21 8                   | 21 4                               | 8 12             | 8 14                   | 9 14                               | 13 0  | 14 10                  | 18 4                               | 20 0   | 20 4                   | 19 4                               |
| 8                  | 24-Pergunnahs | 13 4            | 13 4                   | 14 8                               | 20 8            | 26 8                   | 32 8                               | 8 0              | 8 0                    | 8 0                                | ...   | ...                    | ...                                | 12 4   | 20 0                   | ...                                |
| 9                  | Nuddea        | 16 6            | 16 6                   | 15 12                              | 36 0            | 36 0                   | ...                                | 14 10            | 16 0                   | 14 12                              | ...   | ...                    | ...                                | 20 10  | 28 0                   | 22 14                              |
| 10                 | Khoolna       | ...             | ...                    | ...                                | ...             | ...                    | ...                                | 18 0             | 19 0                   | 15 8                               | ...   | ...                    | ...                                | 16 0   | 16 0                   | 16 0                               |
| 11                 | Jessore       | 11 6            | 12 8                   | 16 0                               | ...             | ...                    | ...                                | 16 0             | 16 4                   | 13 5 2                             | ...   | ...                    | ...                                | 20 0   | 26 8                   | 21 0                               |
| 12                 | Moorshedabad  | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...   | ...                    | ...                                | ...  | ...                    | ...                                |
| 13                 | Dinapore      | 16 0            | 15 4                   | 11 8                               | 23 0            | 24 0                   | 21 0                               | 18 0             | 16 0                   | 19 8 2                             | ...   | ...                    | ...                                | ...  | ...                    | ...                                |
| 14                 | Raichahye     | 18 0            | 17 4                   | 20 10                              | 45 0            | 45 0                   | 37 0                               | 16 8             | 16 10                  | 10 8 2                             | ...   | ...                    | ...                                | 24 8   | 25 0                   | 18 0                               |
| 15                 | Rungpore      | 17 2            | 15 12                  | 18 0                               | ...             | ...                    | ...                                | 14 4             | 14 8                   | 15 0 2                             | ...   | ...                    | ...                                | 28 2   | 28 2                   | 26 4                               |
| 16                 | Bogra         | 12 0            | 15 0                   | 15 0                               | ...             | ...                    | ...                                | 18 0             | 16 14                  | 15 0 2                             | ...   | ...                    | ...                                | 20 0   | 20 0                   | 17 8                               |
| 17                 | Panna         | 18 0            | 18 0                   | 20 0                               | ...             | ...                    | ...                                | 8 0              | 8 0                    | 8 0 2                              | ...   | ...                    | ...                                | 21 12  | 20 10                  | 15 12                              |
| 18                 | Darjeeling    | 9 0             | ...                    | 9 0                                | 13 0            | 13 0                   | 10 0                               | 6 0              | 6 0                    | 6 0 1                              | ...   | ...                    | ...                                | 27 0   | 27 12                  | 22 0                               |
| 19                 | Julporee      | 12 0            | 12 0                   | 12 8                               | 16 0            | 16 0                   | 20 0                               | 13 0             | 13 0                   | 12 0 2                             | ...   | ...                    | ...                                | 11 0   | 11 0                   | 11 0                               |
| Eastern Districts. |               |                 |                        |                                    |                 |                        |                                    |                  |                        |                                    |   |                        |                                    |  |                        |                                    |
| 20                 | Dacca         | 16 0            | 16 0                   | 14 8                               | 26 0            | 26 0                   | 17 0                               | 17 0             | 14 0                   | 20 0                               | ...   | ...                    | ...                                | 19 0   | 19 0                   | 18 0                               |
| 21                 | Barisal       | 14 0            | 14 0                   | 21 0                               | 24 0            | 24 0                   | 25 0                               | 18 0             | 19 0                   | 16 0 24                            | ...   | ...                    | ...                                | 22 0   | 22 0                   | 20 0                               |
| 22                 | Wackergunge   | ...             | ...                    | ...                                | ...             | ...                    | ...                                | 17 0             | 17 0                   | 13 4 20 0                          | ...   | ...                    | ...                                | ...  | ...                    | ...                                |
| 23                 | Mymensingh    | 13 4            | 13 0                   | 12 0                               | ...             | ...                    | ...                                | 13 0             | 13 4                   | 12 8 20 0                          | ...   | ...                    | ...                                | 18 0   | 18 0                   | 16 0                               |
| 24                 | ...           | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...   | ...                    | ...                                | 18 0   | 9 0                    | 17 8                               |

\* Return not received.

A In sub-divisions retail prices of salt per rupee were:—Culna 12 seers, Cutwa 13 seers, and Kane

B At Bishnupore retail price of salt 12 seers per rupee.

C At Rampore retail price of salt 12½ seers per rupee.

D At Tumlook retail price of salt 11 seers per rupee.

E In sub-divisions retail prices of salt per rupee were:—Serampore 12½ seers and Jehanabad 13½ seers.

F In sub-divisions retail prices of salt per rupee were:—Barrasat and Dum-Dum 12 seers, Basirhat 13 seers, Diamond Harbour

G In sub-divisions retail prices of salt per rupee were:—Moherpore and Chuadanga 12 seers, Ranghat 10½ seers.

H In sub-divisions retail prices of salt per rupee were:—Jhousidah and Narail 12 seers, Magurah 10½ seers, and Bongong 13 seers.

*Districts of Bengal during the Fortnight ending the 31st October 1887.*

|  |                        |                                       |  |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |                        |                                       |  |                    |  |  |  |  | DISTRICTS. |
|--|------------------------|---------------------------------------|--|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|---|------------------------|---------------------------------------|--|--------------------|--|--|--|--|------------|
| INDIAN-CORN OR<br>MAIZE<br>(Zea Mays.) |                        |                                       | ARHAR OR TUR.<br>CADJAN PEA:<br>(Cajanus indicus.) |                        |                                       | FIREWOOD.       |                        |                                       | SALT.           |                        |                                       | SALT.           |                        |                                       |   |                        |                                       |  |                    |  |  |  |  |            |
| Present return.                        | Next preceding return. | Corresponding return<br>of last year. | Present return.                                    | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return.                               | Next preceding return. | Corresponding return<br>of last year. |  |                    |  |  |  |  |            |
| BENGAL.                                |                        |                                       |  |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |                        |                                       |  | Western District   |  |  |  |  |            |
|  |                        |                                       |  |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |                        |                                       |  |                    |  |  |  |  |            |
| No sale                                |                        |                                       | 27 0   | 27 0                   | 25 8                                  | 120 0           | 120 0                  | 120 0                                 | A<br>13 12      | 13 12                  | 12 13                                 | 2 13            | 6 2                    | 13 6                                  | 3 1   | 9 9                    | Burdwan.                              |  |                    |  |  |  |  |            |
| 36 0                                   | 35 0                   | 37 0                                  | 19 0   | 19 0                   | 20 0                                  | 320 0           | 320 0                  | 240 0                                 | B<br>12 0       | 12 0                   | 11 11                                 | 3 3             | 0 3                    | 3 0                                   | 3 6   | 0 0                    | Bankoora.                             |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 15 0   | 15 4                   | 20 0                                  | 160 0           | 160 0                  | 160 0                                 | C<br>12 12      | 12 4                   | 12 12                                 | 3 0             | 0 3                    | 2 0                                   | 2 14  | 0 0                    | Beerbhoom.                            |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 13 0   | 13 0                   | 14 0                                  | 120 0           | 120 0                  | 155 0                                 | D<br>13 0       | 13 0                   | 13 8                                  | 3 0             | 0 3                    | 0 0                                   | 3 0   | 3 0                    | Midnapore.                            |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 13 0   | 13 0                   | 13 0                                  | 120 0           | 120 0                  | 120 0                                 | E<br>13 0       | 13 0                   | 13 0                                  | 2 14            | 0 2                    | 14 0                                  | 3 0   | 0 0                    | Hooghly.                              |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 14 0   | 14 4                   | 15 0                                  | 100 0           | 100 0                  | 90 0                                  | 12 13           | 12 13                  | 12 0                                  | 2 14            | 0 2                    | 14 0                                  | 3 2   | 0 0                    | Howrah.                               |  |                    |  |  |  |  |            |
|  |                        |                                       |  |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |                        |                                       |  | Central Districts. |  |  |  |  |            |
|  |                        |                                       |  |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |                        |                                       |  |                    |  |  |  |  |            |
| 24 0                                   | 23 14                  | 25 0                                  | 17 4   | 17 4                   | 18 0                                  | 80 0            | 80 0                   | 80 0                                  | 13 4            | 13 4                   | 13 0                                  | 2 12            | 0 2                    | 12 0                                  | 3 0   | 0 0                    | Calcutta.                             |  |                    |  |  |  |  |            |
| 20 0                                   | ...                    | 20 8                                  | 17 8   | 17 8                   | 19 8                                  | 90 0            | 90 0                   | 90 0                                  | F<br>12 4       | 12 8                   | 12 6                                  | 2 15            | 6 2                    | 15 0                                  | 3 0   | 0 0                    | 24-Pergunnahs.                        |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 17 12  | 20 0                   | 20 0                                  | ...             | ...                    | ...                                   | G<br>11 104     | 11 104                 | 11 104                                | 3 0             | 0 3                    | 0 0                                   | 3 4   | 0 0                    | Nuddea.                               |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | ...  | ...                    | ...                                   | 180 0           | 180 0                  | 180 0                                 | H<br>10 8       | 10 8                   | 10 8                                  | 3 12            | 0 3                    | 12 0                                  | 3 12  | 0 0                    | Khoolna.                              |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 20 0   | 20 0                   | 20 0                                  | 100 0           | 100 0                  | 110 0                                 | I<br>10 12      | 10 12                  | 10 12                                 | 3 2             | 0 3                    | 2 0                                   | 3 4   | 0 0                    | Jessore.                              |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | ...  | ...                    | ...                                   | ...             | ...                    | ...                                   | ...             | ...                    | ...                                   | ...             | ...                    | ...                                   | ...   | ...                    | Moorshedabad.                         |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | ...  | ...                    | ...                                   | 160 0           | 160 0                  | 160 0                                 | J<br>12 8       | 12 8                   | 12 0                                  | 3 2             | 0 3                    | 2 0                                   | 3 4   | 0 0                    | Dinapore.                             |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 17 4   | 16 6                   | 17 0                                  | 240 0           | 240 0                  | 240 0                                 | K<br>12 0       | 12 0                   | 12 0                                  | 3 1             | 4 3                    | 1 4                                   | 3 0   | 0 0                    | Rajshahya.                            |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 8 10   | 8 10                   | 11 8                                  | 120 0           | 120 0                  | 120 0                                 | L<br>12 4       | 10 5                   | 11 8                                  | 3 4             | 0 3                    | 8 0                                   | 3 8   | 0 0                    | Burkapore.                            |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | ...  | ...                    | ...                                   | 90 0            | 90 0                   | 90 0                                  | M<br>12 0       | 2 0                    | 10 10                                 | 3 4             | 0 3                    | 4 0                                   | 3 8   | 0 0                    | Bogra.                                |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 18 0   | 18 2                   | 18 12                                 | 200 0           | 200 0                  | 200 0                                 | N<br>12 0       | 12 0                   | 11 10                                 | 3 5             | 0 3                    | 5 0                                   | 3 5   | 3 3                    | Pabna.                                |  |                    |  |  |  |  |            |
| 24 0                                   | 24 0                   | 24 0                                  | 8 0  | 8 0                    | 7 0                                   | 120 0           | 120 0                  | 120 0                                 | O<br>9 0        | 9 0                    | 9 0                                   | 4 4             | 0 4                    | 4 0                                   | 4 6   | 0 0                    | Darjeeling.                           |  |                    |  |  |  |  |            |
| 25 0                                   | 25 0                   | ...                                   | 11 0   | 11 0                   | ...                                   | 128 0           | 128 0                  | 128 0                                 | P<br>12 0       | 12 0                   | 11 8                                  | 3 4             | 0 3                    | 4 0                                   | 3 4   | 0 0                    | Julpigore.                            |  |                    |  |  |  |  |            |
|  |                        |                                       |  |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |                        |                                       |  | Eastern Districts. |  |  |  |  |            |
|  |                        |                                       |  |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |                        |                                       |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 18 8   | 18 0                   | ...                                   | 120 0           | 120 0                  | 120 0                                 | Q<br>12 8       | 12 8                   | 10 8                                  | 3 3             | 0 3                    | 3 0                                   | 3 8   | 0 0                    | Dacca.                                |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 20 0   | 20 0                   | 14 0                                  | 160 0           | 160 0                  | 120 0                                 | R<br>12 0       | 12 0                   | 12 0                                  | 3 1             | 0 3                    | 1 0                                   | 3 2   | 0 0                    | Furcepore.                            |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 19 0   | 12 0                   | 13 4                                  | 120 0           | 120 0                  | 120 0                                 | S<br>12 8       | 12 8                   | 12 0                                  | 3 2             | 0 3                    | 2 0                                   | 3 5   | 0 0                    | Backergunge.                          |  |                    |  |  |  |  |            |
| ...                                    | ...                    | ...                                   | 20 0   | 20 0                   | 17 0                                  | ...             | ...                    | ...                                   | T<br>12 0       | 12 4                   | 11 4                                  | 3 4             | 0 3                    | 4 0                                   | 3 7   | 0 0                    | Wymonsing.                            |  |                    |  |  |  |  |            |

I In Nattore and Nowgong sub-divisions retail price of salt 12 seers per rupee.

J In sub-divisions retail prices of salt per rupee were:—Gaibanda 9½ seers, Kurigram 10½ seers, and Nilphamari 13 seers.

K At Siliguri retail price of salt 11½ seers per rupee.

L At Fallacotta in the Alipore sub-division retail price of salt 10 seers per rupee.

M In sub-divisions retail prices of salt per rupee were:—Manickganje 11 seers, Moonsheegunge 10½ seers and Naraingunge 12½ seers.

N In sub-divisions retail prices of salt per rupee were:—Gosaindo 13 seers and Mataripore 12½ seers.

O In sub-divisions retail prices of salt per rupee were:—Patankhali 9½ seers, Patorepore 11 seers and Bhola 10½ seers.

P In sub-divisions retail prices of salt per rupee were:—Kishoreganje 12½ seers, Attea 13 seers, Jamalpore 10½ seers, Sherpore 10 seers, and Netrokona 10 seers.

## PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

| Number.   | DISTRICTS.                               | QUANTITIES PER RUPEE IN |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
|---|--|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|---------------------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|   |  | WHEAT.                  |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR GHOLU.<br>(Sorghum Vulgare.) |                        |                                    |                 |                        |                                    |
|   |  | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                       | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|   |  |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
| Eastern Districts—concluded.                    |  |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
| 22  | Chittagong ...                           | 14 0                    | 14 0                   | 16 0                               | ...             | ...                    | ...                                | 14 8             | 13 8                   | 9 0                                | 22 0            | 21 0                   | 18 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 23  | Noakholly ...                            | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 20 0             | 19 0                   | 15 0                               | 22 0            | 21 0                   | 18 8                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 24  | Tipperah ...                             | 13 5                    | 13 4                   | 12 8                               | ...             | ...                    | ...                                | 15 8             | 18 13                  | 13 5                               | 26 3            | 22 1                   | 17 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 25  | Chittagong Hill Tract, Hill Tipperah ... | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 13 13            | 12 4                   | 8 14                               | 14 8½           | 13 5                   | 11 6                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
|   |  | 12 0                    | 12 0                   | 12 0                               | ...             | ...                    | ...                                | 12 0             | 12 0                   | 10 0                               | 20 0            | 18 0                   | 13 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| BEHAR.  |  |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
| 26  | Patna ...                                | 22 0                    | 22 0                   | 21 0                               | 31 8            | 31 0                   | 31 0                               | 11 8             | 11 8                   | 11 8                               | 23 0            | 22 0                   | 21 8                               | 26 0                                  | 26 0                   | 26 0                               | ...             | ...                    | ...                                |
| 27  | Gya ...                                  | 16 0                    | 16 0                   | 18 8                               | 29 0            | 27 0                   | 25 0                               | 10 0             | 9 8                    | 9 0                                | 17 0            | 17 0                   | 17 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 28  | Shahabad ...                             | 16 0                    | 16 8                   | 18 0                               | 20 0            | 26 0                   | 30 0                               | 9 0              | 9 0                    | 8 0                                | 16 0            | 16 0                   | 20 0                               | 27 0                                  | 25 0                   | ...                                | ...             | ...                    | ...                                |
| 29  | Durbhanga ...                            | 19 0                    | 22 0                   | 16 8                               | 38 0            | 39 0                   | 23 0                               | 14 0             | 14 4                   | 13 0                               | 17 0            | 18 10                  | 18 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 30  | Mounseerpore ...                         | 22 0                    | 22 0                   | 20 0                               | 35 0            | 35 0                   | 29 0                               | 13 0             | 12 0                   | 11 0                               | 23 0            | 22 0                   | 20 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 31  | Saran ...                                | 17 0                    | 17 0                   | 18 0                               | 29 0            | 29 0                   | 30 0                               | 9 0              | 9 0                    | 8 0                                | 21 0            | 21 0                   | 19 8                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 32  | Chumpanu ...                             | 18 0                    | 18 0                   | 20 0                               | 39 0            | 40 0                   | 30 0                               | 8 0              | 8 0                    | 10 0                               | 18 0            | 16 0                   | 16 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 33  | Monghyr ...                              | 21 0                    | 23 1                   | 21 0                               | 42 0            | 42 0                   | 33 0                               | 14 2             | 13 15                  | 14 12                              | 17 4            | 17 13                  | 16 13                              | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 34  | Bhagulpore ...                           | 19 4                    | 20 3                   | 18 15                              | 31 0            | 31 0                   | 22 11                              | 16 6             | 17 0                   | 17 11                              | 21 7            | 20 3                   | 21 7                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 35  | Purneah ...                              | 22 0                    | 22 0                   | 16 0                               | ...             | ...                    | ...                                | 14 0             | 16 0                   | 17 0                               | 20 0            | 20 0                   | 20 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 36  | Maldah ...                               | 20 0                    | 20 0                   | 16 8                               | ...             | ...                    | ...                                | 14 0             | 14 0                   | 16 0                               | 26 0            | 26 0                   | 23 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 37  | Southal Peralia ...                      | 14 0                    | 16 0                   | 16 0                               | ...             | ...                    | ...                                | 16 0             | 16 0                   | 16 0                               | 22 0            | 22 0                   | 24 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| ORISSA.   |  |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
| 38  | Cuttack ...                              | 15 12                   | 16 6                   | 17 1                               | ...             | ...                    | ...                                | 10 8             | 10 8                   | 10 8                               | 18 6            | 18 6                   | 19 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 39  | Pooree ...                               | 11 13                   | 13 2                   | 13 2                               | ...             | ...                    | ...                                | 11 13            | 11 13                  | 16 12                              | 18 6            | 18 6                   | 19 11                              | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 40  | Balasore ...                             | 12 8                    | 12 3                   | 14 0                               | 13 0            | 13 0                   | 13 0                               | 14 0             | 14 0                   | 18 0                               | 27 0            | 27 0                   | 24 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| CHOTA NAGPORE<br>South-Western Frontier Agency. |  |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |                 |                        |                                    |
| 41  | Hazarebagh ...                           | 18 0                    | 17 0                   | 16 0                               | 23 0            | 24 0                   | 18 0                               | 10 0             | 9 0                    | 11 0                               | 19 0            | 20 0                   | 20 0                               | Not procurable.                       |                        |                                    |                 |                        |                                    |
| 42  | Lohardugga ...                           | 22 0                    | 22 0                   | 24 0                               | 21 0            | 22 0                   | 18 0                               | 16 0             | 16 0                   | 21 (new)                           | 20 0 (new)      | 24 0 (new)             | 32 0 (new)                         | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 43  | Singbhoon ...                            | 20 0                    | 20 0                   | 24 0                               | 32 0            | 32 0                   | 24 0                               | 16 0             | 16 0                   | 28 0                               | 20 0            | 20 0                   | 32 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |
| 44  | Mauibhoon ...                            | 16 0                    | 18 0                   | 16 0                               | ...             | ...                    | ...                                | 16 0             | 16 0                   | 16 0                               | 21 0            | 23 0                   | 23 0                               | ...                                   | ...                    | ...                                | ...             | ...                    | ...                                |

Q At Cox's Bazar retail price of salt 8 seers per rupee.

R At hand-pore retail price of salt 11½ seers per rupee.

S In sub-divisions retail prices of salt per rupee were:—Sasseram 12 seers, Buxar 12½ seers, and Bhabuah 11 seers.

T In sub-divisions retail prices of salt per rupee were:—Tajpore 12 seers and Madhubani 11 seers.

U In sub-divisions retail prices of salt per rupee were:—Majpore 12½ seers and Seetamarhi 10 seers.

V In sub-divisions retail prices of salt per rupee were:—Bawan 11½ seers and Giopalgunge 12½ seers.

Published for general information.

CALCUTTA,  
The 8th November 1887.

## Districts of Bengal during the Fortnight ending 31st October 1887—(concluded.)

|   |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |  |  | DISTRICTS. |
|---|------------------------|---------------------------------------|---|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|---|--|--|------------|
| INDIAN CORN OR<br>MAIZE.<br>(Zea Mays.) |                        |                                       | ARHAR OR THUR.<br>CADJAN PEA.<br>(Cajanus indicus.) |                        |                                       | FIRKWOOD.       |                        |                                       | SALT.           |                        |                                       | SALT.           |                        |                                       |   |  |  |            |
| Present return.                         | Next preceding return. | Corresponding return<br>of last year. | Present return.                                     | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. |   |  |  |            |
| S. Ch.                                  | S. Ch.                 | N. Ch.                                | S. Ch.  | S. Ch.                 | S. Ch.                                | S. Ch.          | S. Ch.                 | S. Ch.                                | S. Ch.          | S. Ch.                 | S. Ch.                                | Rs. A. P.       | Rs. A. P.              | Rs. A. P.                             |   |  |  |            |
| ...                                     | ...                    | ...                                   | 11 0  | 11 0                   | 12 0                                  | 75              | 75 0                   | 75 0                                  | 1 0             | 0 0                    | 12 0                                  | 3 4 0           | 4 6 0                  | 3 2 0                                 | Chittagong.                                   |  |  |            |
| ...                                     | ...                    | ...                                   | ...   | ...                    | ...                                   | ...             | ...                    | ...                                   | 10 0            | 10 0                   | 9 0                                   | 3 8 0           | 3 8 0                  | 4 4 0                                 | Noakhally.                                    |  |  |            |
| ...                                     | ...                    | ...                                   | 9 10  | 10 2                   | 9 11                                  | ...             | ...                    | ...                                   | 12 0            | 12 0                   | 11 8                                  | 3 3 0           | 3 3 0                  | 3 8 0                                 | Tippurah.                                     |  |  |            |
| ...                                     | ...                    | ...                                   | ...   | ...                    | ...                                   | 320             | 0 320                  | 0 320                                 | 8 0             | 8 0                    | 8 0                                   | 4 8 0           | 4 8 0                  | 4 8 0                                 | Chittagong Hill<br>Tracts.                    |  |  |            |
| ...                                     | ...                    | ...                                   | 16 0  | 16 0                   | 16 0                                  | ...             | ...                    | ...                                   | 11 0            | 11 0                   | 11 0                                  | 3 4 0           | 3 4 0                  | 3 4 0                                 | Hill Tippurah.                                |  |  |            |
| Eastern Districts—concluded.            |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |  |  |            |
| BEHAR.                                  |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |  |  |            |
| 34 0                                    | 34 0                   | 32 0                                  | 36 0  | 36 0                   | 36 0                                  | 120             | 0 120                  | 110 0                                 | 11 12           | 11 12                  | 11 8                                  | 3 1 6           | 3 1 6                  | 3 1 6                                 | Patna.  |  |  |            |
| ...                                     | ...                    | ...                                   | 20 0  | 22 0                   | 24 0                                  | 130             | 0 150                  | 120 0                                 | 11 0            | 11 0                   | 11 0                                  | 3 5 0           | 3 5 0                  | 3 5 0                                 | Gya.  |  |  |            |
| ...                                     | ...                    | ...                                   | 16 0  | 16 0                   | 14 0                                  | 120             | 0 120                  | 160 0                                 | 12 8            | 12 8                   | 12 0                                  | 3 3 0           | 3 3 0                  | 3 5 0                                 | Shahabad.                                     |  |  |            |
| 33 0                                    | 30 12                  | 26 0                                  | 8 0   | 19 12                  | 21 0                                  | 176             | 0 176                  | 160 0                                 | 12 0            | 12 0                   | 11 8                                  | 3 0 0           | 3 0 0                  | 3 4 0                                 | Durbhanga.                                    |  |  |            |
| 35 0                                    | 33 0                   | 25 0                                  | 20 0  | 0 0                    | 21 4                                  | 1 0             | 0 120                  | 0 140                                 | 12 0            | 12 0                   | 12 0                                  | 3 4 0           | 3 4 0                  | 3 4 0                                 | Muzafferpore.                                 |  |  |            |
| 30 8                                    | 30 0                   | 27 0                                  | 3 0   | 23 0                   | 24 0                                  | 6               | 0 16                   | 0 140                                 | 12 0            | 12 0                   | 1 0                                   | 3 2 0           | 3 2 0                  | 3 6 0                                 | Saran.  |  |  |            |
| 40 0                                    | 35 0                   | 27 0                                  | 20 0  | 0 0                    | 23 0                                  | ...             | ...                    | ...                                   | 12 0            | 12 0                   | 10 0                                  | 3 4 0           | 3 4 0                  | 3 7 0                                 | Chumparan.                                    |  |  |            |
| 33 9                                    | 36 1                   | 43 0                                  | 22 0  | 22 0                   | 21 0                                  | 126             | 0 126                  | 0 126                                 | 12 0            | 13 9                   | 12 1                                  | 2 14 6          | 2 14 6                 | 3 4 0                                 | Monghyr.                                      |  |  |            |
| 32 3                                    | 31 9                   | 37 14                                 | 21 7  | 21 7                   | 21 7                                  | 164             | 0 51                   | 8 51                                  | 12 10           | 12 10                  | 12 0                                  | 3 3 0           | 3 0 0                  | 3 1 0                                 | Biage pore                                    |  |  |            |
| No sale.                                |                        |                                       | 20 0  | 18 0                   | ...                                   | 160             | 0 110                  | 0 128                                 | 11 0            | 10 8                   | 10 8                                  | ...             | 3 8 0                  | 3 10 0                                | Purneah.                                      |  |  |            |
| ...                                     | ...                    | ...                                   | ...   | ...                    | ...                                   | 120             | 120 0                  | 160 0                                 | 12 0            | 12 0                   | 11 8                                  | 3 4 0           | 3 4 0                  | 3 2 0                                 | Maloh.  |  |  |            |
| 45 0                                    | 42 8                   | 50 0                                  | 25 0  | 25 0                   | 18 0                                  | 200             | 0 100                  | 0 200                                 | 11 8            | 11 8                   | 12 0                                  | 3 4 6           | 3 4 6                  | 3 2 0                                 | Sonthal Pergah.                               |  |  |            |
| ORISSA.                                 |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |  |  |            |
| ...                                     | ...                    | ...                                   | 17 1  | 18 6                   | ...                                   | 80              | 0 80                   | 0 80                                  | 14 0            | 14 0                   | 14 0                                  | 2 12 0          | 2 12 0                 | 2 12 0                                | Cuttack.                                      |  |  |            |
| ...                                     | ...                    | ...                                   | 13 2  | 13 2                   | 16 12                                 | 70              | 0 70                   | 0 8                                   | 13 2            | 13 2                   | 14 7                                  | 2 12 0          | 2 12 0                 | 2 10 0                                | Poores.                                       |  |  |            |
| ...                                     | ...                    | ...                                   | 13 0  | 13 0                   | 13 0                                  | 160             | 0 160                  | 0 80                                  | 10 8            | 10 8                   | 10 0                                  | 3 4 0           | 3 4 0                  | 3 12 0                                | Balasore.                                     |  |  |            |
| CHOTA NAGPUR.                           |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |  |  |            |
| South-Western Frontier Agency.          |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       |                 |                        |                                       |   |  |  |            |
| 25 0                                    | 26 0                   | 10 0                                  | 21 0  | 20 0                   | 18 0                                  | 320             | 0 320                  | 0 220                                 | 10 0            | 10 0                   | 9 0                                   | 3 9 0           | 3 8 0                  | 4 4 0                                 | Hazaribagh.                                   |  |  |            |
| 40 0                                    | 46 0                   | 45 0                                  | 28 0  | 28 0                   | 20 0                                  | 120             | 0 120                  | 0 120                                 | 10 0            | 10 0                   | 9 0                                   | 3 12 0          | 3 12 0                 | 4 4 0                                 | Lohardugga.                                   |  |  |            |
| ...                                     | ...                    | ...                                   | 20 0  | 20 0                   | 21 0                                  | 32              | 0 320                  | 0 360                                 | 9 0             | 9 0                    | 9 0                                   | 4 0 0           | 4 0 0                  | 4 0 0                                 | Singbhoom.                                    |  |  |            |
| ...                                     | ...                    | ...                                   | 21 0  | 21 0                   | ...                                   | ...             | ...                    | ...                                   | 10 10           | 10 10                  | 10 10                                 | 3 6 0           | 3 6 0                  | 3 10 0                                | Manbhoom.                                     |  |  |            |

W In sub-divisions retail prices of salt per rupee were:—Begusrai 11 seers and Jamui 11½ seers.

X In sub-divisions retail prices of salt per rupee were:—Bansa and Mudnepoorah 12 seers and So pole 11 seers.

Y At Kishengunge and Rangunge retail price of salt 10 seers per rupee.

Z In sub-divisions retail prices of salt per rupee were:—Deoghur 13 seers, Godda 11 seers, and Pakour and Rajmehal 12 seers.

Z1 At Bhudruck retail price of salt 9½ seers per rupee.

Z2 At Kharagdih in the Giridih sub-division retail price of salt 12 seers per rupee.

Z3 At Govindpore retail price of salt 12 seers per rupee.

P. NOLAN,  
Secy. to the Govt. of Bengal.

PRICES-CURRENT (wholesale) of Food-grains, Firmwood, and Salt in the

| Number. | MARKS.          | WHEAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE.           |
|---------|-----------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|
|         |                 |                 |                        |                                    |                 |                        |                                    |                 |
|         |                 | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. |
|         |                 | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        |
| 1       | Calcutta ...    | 2 10 3          | 2 7 9                  | 2 8 3                              | 1 11 6          | 1 7 6                  | 1 11 0                             | 3 13 0          |
| 2       | Seragunge ...   | 1 12 0          | 1 14 0                 | 2 2 0                              | ...             | ...                    | ...                                | 3 0 0           |
| 3       | Dacca ...       | 2 6 0           | 2 6 0                  | 2 8 0                              | 1 8 0           | 1 8 0                  | 1 8 0                              | 2 6 0           |
| 4       | Naraingunge ... | ...             | ...                    | ...                                | ...             | ...                    | ...                                | 5 4 0           |
| 5       | Chittagunge ... | 2 12 0          | 2 10 0                 | 2 6 0                              | ...             | ...                    | ...                                | 2 12 0          |
| 6       | Patna ...       | 1 12 0          | 1 13 0                 | 1 12 0                             | 1 3 0           | 1 4 0                  | 1 2 6                              | 3 0 0           |
| 7       | Balasore ...    | 3 4 0           | 3 0 0                  | 2 8 0                              | 3 0 0           | 3 0 0                  | 3 0 0                              | 2 12 0          |
| 8       | Pooree ...      | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...             |
| 9       | Cuttack ...     | 2 5 0           | 2 4 0                  | 2 2 0                              | ...             | ...                    | ...                                | 3 10 0          |

| OF 40 SEERS.                                    |                        |                                    |   |                        |                                    |          |          |          |
|---|------------------------|------------------------------------|---|------------------------|------------------------------------|----------|----------|----------|
| MARUA OR RASI.<br>( <i>Eleusine Corocana.</i> ) |                        |                                    | KANGNI OR KAKUM<br>ITALIAN MILLET.<br>( <i>Setaria italica.</i> ) |                        |                                    |          |          |          |
| Present return.                                 | Next preceding return. | Corresponding return of last year. | Present return.   | Next preceding return. | Corresponding return of last year. |          |          |          |
| R. A. P.  | R. A. P.               | R. A. P.                           | R. A. P.  | R. A. P.               | R. A. P.                           | R. A. P. | R. A. P. | R. A. P. |
| ...   | ...                    | ...                                | 3 0 0   | 2 12 0                 | 2 0 0                              |          |          |          |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |          |          |          |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |          |          |          |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |          |          |          |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |          |          |          |
| 1 3 0   | 1 3 0                  | 1 6 0                              | 1 4 0   | 1 4 0                  | 1 14 0                             |          |          |          |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |          |          |          |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |          |          |          |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |          |          |          |

CALCUTTA,  
The 8th November 1887.

mentioned *Marts of Bengal during the fortnight ending 31st October 1887.*

| RAWA, CHHOLA,<br>AY OR SUKAGA.<br>( <i>Aristinum.</i> ) |                                       |                 | INDIAN-CORN OR MAIZE.<br>( <i>Zea Mays.</i> ) |                                       |                 | ARHAR OR THUR<br>( <i>CADJAN PRA.</i><br>( <i>Cajanus indicus.</i> ) |                                       |                 | FIREWOOD.              |                                       |                 | SALT.                  |                                       |              | MARTS. |
|---|---------------------------------------|-----------------|---|---------------------------------------|-----------------|--|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|--------------|--------|
| Next preceding return.                                  | Corresponding return<br>of last year. | Present return. | Next preceding return.                        | Corresponding return<br>of last year. | Present return. | Next preceding return.   | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. |              |        |
| R. A. P.  | R. A. P.                              | R. A. P.        | R. A. P.                                      | R. A. P.                              | R. A. P.        | R. A. P.   | R. A. P.                              | R. A. P.        | R. A. P.               | R. A. P.                              | R. A. P.        | R. A. P.               | R. A. P.                              | R. A. P.     |        |
| 1 10 6  | 1 13 0                                | 1 9 0           | 1 6 6   | 1 6 0                                 | 2 2 0           | 2 2 0  | 2 0 0                                 | 0 6 9           | 0 6 9                  | 0 6 9                                 | 2 12 0          | 2 12 0                 | 3 0 0                                 | Calcutta.    |        |
| 2 0 0   | 2 0 0                                 | ...             | ...   | ...                                   | ...             | ...  | ...                                   | ...             | ...                    | ...                                   | 3 0 0           | 3 2 0                  | 3 1 6                                 | Serejgunge.  |        |
| 2 0 0   | 2 3 0                                 | ...             | ...   | ...                                   | 2 0 0           | 2 0 0  | ...                                   | 0 6 0           | 0 5 0                  | 0 5 0                                 | 3 8 0           | 3 3 0                  | 3 8 0                                 | Dacca.       |        |
| 2 3 0   | 2 2 0                                 | ...             | ...   | ...                                   | 2 12 0          | 2 4 0  | 2 0 0                                 | 0 8 0           | 0 7 0                  | 0 6 0                                 | 2 14 0          | 3 1 0                  | 3 3 0                                 | Narainku ge. |        |
| 2 6 0   | 2 12 0                                | ...             | ...   | ...                                   | 3 8 0           | 3 4 0  | 3 4 0                                 | 0 8 0           | 0 8 0                  | 0 8 0                                 | 3 4 0           | 4 6 0                  | 3 2 0                                 | Chittagong.  |        |
| 1 4 0   | 1 4 6                                 | 1 2 0           | 1 2 0   | 1 3 6                                 | 1 7 0           | 1 7 0  | 1 6 0                                 | 0 5 0           | 0 5 0                  | 0 5 3                                 | 3 1 6           | 3 1 6                  | 3 1 6                                 | Patna.       |        |
| 2 6 0   | 2 8 0                                 | ...             | ...   | ...                                   | 3 0 0           | 3 0 0  | 3 0 0                                 | 0 4 6           | 0 4 6                  | 0 6 0                                 | 3 4 0           | 3 4 0                  | 3 13 0                                | Balasore.    |        |
| ...   | ...                                   | ...             | ...   | ...                                   | ...             | ...  | ...                                   | ...             | ...                    | ...                                   | 2 12 0          | 2 12 0                 | 2 10 0                                | Pooree.      |        |
| (Kakai)<br>2 2 0  | 2 0 0                                 | ...             | ...   | ...                                   | 2 2 0           | 2 2 0  | ...                                   | 0 8 0           | 0 8 0                  | 0 8 0                                 | 2 12 0          | 2 12 0                 | 2 12 0                                | Cuttack.     |        |

Published for general information.

P. NOLAN,  
Secy. to the Govt. of Bengal.

### STATEMENT SHOWING THE STOCKS OF RICE IN AND AROUND CALCUTTA.

| NAMES OF MARKS.  | STOCK IN HAND AS COMPARED OF—      |                                    |                                      |                                       |   |                                       |                                     |                                      |                                      |  |   |                                      |
|--|------------------------------------|------------------------------------|--------------------------------------|---------------------------------------|---|---------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|--|---|--------------------------------------|
|  | 1st week<br>of Nov. 1886.          | 1st week<br>of Dec. 1886.          | 1st week<br>of Jan. 1887.            | 1st week<br>of Feb. 1887.             | 1st week<br>of Mar. 1887.               | 1st week<br>of April 1887.            | 1st week<br>of May 1887.            | 1st week<br>of June 1887.            | 1st week<br>of July 1887.            | 1st week<br>of August 1887.            | 1st week<br>of Oct. 1887.               | 1st week<br>of Nov. 1887.            |
| Bellaghattha   | Mds. 3,81,000                      | Mds. 3,11,000                      | Mds. 2,80,000                        | Mds. 4,15,500                         | Mds. 4,75,000                           | Mds. 14,01,000                        | Mds. 12,67,000                      | Mds. 10,35,700                       | Mds. 7,61,000                        | Mds. 6,72,000                          | Mds. 5,13,000                           | Mds. 4,66,000                        |
| Ootledanga   | Mds. 56,500                        | Mds. 29,500                        | Mds. 47,500                          | Mds. 53,500                           | Mds. 61,300                             | Mds. 64,800                           | Mds. 42,800                         | Mds. 42,800                          | Mds. 73,200                          | Mds. 53,600                            | Mds. 66,100                             | Mds. 63,900                          |
| Chitpore, Golabaree, Coomer-<br>toor, Hathbala, and Gulp.<br>Ghat. | Mds. 6,26,100                      | Mds. 8,43,100                      | Mds. 7,75,900                        | Mds. 7,65,700                         | Mds. 5,82,700                           | Mds. 6,53,200                         | Mds. 6,16,800                       | Mds. 6,16,800                        | Mds. 8,85,000                        | Mds. 6,17,200                          | Mds. 6,14,500                           | Mds. 6,12,100                        |
| Pahuriaghattha, Posta, and<br>Jorabagan.                           | Mds. 5,700                         | Mds. 4,000                         | Mds. 6,000                           | Mds. 8,000                            | Mds. 4,000                              | Mds. 5,000                            | Mds. 3,000                          | Mds. 3,000                           | Mds. 3,000                           | Mds. 2,000                             | Mds. 3,000                              | Mds. 4,000                           |
| Tallypunge, Chittlab, Kidderpore,<br>and Moonshirunge.             | Mds. 1,15,800                      | Mds. 1,45,400                      | Mds. 1,43,800                        | Mds. 1,55,400                         | Mds. 1,39,300                           | Mds. 1,75,900                         | Mds. 1,28,900                       | Mds. 1,28,900                        | Mds. 1,11,700                        | Mds. 1,07,500                          | Mds. 1,09,500                           | Mds. 99,400                          |
| 21 Minor Bazaras (estimated) ...                                   | Mds. 2,40,000                      | Mds. 2,40,000                      | Mds. 2,40,000                        | Mds. 2,40,000                         | Mds. 2,10,000                           | Mds. 2,40,000                         | Mds. 2,40,000                       | Mds. 2,40,000                        | Mds. 2,40,000                        | Mds. 2,40,000                          | Mds. 2,40,000                           | Mds. 2,40,000                        |
| Other retail shops, 3,129 in<br>number (estimated).                | Mds. 2,50,000                      | Mds. 2,50,000                      | Mds. 2,50,000                        | Mds. 2,50,000                         | Mds. 2,50,000                           | Mds. 2,50,000                         | Mds. 2,50,000                       | Mds. 2,50,000                        | Mds. 2,50,000                        | Mds. 2,50,000                          | Mds. 2,50,000                           | Mds. 2,50,000                        |
| Boldrahatthy, Kowabunge,<br>Bhuddreer, and Chander-<br>seore.      | Mds. 28,114                        | Mds. 7,200                         | Mds. 5,000                           | Mds. 5,180                            | Mds. 5,213                              | Mds. 6,142                            | Mds. 8,775                          | Mds. 6,430                           | Mds. 6,430                           | Mds. 34,740                            | Mds. 51,322                             | Mds. 30,616                          |
| Total ...  | 17,02,914                          | 18,38,000                          | 17,37,480                            | 14,98,839                             | 17,55,743                               | 22,01,742                             | 20,49,648                           | 23,29,475                            | 20,50,130                            | 19,77,310                              | 17,95,302                               | 17,63,016                            |
| On Railway premises on both<br>sides of the river.                 | 11,604<br>(on 4th<br>Nov. 86.)     | 7,219<br>(on 4th<br>Dec. 86.)      | 91,900<br>(on 4th<br>Jan. 87.)       | 16,335<br>(on 2nd<br>Feb. 1887.)      | 17,883<br>(on 4th<br>Mar. 1887.)        | 9,883<br>(on 4th<br>April 1887.)      | 12,004<br>(on 4th<br>May 1887.)     | 9,484<br>(on 4th<br>June 1887.)      | 6,140<br>(on 4th<br>July 87.)        | 4,254<br>(on 4th<br>August 87.)        | 6,722<br>(On 4th<br>October 87.)        | 7,616<br>(on 4th<br>Nov. 1887.)      |
| On boats un-<br>loaded ...   | 25,219<br>(1st to 3rd<br>Nov. 86.) | 30,273<br>(2nd to 4th<br>Dec. 86.) | 76,833<br>(2nd to 4th<br>Jan. 1887.) | 8,461<br>(1st to 3rd<br>Feb. 1887.)   | 78,908<br>(1st to 3rd<br>Mar. 1887.)    | 14,532<br>(1st to 3rd<br>April 1887.) | 18,310<br>(1st to 3rd<br>May 1887.) | 14,532<br>(1st to 3rd<br>June 1887.) | 21,770<br>(1st to 3rd<br>July 1887.) | 79,999<br>(1st to 3rd<br>August 1887.) | 30,919<br>(1st to 3rd<br>October 1887.) | 23,645<br>(1st to 3rd<br>Nov. 1887.) |
| By Canal returns   | 24,381<br>(1st to 3rd<br>Nov. 86.) | 21,411<br>(3rd to 5th<br>Dec. 86.) | 76,213<br>(2nd to 4th<br>Jan. 1887.) | 151,101<br>(1st to 3rd<br>Feb. 1887.) | 1,77,009<br>(1st to 3rd<br>March 1887.) | 81,375<br>(1st to 3rd<br>April 1887.) | 30,235<br>(1st to 3rd<br>May 1887.) | 17,539<br>(1st to 3rd<br>June 1887.) | 21,701<br>(1st to 3rd<br>July 1887.) | 25,344<br>(1st to 3rd<br>August 1887.) | 52,329<br>(1st to 3rd<br>October 1887.) | 45,191<br>(1st to 3rd<br>Nov. 87.)   |
| Gross Total of Stocks ...  | 17,64,018                          | 18,97,507                          | 19,16,745                            | 21,41,359                             | 20,29,619                               | 30,47,837                             | 27,17,897                           | 28,74,350                            | 26,53,247                            | 20,51,918                              | 19,21,218                               | 19,12,468                            |
| Probable stock available for<br>exportation by sea.                | 74 lakhs                           | 84 lakhs                           | 84 lakhs                             | 11 lakhs                              | 94 lakhs                                | 20 lakhs                              | 164 lakhs                           | 134 lakhs                            | 104 lakhs                            | 104 lakhs                              | 84 lakhs                                | 8 lakhs                              |

STATISTICAL DEPARTMENT.

*The 7th November 1887.*

P. NOLAN,  
*Secretary to the Govt. of Kenya.*



Abstract of the results of Meteorological Observations taken at the Alipore Observatory in the month of October 1887.

|   | Inches. | Date.                                 | Hour. |
|---|---------|---------------------------------------|-------|
| The mean pressure of the month ...  | 29.878  |                                       |       |
| The average pressure of October from 24 years' registers ...  | 29.832  |                                       |       |
| The highest pressure in the month ...   | 30.021  | 27th                                  | 10h.  |
| The lowest pressure in the month ...  | 29.686  | 6th                                   | 16h.  |
| The range of pressure ...   | 0.335   |                                       |       |
| Hours.  |         |                                       |       |
| The total number of hours of bright sunshine during the month   | 223.9   |                                       |       |
| The maximum possible number of hours of sunshine ...  | 359.1   |                                       |       |
| °   |         |                                       |       |
| The mean temperature of the month ...   | 78.6    |                                       |       |
| The average temperature of October from 24 years' registers ...   | 81.5    |                                       |       |
| The highest temperature in the month ...  | 91.0    | 6th                                   |       |
| The lowest temperature in the month ...   | 63.2    | 27th                                  |       |
| The range of temperature during the month ...   | 27.8    |                                       |       |
| The mean daily range of temperature ...   | 12.7    |                                       |       |
| The greatest range of temperature in one day ...  | 17.7    | 28th                                  |       |
| Per cent.   |         |                                       |       |
| The mean humidity of the month ...  | 82      |                                       |       |
| The average humidity of October from 24 years' registers ...  | 79      |                                       |       |
| Inches.   |         |                                       |       |
| The mean vapour tension of the month ...  | 0.796   |                                       |       |
| The average vapour tension of October from 9 years' registers ...   | 0.854   |                                       |       |
| The mean cloud proportion of the month ...  | 4.15    |                                       |       |
| The average cloud proportion of October from 10 years' registers ...  | 4.28    |                                       |       |
| Inches.   |         |                                       |       |
| The total rainfall of the month ...   | 2.57    |                                       |       |
| The total rainfall indicated by a Beckley's self-registering rain-gauge (mouth of the gauge about 52 feet above the ground) | 2.35    |                                       |       |
| The average fall of October from 48 years' registers ...  | 5.61    |                                       |       |
| The greatest fall in 24 hours ...   | 1.35    | 7th                                   |       |
| Days.   |         |                                       |       |
| The number of rainy days in the month ...   | 6       |                                       |       |
| The average number of rainy days in October from 24 years' registers ...  | 10      |                                       |       |
| °   |         |                                       |       |
| The mean maximum equilibrium temperature of solar radiation during the month ...  | 142.2   |                                       |       |
| The mean difference of sun and air temperatures ...   | 56.8    |                                       |       |
| The greatest sun temperature ...  | 154.2   | 11th                                  |       |
| The greatest excess of sun over air temperature ...   | 68.1    | 11th                                  |       |
| The mean temperature of the nocturnal radiation thermometer on woollen cloth ...  | 67.3    |                                       |       |
| The mean depression of the nocturnal radiation thermometer below the minimum air temperature at 4 feet above the ground ... | 5.4     |                                       |       |
| The greatest depression of the nocturnal radiation thermometer below the minimum air temperature ...                        | 8.4     | 26th                                  |       |
| Miles.  |         |                                       |       |
| The mean movement of the wind per day ...   | 68.8    |                                       |       |
| The greatest movement of the wind in one day ...  | 128.0   | 14th                                  |       |
| The greatest movement of the wind in one hour ...   | 12.0    | 15th noon to 1, 1 to 2, & 2 to 3 P.M. |       |

The number of hours with winds from each of the 8 points—

N. 160, NE. 30. E. 77, SE. 55, S. 65, SW. 71, W. 78, NW. 134, Calm 74.

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park-street Observatory). The barometer is about 3 feet higher at Alipore, and, other things being equal, reads therefore .003 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently about 0.8° lower; and, finally, the thermometer which furnished the record of temperature at the Surveyor-General's Office during 20 years and upwards is found to read 0.6 higher than the Kew standard thermometer, which is the standard of reference at the present Observatory.

















al for the month of October 1887—concluded.

| 23  | 24  | 25  | 26   | 27  | 28  | 29  | 30  | 31  | Number of rainy days. | Average number of rainy days. | Total rainfall for the month. | Average rainfall for the month. | Haviest rainfall during the month. | Total rainfall from 1st January 1887 up to 31st Oct. 1887. | Average rainfall from 1st January up to 31st Oct. 1887. | Station.            | District.          | Metereological division. |
|-----|-----|-----|------|-----|-----|-----|-----|-----|-----------------------|-------------------------------|-------------------------------|---------------------------------|------------------------------------|--|---|---------------------|--------------------|--------------------------|
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 4.1                           | 4.74                          | 3.32                            | 2.48                               | 36.48  | 33.54   | Buxar               | Shahabad           | SOUTH BENGAL.            |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 2.5                           | 2.62                          | ?                               | 1.50                               | 40.41  | ?   | Dehree.             | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 3.4                           | 4.65                          | 3.28                            | 2.80                               | 42.12  | 42.20   | Bhubooh.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 4.8                           | 4.45                          | 3.07                            | 1.85                               | 37.46  | 41.74   | Sasaram.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 5.80                          | 3.02                            | 2.27                               | 43.10  | 44.05   | Arrah               | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 3.20                          | ?                               | 2.10                               | ?  | ?   | Mohaniah.           | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | 3.3                           | 0.98                          | 2.75                            | 0.02                               | 32.18  | 43.01   | Anrungaahad         | Gya                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 4.3                           | 0.73                          | 2.41                            | 0.54                               | 44.14  | 40.87   | Gya.                | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 5                     | 3.3                           | 1.67                          | 2.64                            | 1.00                               | 34.09  | 41.51   | Nowadah.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 3.9                           | 5.62                          | 3.55                            | 0.60                               | 18.83  | 42.12   | Jehanabad.          | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | ?                             | 4.06                          | ?                               | 3.05                               | 42.31  | ?   | Arrah.              | ...                | Patna.                   |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | ?                             | 2.40                          | ?                               | 1.20                               | 29.21  | ?   | Daudnagar.          | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 1                     | ?                             | 0.87                          | ?                               | 0.87                               | 38.00  | ?   | Sherrghati.         | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 0.20                          | ?                               | 0.10                               | ?  | ?   | Rajauli.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 1                     | ?                             | 0.60                          | ?                               | 0.60                               | 24.30  | ?   | Pakri Bara-wan.     | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 4.5                           | 3.20                          | 2.92                            | 0.98                               | 38.64  | 41.58   | Patna.              | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 3.7                           | 2.83                          | 3.15                            | 1.55                               | 40.27  | 42.18   | Dinapore.           | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 4.6                           | 1.16                          | 3.22                            | 0.68                               | 40.08  | 43.42   | Benar.              | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 3.6                           | 3.30                          | 3.30                            | 2.40                               | 38.81  | 41.40   | Barri.              | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | ?                             | 0.70                          | ?                               | 0.50                               | 41.35  | ?   | Hickram.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | ?                             | 3.38                          | ?                               | 1.87                               | 41.47  | ?   | Hilsa.              | ...                | Monghyr.                 |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 4.2                           | 2.51                          | 3.17                            | 1.40                               | 55.03  | 41.82   | Hogoonerai          | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 4.7                           | 3.64                          | 3.02                            | 3.00                               | 52.02  | 45.11   | Monghyr.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 3.9                           | 2.07                          | 2.61                            | 1.56                               | 45.36  | 44.70   | Janui.              | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 0.60                          | ?                               | 0.65                               | ?  | ?   | Gogri.              | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 1                     | ?                             | 2.05                          | ?                               | 2.05                               | 30.68  | ?   | Shoikpura.          | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 4.5                           | 1.28                          | 4.05                            | 0.62                               | 46.07  | 47.15   | Bhazulpore          | South Bhagal-pore. |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 4.4                           | 2.94                          | 3.48                            | 1.13                               | 43.85  | 45.77   | Banka.              | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 0.87                          | ?                               | 0.60                               | 46.73  | ?   | Kolgong.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 5                     | 4.6                           | 4.00                          | 3.20                            | 1.95                               | 61.69  | 55.86   | Rajmehal            | South Per-gunnahs. |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 4.2                           | 1.31                          | 3.07                            | 0.50                               | 55.74  | 47.60   | Gadda.              | ...                | CHUTTA NAGPUR            |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 7                     | 6.1                           | 6.30                          | 4.44                            | 2.05                               | 82.05  | 60.42   | Pakour.             | ...                |                          |
| ... | ... | ... | 0.04 | ... | ... | ... | ... | ... | 3                     | 6.9                           | 0.90                          | 4.02                            | 0.60                               | 49.8.  | 57.35   | Nya Doomka.         | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 6.6                           | 2.60                          | 4.52                            | 1.60                               | 52.32  | 52.75   | Dooghur             | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 5                     | 4.7                           | 2.29                          | 3.23                            | 0.74                               | 46.01  | 50.57   | Janitara            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | ?                     | ?                             | 1.73                          | ?                               | 0.82                               | 40.98  | ?   | Sinra.              | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | ?                             | ?                             | ?                               | ?                                  | ?  | ?   | Nanihat.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 6.0                           | 0.90                          | 3.16                            | 0.50                               | 43.48  | 50.24   | Pachanaha (Giradi). | Hazaribagh         |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 7.1                           | 2.49                          | 3.37                            | 1.26                               | 40.02  | 49.13   | Hazaribagh.         | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 5.6                           | 2.14                          | 3.10                            | 0.82                               | 42.20  | 48.92   | Semtagurah.         | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | 4.3                           | 1.10                          | 2.55                            | 0.80                               | ?  | 48.78   | Mahudi Hills.       | ...                | Lohardugga               |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | 5.8                           | 0.20                          | 3.60                            | 0.10                               | 50.00  | 64.18   | Jhoomrah Hill.      | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | ?                             | 1.16                          | ?                               | 0.50                               | 43.56  | ?   | Barhi.              | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | ?                             | 0.82                          | ?                               | 0.33                               | 51.64  | ?   | Chatra.             | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 1.30                          | ?                               | 1.10                               | 75.23  | ?   | Karagdeha.          | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | ?  | ?   | Kamyhar.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 6                     | ?                             | 1.39                          | ?                               | 0.48                               | 56.60  | ?   | Lohardugga          | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 3                     | 5.8                           | 1.63                          | 3.14                            | 0.75                               | 58.00  | 49.48   | Ranchi.             | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | 4.1                           | 2.19                          | 2.81                            | 0.80                               | 52.61  | 44.62   | Palamow.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 1.00                          | ?                               | 0.60                               | 44.26  | ?   | Silli.              | ...                | Singbhoom.               |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 1.24                          | ?                               | 1.15                               | 36.56  | ?   | Dalumal.            | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | ?                             | 4.79                          | ?                               | 2.85                               | 57.15  | ?   | Hoseinabad.         | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | ?                             | ?                               | ?                                  | ?  | ?   | Garwah.             | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | 6.8                           | 0.32                          | 3.09                            | 0.13                               | 52.28  | 54.95   | Chyobassa           | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 0.08                          | ?                               | 0.58                               | 30.66  | ?   | Chakradhar-pore.    | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 0.80                          | ?                               | 0.53                               | 58.70  | ?   | Ghalsila.           | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | ?                             | 1.08                          | ?                               | 1.16                               | 44.15  | ?   | Baharagura.         | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 6                     | 6.4                           | 2.88                          | 3.74                            | 2.04                               | 47.93  | 49.98   | Purulia             | ...                | Manbhoom.                |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 5                     | 5.5                           | 0.81                          | 4.17                            | 0.61                               | 32.32  | 45.45   | Gobindpore.         | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 6                     | ?                             | 2.08                          | ?                               | 0.70                               | 30.90  | ?   | Raghuwath-pore.     | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 4                     | ?                             | 1.27                          | ?                               | 0.60                               | 45.74  | ?   | Barraabhoom.        | ...                |                          |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | 2                     | ?                             | 1.06                          | ?                               | 0.76                               | ?  | ?   | Jhalda.             | ...                | Chas.                    |
| ... | ... | ... | ...  | ... | ... | ... | ... | ... | ?                     | ?                             | ?                             | ?                               | ?                                  | ?  | ?   | Chas.               | ...                |                          |

# SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS TAKEN IN ASSAM, FOR THE MONTH OF OCTOBER 1887.

OCTOBER is the month in which, as a rule, the south-west monsoon entirely retreats from the province of Bengal, and its place is taken by the north-east monsoon, which slowly and gradually establishes itself over the province. The south-west monsoon, in its gradual retreat southwards, is followed by the northerly wind current, and over the area of interaction light and variable winds prevail. At this interaction in normal years takes place for a portion of the month over Bengal, winds over the province are usually light and variable; but as the south-west monsoon retreats over the Bay, conditions become favourable for the formation of cyclonic storms, and it is in October that the largest and fiercest cyclones are formed, for during this month most of the conditions are favourable for their production on an extensive scale. These storms differ widely in different years in their nature and in their line of march, and they sometimes travel towards Bengal, and in other cases they cross the peninsula and pass into the Arabian Sea.

The general rainfall, due to the continuance of the south-west monsoon over Bengal, usually ceases during the first and second weeks in October, but even after this time local showers may fall. After the second week of October any rainfall which is brought up to Bengal is usually due to the formation and movement of cyclonic storms in the Bay, and it will evidently depend on the direction of their march and on the nature of such storms whether any rain at all is received in the latter half of October; and if any is received, the amounts will vary with the nature of the storm.

The rainfall of October in normal years is consequently due to two distinct causes, and as the second is, from its nature, an extremely variable and uncertain one, the average distribution of rainfall in October is decidedly more irregular than in the previous monsoon months, and also in any particular year its actual distribution may be of an extremely capricious character. The normal distribution of rainfall in October can therefore only be described with approximate accuracy. The average rainfall in Behar (with the exception of the Purneah and North Bhagulpore districts) and Centia Nagpur (excluding the districts bordering on South-West Bengal) varies from two and a half to four inches. The amount is least in the Gya district. Rainfall varies from four to six inches in the case of the previously excepted districts, the western districts of Orissa, and the whole of Bengal, excluding the Julpigore district, and a narrow strip extending along the coast and bounded on the north by a curved line running through Cuttack, Jajpore Diamond Harbour, Port Canning, Chandpore and Chittagong. Over this long narrow area, the width of which varies from 20 to 60 miles, the average rainfall exceeds six inches. It is absolutely greatest at False Point, and there equals 11·4 inches.

The principal features to be considered, therefore, in the meteorology of October, are the date of the gradual retreat of the south-west monsoon from the province, and the nature and the direction of movement of the cyclonic storms formed in the Bay.

*Meteorology of the month.*—It was noticed in the report for September that the south-west monsoon blowing over the province in that month had been weak, and that the current had diminished in strength more rapidly and much earlier than usual, and that from about the 27th of September the south-west monsoon winds had almost ceased to blow over Bengal.

At the commencement of October, therefore, the meteorological conditions over the province were distinctly those which mark the close of the rainy season in Bengal, and the commencement of the transition conditions which obtain up to the time of the complete setting in of the north-east monsoon of the cold-weather period. Dry, north-westerly winds were blowing over the greater part of the province, and in fact the only districts in which southerly and south-easterly winds still continued to blow were at the extreme easterly stations of East and North Bengal and in Assam. Humidity had become very low at the western stations, and cloud proportion had also become small, generally, over the whole province. Northerly and north-westerly winds were also blowing over a considerable part of the northern half of the Bay, though in the south a fairly strong south-west monsoon current still prevailed. These conditions continued practically unaltered during the first four or five days of the month, though at the eastern and northern stations wind directions changed somewhat, and became in many cases north-easterly. On the 5th and 6th winds became lighter and more variable in direction than they had hitherto been, and on the 7th a certain number of stations showed southerly winds, and there was evidence of a considerable amount of interaction taking place over the province, which caused conditions to become more favourable for rainfall. The greater part of the whole province during this period was practically rainless, except for a few local showers of little or no importance; but on the 7th rainfall was fairly general in the 24-Pergunnahs and Khoolna districts in South-West Bengal, while showers were more numerous over a considerable part of the remainder of the province. These disturbed conditions in South Bengal were probably induced by the formation of a small cyclonic storm in the south of the Bay, slight indications of which were shown on the 7th by a fairly complete cyclonic circulation over the centre and south of the Bay, and by the strengthening of the winds at Galle and Diamond Island. This storm afterwards developed slightly, and on the 8th it was approaching the Madras coast, which it crossed on the 9th, subsequently travelling across the entire peninsula and passing into the Arabian Sea. This storm will be described more at length under the head of cyclonic storms of the month.

This small storm gave heavy rain to the Madras coast as it passed over the land, and with the indraught towards the retreating storm, rather strong humid winds set in along the west coast of the Bay. From the reports received on the morning of the 10th, the area of heavy rainfall then appeared to extend along the coast from Gopalpore down to Madras, but on the following day the humid winds advanced somewhat in a northerly direction, and on the morning of the 11th the reports showed that the area of heavy rainfall had advanced to False Point, while the southern limit was Coconada. On the 12th the reports again showed that the moisture-laden current had advanced further northward, and the area of heavy rain extended from Saugor Island down to Coconada. The moist current having thus reached South Bengal, it then commenced to spread slowly over the interior of the province. The wind system blowing over Bengal became first strongly easterly, and then the northerly element gradually disappeared. On the 12th winds had become easterly and south-easterly over the greater part of the province, and by the close of the week scarcely any stations reported northerly winds.

The effect of the formation and movement of the cyclonic storm above described was therefore to cause the south-west monsoon winds to temporarily establish themselves over the whole of Bengal, and thus good general rain was again reported over the whole of the province. During the formation and advance of the storm, conditions in Bengal as usual became somewhat disturbed, and rain showers, more or less local, were reported from many districts, but the actual monsoon current came up later, and the heavy rainfall commenced in the Orissa Division from about the 10th; in South-West Bengal and Chutia Nagpur the general rain commenced on the 11th and 12th; and finally in East and North Bengal, and in Behar, the general heavy rainfall usually commenced on the 13th and 14th instant, and as a general rule the rainfall continued up to about the 15th or 16th of the month.

The meteorology of this period was therefore extremely important, probably more important to the province than any period since the commencement of the monsoon, for good general and rather heavy rainfall was given to the province at a period when it was extremely important and was most urgently needed.

On October 15th and 16th the moist south-easterly and easterly winds blowing over the province commenced to be driven back by a dry westerly and north-westerly current, and from the 17th light northerly winds blew over the whole province and rainfall practically ceased. Conditions therefore became settled, humidity, cloud proportion, and temperature decreased, and conditions were similar to those which usually usher in the cold weather season in Bengal. Winds were, however, rather light and irregular in direction at first, though cloud proportion and humidity were low and temperature was distinctly falling. On the 22nd winds became decidedly more northerly than they had been, and northerly winds were reported till nearly the close of the month. Temperature also began to fall rather rapidly, so that the mean temperature of the 23rd was at some of the western stations 4° and 5° below the normal. A further rather rapid fall of temperature took place later on, and in the observations reported on the 26th, the mean temperature was shown to be no less than 9·8° in defect of the normal at Berhampore and 8·8° below at Raneegunge. The defect exceeded 7° at Rampore Beaulah; at Burdwan, Dinapore, and Dhubri the defects exceeded 6°, and at Furr edpore and Rungpore they exceeded 5°. At the same time also humidity became decidedly low, and at 10 A.M. of the 15th, at Ranchi, the saturation of the air with moisture was only 23 per cent. and at Hazaribagh only 21 per cent. of the possible amount. The sky also became practically cloudless over the greater part of the province, except on the 26th, when it clouded over locally in parts of South-West and North Bengal, and a few local showers were reported on this day from the Burdwan, Bankoora, Beerbhoom, Moorshedabad, Rajshahye, Dinapore, and Rungpore districts. With the exception of these light local showers, the whole province was practically rainless during the period 21st to the 28th, which was thus characterized by the gradual establishment of the north-east monsoon conditions over the greater part of Bengal, accompanied by the continuance of comparatively high pressure, and with a decidedly rapid reduction of temperature; skies also cleared and humidity decreased.

But while these conditions gradually became established in Bengal, in the south of the Bay the south-west monsoon still continued to blow; rather heavy rain was received along the Madras coast, and strong winds and rather squally weather generally prevailed, and it was evident that a decided barometric depression or feeble cyclonic storm was forming in the south-west of the Bay. On October 29th a distinct barometric depression was situated off the south Madras coast; on the 30th it had moved in a northerly direction and was nearly opposite Madras; and on the 31st it had advanced towards the coast a little to the north of Madras, but in its advance towards the land it commenced to fill up, and at the same time became more diffused, giving unsettled conditions over the whole of the Bay. On the 31st therefore conditions commenced to change in Orissa and parts of South Bengal, skies clouded over rapidly and rainfall became general in Orissa, though only showers were reported in South Bengal.

The principal features of interest therefore in the month were the unusually early retreat of the south-west monsoon current from Bengal, and second, the formation of the two cyclonic storms in the Bay, the description of which, taken mainly from the weekly reports, is as follows:—

*Cyclonic storms of the month.*—Storm of October 8th to the 11th. At the commencement of the month northerly winds were generally blowing in Bengal, though in the centre and south of the Bay the south-west monsoon was still blowing, and on the 5th and 6th conditions became somewhat disturbed over this area as evidenced by the strengthening of the winds at Galle. On Friday, the 7th, in addition to moderately strong winds, which were blow-

ing at Galle and at Diamond Island, there was a well marked cyclonic circulation of winds over the centre and south of the Bay, though there was still no distinct evidence to show that any definite cyclonic storm had formed. On the 8th pressure fell slightly at Madras, though it was rising at all other stations in the south of the Bay; the cyclonic circulation of winds over this area became more strongly marked, and winds strengthened considerably, particularly at Diamond Island.

It was therefore evident that a small cyclonic storm had formed to the west of the centre of the Bay, and immediately on receipt of the 10 A.M. observations on this day, the following telegram was despatched to the Port Officers at Madras and Masulipatam, and to all the important coast stations as far north as Gopalpore—"Barometric depression formed west of centre of Bay, probably off Masulipatam and Madras coasts. It may develop, or may only bring heavy rain and squally weather to west coast. Please telegraph any important changes." The storm was on this day apparently not very far from the coast to the east of Madras, for it reached the land early on Sunday morning, the 9th instant, the centre crossing the coast probably at 7 or 8 A.M. about 30 to 40 miles to the north of Madras and between this station and Masulipatam, and at 10 A.M. of this day the centre was well inland and about this distance to the north-west of Madras. So far as the observations which have been received up to the present time show, the lowest pressure recorded at Madras by the Port Officer during the passage of the storm was about 29·4 inches. The storm was not a very violent one, though it gave strong winds or perhaps a gale of wind at Madras and as far north as Coconada and Vizagapatam. It also gave heavy rain along the coast, and Madras received 6·23 inches on the morning of the 9th.

As the storm was evidently crossing the Peninsula, the following telegram was sent off on receipt of the 10 A.M. observations of the 9th to the Meteorological Reporter to the Government of Bombay to the following effect:—"Small cyclonic storm crossed coast near Madras; movement westerly," and the Port Officers at the stations previously named, except Madras, were informed that the storm was passing inland north of Madras.

The storm then travelled slowly in a north-westerly or west-north-westerly direction, and on the morning of the 10th it had almost crossed the peninsula, and the centre of the cyclonic wind circulation was a little to the south-east of Belgaum. The storm therefore advanced along almost precisely the same track as that of the storm of the second week of November 1886, which passed over the Western Ghâts and advanced by a curved track over the Arabian Sea to the Beluchistan coast. On the 11th the storm had crossed the coast and had passed into the Arabian Sea, and it had practically ceased to affect the land area.

*Small storm of October 27th to 31st.*—Up till about the 25th or 26th of the month light northerly winds were blowing over the greater part of the Bay, but on the 26th and 27th squally weather and strong winds commenced in the south-eastern part of the Bay. It is probable on the 27th that a definite barometric depression had formed, which then drifted in a westerly direction and commenced to make itself felt off the south Madras coast on the 29th, when its centre was probably opposite the coast between Madras and Negapatam. On the 30th it was almost opposite Madras, and on the 31st it was to the north-east of Madras, but as it approached the land it filled up and became more diffused, and afterwards quite ceased to exist as a distinct storm, though it gave rise to a large disturbance, which produced squally unsettled weather over a large part of the Bay. It was never an intense and concentrated storm, but rather of a diffused nature, and the disturbed conditions brought by it extended over a large area of the Bay and of the coast. It gave strong winds to all the coast stations from Vizagapatam southwards, while heavy rain also fell at many stations. Directly the storm approached the south Madras coast that is, on the morning of the 29th, warnings of the existence of the barometric depression were issued to the Port Officers at Madras, and at all important ports to the south of that station, together with the statement that the storm was not an intense one; and on the 30th the Port Officers at the stations from Vizagapatam down to Madras were informed that the storm was almost opposite Madras, while the Port Officers at the stations south of Madras were informed of the northerly movement of the depression.

*Pressure.*—The changes in the distribution of pressure during the month have not been of very great importance. For the first week pressure was very slightly in excess of the normal, the mean excess equalling 0·008 inch. During the second week pressure rose decidedly rapidly, and the mean pressure became in excess of the normal by 0·073 inch. In the third week the excess had become rather smaller and only equalled 0·042 inch, while for the fourth week the excess had again rather increased, and pressure was above the normal by 0·065 inch. The mean pressure for the whole province of Bengal for October was therefore very decidedly in excess of the normal, and taking only these stations into consideration from which observations have been received for many years, and which therefore yield reliable averages, pressure in this month was in excess of the normal by 0·046 inch. The distribution of the excess pressure was also rather uniform, for the minimum excess was 0·035 inch at Calcutta, and the maximum 0·058 inch at Durbhunga. In Assam during October pressure was in excess of the normal by an average amount of 0·031 inch.

*Temperature.*—The most important feature in the distribution of temperature during the month was the very rapid fall which took place during the last week, when, as stated in the Meteorological Summary at some stations, temperature became largely below the normal for the period. During the first week in October temperature was in excess of the normal by 1·2°. During the second week the excess was neutralized, and a defect of 0·2° was established; in the third week the defect had increased to 1·7°, and in the fourth week

the defect was again  $1.7^{\circ}$ . For the whole month the average temperature was therefore below the normal. The defect was largest in South Behar, where it equalled  $1.2^{\circ}$ , in South-West Bengal the defect was  $0.9^{\circ}$ , in North Behar  $0.8^{\circ}$ , in North Bengal  $0.7^{\circ}$ ; in East Bengal and Chutia Nagpur the defect was  $0.5^{\circ}$ , and in Orissa  $0.2^{\circ}$ . For the whole of Bengal therefore the mean temperature of the month was  $0.7^{\circ}$  in defect of the normal. In Assam the mean temperature was much more nearly normal, and the defect was only from about  $0.1^{\circ}$  to  $0.2^{\circ}$ .

**Rainfall.**—The rainfall of October appears to be an illustration of the fact that at certain seasons of the year the distribution of the rain with reference to time is quite as important as its quantity, and thus though the general rainfall of the whole of Bengal has not averaged more than about 79 per cent. of the amount which normally falls in October, yet, as the rain came just when the conditions were becoming rather critical, the smaller fall did far more good than would have been the case had it fallen earlier in the month, or if it had been distributed evenly over the month, or if it had fallen quite at the end of the month. The rainfall, though really very considerably deficient in quantity, appears to have been much more valuable than would be expected by the statement that the actual fall was less than four-fifths of the usual amount. During the first week of October the average fall of rain over the whole province did not equal more than about a tenth of an inch; in the second week the average fall equalled about two and a half inches; in the third week there was an average fall of about three quarters of an inch; and in the fourth week rainfall was practically absent, though again on the last day of the month rain commenced to fall at the extreme southern stations in the province.

During October rainfall was heaviest in North Behar, which received an average amount of 4.6 inches falling on four days; this amount is 1.08 inches in excess of the usual fall in October, and therefore the fall has been equal to 131 per cent. of the normal amount. In East Bengal the average fall in the month has been 4.34 inches on 5.6 days; this fall is 1.13 inches smaller than the normal, and thus this district has only received 79 per cent. of the normal. North Bengal has received rain on an average of 5.4 days, and the amount was 3.63 inches, or 1.06 inches smaller than the normal, the percentage fall in North Bengal is therefore 77. Orissa has received an average rainfall of 3.60 inches on 5.8 days; the actual fall is no less than 2.7 inches smaller than the normal, and the fall is therefore only 57 per cent. of the normal quantity. South-West Bengal has received 3.27 inches of rain falling on 5.6 days; this is 1.16 inches smaller than the normal October fall, and thus this district has only received 88 per cent. of the usual amount. South Behar has received an average fall of 3.14 inches on 3.7 days, which is only 0.19 inch less than the usual amount, and the percentage fall has been 94. Finally, in Chutia Nagpur there has been an average rainfall of only 1.46 inches, which is 1.78 inches less than the normal, and the percentage fall is therefore only 45.

The following table, which includes some of the above figures, gives a comparison between the actual monthly and total rainfall and the normal rainfall of the province up to the end of October, in the same form that has been employed in previous monthly abstracts of the present year. The figures represent the ratio of the rainfall of each month of the present year to the normal rainfall expressed as a percentage. The table thus gives a condensed summary of the rainfall data of the year for each meteorological division. The first ten columns give the percentage amount of rainfall received in each month, and the last column the percentage rainfall of the whole period from the 1st of January to the end of October:—

| Meteorological Divisions. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | Actual rainfall of first ten months expressed as a percentage of the normal fall for the period. |
|---------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|--|
| Orissa                    | 119      | Nil       | 137    | 60     | 103  | 66    | 91    | 83      | 59         | 62       | 83   |
| South-West Bengal         | 202      | 2         | 252    | 56     | 139  | 82    | 103   | 76      | 88         | 74       | 93   |
| East Bengal               | 413      | 14        | 206    | 34     | 71   | 79    | 80    | 71      | 58         | 79       | 77   |
| North Bengal              | 530      | 2         | 274    | 114    | 158  | 139   | 63    | 97      | 88         | 77       | 108  |
| North Behar               | 381      | Nil       | 127    | 109    | 177  | 135   | 52    | 111     | 75         | 131      | 103  |
| South Behar               | 411      | Nil       | 263    | 188    | 423  | 70    | 83    | 83      | 79         | 94       | 101  |
| Chutia Nagpur             | 500      | Nil       | 10     | 111    | 331  | 73    | 93    | 90      | 71         | 45       | 92   |

For the whole of the year up to the end of October North Bengal and Behar have received falls up to or slightly exceeding the normal; South-West Bengal and Chutia Nagpur have received falls less than the normal by about 7 and 8 per cent.; Orissa has received a fall about 19 per cent. in defect, while in East Bengal the average fall has been only slightly more than three-fourths of the usual quantity.

Taking up the rainfall of October rather more in detail, the actual falls vary from about ten inches in the extreme north-west of Behar (Bagaha), on the coast of Orissa (False Point), and in the extreme south-east of the province (Harishpore), to a fall of less than half an inch at the following stations:—Anda and Gangajalghati in the Bankoora district, Rajauli (Gya district), and Jhoomra Hills and Ramghar in the Hazaribagh district. The following districts have received less than one inch of rain during the month:—a large part of the Singbhoom district, parts of the Hazaribagh and Gya districts, a considerable part

of the Bankoora district, part of the Midnapore district, and parts of the Bhagulpore and Sonthal Pergunnahs districts.

When compared with the normal fall, it is seen that there are two areas of distinct excess—the one including the greater part of North Behar (excluding parts of the Bhagulpore and the greater part of the Purneah district), and parts of South Behar represented by the Shahabad and Patna districts; and the second represented by a tract of country of variable width running almost north and south through the centre of Bengal and including parts of the following districts:—Dinagepore, Maldah, Sonthal Pergunnahs, Rajshahye, Moorshedabad, Nuddea, Jessore, and Khoolna. The remainder of the province is practically all in defect, and over considerable areas the defects are as large as three inches, and even vary up to five inches. These areas comprise considerable parts of the following districts:—Pooree, Cuttack, Balasore, Midnapore, Howrah, Hooghly, Burdwan, Bankoora, Singbhoom, Manbhoom, Sonthal Pergunnahs, Backergunge, Noakholly, Chittagong, Cooch Behar, and Julpigoree.

Comparing the averages district by district with the normal, and allowing due weight for the area which each reporting station represents, it is found that the average rainfall in the following districts has been less than 50 per cent. of the normal:—In Orissa, Onttack, and Balasore; in South-West Bengal, Howrah, Hooghly, Burdwan and Bankoora; in East Bengal, Noakholly; in North Bengal, Cooch Behar; and in Chutia Nagpur, Singbhoom.

The following table gives full data of the comparison of the actual and normal rainfall of the month of October in all districts of the province. The figures are obtained in the manner explained in preceding monthly summaries. The first column gives the average district rainfall as determined from the rainfall observations of the past 15 years. The second column gives the actual district rainfall as determined from the actual weighted rainfall of the month at the reporting stations in the district. The third column expresses the ratio of the actual district rainfall to the normal district rainfall expressed as a percentage. The fourth column gives the same information as the third column in a slightly different form. It states by what percentage the actual rainfall varied in excess (+) or in defect (—) from the normal fall:—

*Percentage Table for October 1887.*

| DIVISION.         | DISTRICT.              | Normal district rainfall for October 1887. | Actual district rainfall for October 1887. | Percentage of actual to normal rainfall. | Percentage excess (+) defect (—) |
|-------------------|------------------------|--|--|--|----------------------------------|
| Orissa            | Pooree ...             | 7.85                                       | 5.78                                       | 74                                       | — 36                             |
|                   | Cuttack ...            | 5.74                                       | 2.31                                       | 40                                       | — 60                             |
|                   | Balasore ...           | 5.54                                       | 2.74                                       | 50                                       | — 50                             |
|                   | Midnapore ...          | 5.42                                       | 2.97                                       | 55                                       | — 45                             |
|                   | 24-Pergunnahs ...      | 4.58                                       | 3.79                                       | 83                                       | — 17                             |
|                   | Howrah ...             | 3.92                                       | 1.38                                       | 35                                       | — 65                             |
| South-West Bengal | Hooghly ...            | 4.19                                       | 1.97                                       | 47                                       | — 53                             |
|                   | Burdwan ...            | 4.87                                       | 1.66                                       | 34                                       | — 66                             |
|                   | Bankoora ...           | 4.00                                       | 1.34                                       | 34                                       | — 66                             |
|                   | Beerbhoom ...          | 3.57                                       | 1.99                                       | 56                                       | — 44                             |
|                   | Nuddea ...             | 4.31                                       | 3.70                                       | 86                                       | — 14                             |
|                   | Khoolna ...            | 4.70                                       | 5.26                                       | 112                                      | + 12                             |
|                   | Jessore ...            | 4.59                                       | 4.10                                       | 89                                       | — 11                             |
|                   | Moorshedabad ...       | 4.50                                       | 4.08                                       | 91                                       | — 9                              |
|                   | Chittagong ...         | 6.39                                       | 4.55                                       | 71                                       | — 29                             |
|                   | Backergunge ...        | 5.43                                       | 4.14                                       | 76                                       | — 24                             |
| East Bengal       | Noakholly ...          | 7.09                                       | 3.32                                       | 47                                       | — 53                             |
|                   | Furreedpore ...        | 4.42                                       | 4.17                                       | 94                                       | — 6                              |
|                   | Dacca ...              | 4.92                                       | 4.56                                       | 93                                       | — 7                              |
|                   | Commilla ...           | 5.31                                       | 4.17                                       | 79                                       | — 21                             |
|                   | Mymensingh ...         | 5.52                                       | 5.41                                       | 98                                       | — 2                              |
|                   | Pubna ...              | 4.59                                       | 4.18                                       | 91                                       | — 9                              |
|                   | Bogra ...              | 4.57                                       | 4.02                                       | 88                                       | — 12                             |
| North Bengal      | Rajshahye ...          | 4.48                                       | 3.60                                       | 77                                       | — 23                             |
|                   | Maldah ...             | 3.74                                       | 2.59                                       | 69                                       | — 31                             |
|                   | Dinagepore ...         | 3.70                                       | 4.42                                       | 120                                      | + 20                             |
|                   | Rungpore ...           | 4.70                                       | 3.62                                       | 77                                       | — 23                             |
|                   | Cooch Behar ...        | 5.30                                       | 2.04                                       | 39                                       | — 61                             |
|                   | Julpigoree ...         | 5.46                                       | 4.09                                       | 75                                       | — 25                             |
|                   | Darjeeling ...         | 5.34                                       | 4.64                                       | 87                                       | — 13                             |
|                   | Purneah ...            | 3.62                                       | 3.83                                       | 106                                      | + 6                              |
|                   | North Bhagulpore ...   | 3.71                                       | 3.96                                       | 107                                      | + 7                              |
|                   | Durbhunga ...          | 2.87                                       | 3.42                                       | 119                                      | + 19                             |
| North Behar       | Mozufferpore ...       | 3.18                                       | 4.60                                       | 145                                      | + 45                             |
|                   | Chumparun ...          | 3.62                                       | 7.30                                       | 202                                      | + 102                            |
|                   | Sarun ...              | 3.98                                       | 5.45                                       | 137                                      | + 37                             |
|                   | Shahabad ...           | 3.35                                       | 4.97                                       | 148                                      | + 48                             |
|                   | Gya ...                | 2.69                                       | 1.99                                       | 74                                       | — 26                             |
|                   | Patna ...              | 3.12                                       | 2.43                                       | 78                                       | — 22                             |
| South Behar       | Monghyr ...            | 3.25                                       | 2.79                                       | 86                                       | — 14                             |
|                   | South Bhagulpore ...   | 3.72                                       | 2.23                                       | 60                                       | — 40                             |
|                   | Sonthal Pergunnahs ... | 3.79                                       | 2.57                                       | 69                                       | — 31                             |
|                   | Hazaribagh ...         | 3.11                                       | 1.82                                       | 59                                       | — 41                             |
| Chutia Nagpur     | Lohardugga ...         | 2.85                                       | 2.13                                       | 75                                       | — 25                             |
|                   | Singbhoom ...          | 3.09                                       | 0.32                                       | 10                                       | — 90                             |
|                   | Manbhoom ...           | 3.83                                       | 2.45                                       | 64                                       | — 36                             |

The following table gives the summary of the temperature and rainfall data of each of the seven Meteorological Divisions of the province for the month of October 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                   |                               |                         |                        |                       |  | RAINFALL. |                 |            |                          |                                 |            |                      |                 |
|------------------------------|--------------------------------|-------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|--------------------------|---------------------------------|------------|----------------------|-----------------|
|                              | Highest observed during month. | Lowest observed during month. | Averages for month.     |                        |                       | Average mean of month above or below normal mean of month. | Of month. |                 |            | Rainy days.              |                                 |            | Since 15th May 1887. |                 |
|                              |                                |                               | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average.  | Normal average. | Variation. | Average number in month. | Normal average number in month. | Variation. | Average.             | Normal average. |
|                              |                                |                               |                         |                        |                       |  |           |                 |            |                          |                                 |            |                      |                 |
| Orissa ... ..                | 94.9                           | 62.0                          | 88.5                    | 73.7                   | 81.1                  | -0.2   | 3.92      | 6.39            | -2.33      | 6.3                      | 8.4                             | -2.1       | 42.24                | 52.08           |
| South-West Bengal ... ..     | 94.5                           | 60.1                          | 87.8                    | 72.4                   | 80.1                  | -0.9   | 3.29      | 4.43            | -1.14      | 5.6                      | 6.7                             | -1.1       | 46.51                | 51.24           |
| East Bengal ... ..           | 93.4                           | 63.0                          | 87.0                    | 72.6                   | 80.8                  | -0.5   | 4.36      | 5.47            | -1.11      | 5.8                      | 7.8                             | -2.0       | 53.04                | 73.78           |
| North Bengal ... ..          | 93.3                           | 58.1                          | 80.9                    | 71.0                   | 79.0                  | -0.7   | 3.63      | 4.69            | -1.06      | 5.4                      | 5.8                             | -0.4       | 73.88                | 69.29           |
| North Behar ... ..           | 94.0                           | 55.9                          | 86.5                    | 69.9                   | 78.2                  | -0.8   | 4.60      | 3.52            | +1.08      | 4.0                      | 3.7                             | +0.3       | 52.07                | 47.66           |
| South Behar ... ..           | 95.4                           | 57.0                          | 86.7                    | 69.5                   | 78.1                  | -1.2   | 3.14      | 3.33            | -0.19      | 3.7                      | 4.3                             | -0.6       | 41.85                | 43.13           |
| Chutia Nagpur ... ..         | 90.5*                          | 54.4*                         | 83.3*                   | 65.1*                  | 74.2*                 | -0.5*  | 1.46      | 3.24            | -1.78      | 3.5                      | 5.7                             | -2.2       | 44.55                | 46.29           |
| Assam ... ..                 | 96.6                           | 61.3                          | 86.4                    | 71.7                   | 79.1                  | -0.1   |           |                 |            |                          |                                 |            |                      |                 |

\* Chyobussa not included.

METEOROLOGICAL OFFICE, BENGAL ;  
The 8th November 1887.

ALEXANDER PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal.



## Meteorological Report of the Province of Ber

| DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------|----------------------------|---------------------|---------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|
|                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.         |                            |                     |               |                           |                                   |                                 |                                     |
|                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week. | Date.                      | Lowest during week. | Date.         | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. |
| Pooree                 | Gopalpore               | 29.940                          | 29.990                     | +0.021               | N                     | 100.0               | 88.2                 | 29th Oct.                  | 70.9                | 30th Oct.     | 80.8                      | 72.4                              | 76.6                            | -1.6                                |
|                        | False Point             | 29.973                          | 29.993                     | +0.021               | Notherly              | 180.0               | 84.4                 | 29th "                     | 65.5                | 29th "        | 81.5                      | 70.3                              | 75.9                            | -1.8                                |
| Outtaek                | Outtaek                 | 29.916                          | 29.999                     | +0.020               | ENE                   | 65                  | 87.0                 | 29th, 30th Oct.            | 60.3                | 29th Oct.     | 84.2                      | 70.9                              | 77.5                            | -1.1                                |
| Balasore               | Balasore                | 29.945                          | 30.005                     | +0.016               | NNE                   | 73.6                | 85.1                 | 29th "                     | 62.0                | 29th "        | 82.4                      | 68.3                              | 75.4                            | -0.1                                |
| South-West Midnapore   | Saugor Island           | .977                            | 30.004                     | +0.026               | NNE                   | 189                 | 84.2                 | 29th, 31st Oct.            | 67.9                | 29th "        | 81.0                      | 71.3                              | 76.2                            | -2.0                                |
| South 24-Pergunnahs    | Midnapore               | .872                            | 30.026                     | +0.018               | N                     | 84.1                | 85.3                 | 29th "                     | 61.7                | 29th "        | 82.2                      | 63.0                              | 75.1                            | -0.4                                |
| 24-Pergunnahs          |                         |                                 |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
| Howrah                 | Calcutta                | .986                            | 30.008                     | +0.023               | North-easterly.       | 70                  | 82.5                 | 29th "                     | 64.5                | 29th "        | 80.1                      | 70.7                              | 75.4                            | -1.0                                |
| Hooghly                |                         |                                 |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
| Burdwan                | Burdwan                 | .917                            | 30.019                     | +0.020               | E & NE                | 43                  | 84.5                 | 29th, 30th Oct.            | 60.4                | 29th "        | 82.7                      | 60.4                              | 70.0                            | -1.6                                |
| Bankoora               | Bankoora                | .893                            | —                          | —                    | Calm                  | 4                   | 85.6                 | 30th "                     | 63.2                | 29th "        | 82.1                      | 67.5                              | 74.8                            | —                                   |
| Beerbhoom              |                         |                                 |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
| West Burdwan           | Raneegunge              | .897                            | 30.011                     | +0.059               | NE                    | 70.5                | 80.5                 | 29th, 30th Oct. & 1st Nov. | 63.0                | 29th "        | 84.6                      | 64.5                              | 75.6                            | -0.4                                |
| Moorshedabad           | Berhampore              | .908                            | 30.036                     | +0.054               | NE                    | 55.5                | 84.0                 | 1st "                      | 67.2                | 3rd Nov.      | 82.3                      | 66.8                              | 75.0                            | -2.5                                |
| Nuddea                 | Krishnaghur             | .956                            | 30.023                     | —                    | NNE                   | 50.9                | 84.1                 | 31st Oct.                  | 63.4                | 4th "         | 82.5                      | 67.6                              | 75.1                            | —                                   |
| Jessore                | Jessore                 | .959                            | 29.993                     | +0.030               | Variable              | 62.4                | 85.2                 | 29th "                     | 63.5                | 29th Oct.     | 82.8                      | 69.7                              | 76.3                            | -0.9                                |
| Khoolna                |                         |                                 |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
| Chittagong             | Chittagong              | .921                            | 30.012                     | +0.055               | NE                    | 55                  | 86.6                 | 31st "                     | 68.5                | 29th "        | 84.5                      | 70.5                              | 77.5                            | -0.8                                |
| Chittagong Hill Tracts | Demagiri                |                                 |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
| Backergunge            | Barrisal                | 30.000                          | 30.012                     | +0.073               | NE                    | 64.9                | 84.3                 | 31st "                     | 60.5                | 29th "        | 80.5                      | 70.3                              | 75.4                            | -0.5                                |
| Noakholly              | Noakholly               | 29.956                          | 30.001                     | —                    | Calm                  | 8.99                | 85.5                 | 30th, 31st Oct.            | 65.0                | 29th "        | 81.3                      | 69.1                              | 75.2                            | —                                   |
| Furzedpore             | Furzedpore              | 29.984                          | 30.024                     | +0.063               | Notherly              | 77.6                | 83.8                 | 31st "                     | 61.0                | 29th "        | 79.0                      | 68.0                              | 73.5                            | -2.9                                |
| Dacca                  | Dacca                   | 30.001                          | 30.023                     | +0.073               | ESE                   | 58                  | 86.1                 | 30, 31, Oct. & 1st Nov.    | 60.5                | 29th "        | 83.9                      | 70.5                              | 76.7                            | -2.0                                |
| Commillah              | Commillah               | 29.973                          | 30.000                     | +0.074               | NE                    | 26.7                | 87.5                 | 1st "                      | 60.8                | 29th "        | 83.3                      | 69.8                              | 76.0                            | -1.5                                |
| Mymensingh             | Mymensingh              | 29.982                          | 30.041                     | +0.100               | North-easterly.       | 60.3                | 86.4                 | 31st Oct.                  | 68.1                | 4th Nov.      | 83.0                      | 67.7                              | 75.4                            | -1.2                                |
| Bogra                  | Bogra                   | 29.936                          | 30.000                     | —                    | Calm                  | 26.8                | 84.8                 | 1st Nov.                   | 62.9                | 4th "         | 82.7                      | 65.4                              | 74.1                            | —                                   |
| Pubna                  | Serajgunge              | 30.078                          | 30.026                     | +0.067               | E                     | 41.4                | 80.1                 | 31st Oct.                  | 59.8                | 3rd "         | 83.2                      | 65.7                              | 74.5                            | -1.1                                |
| Rajahahye              | Rampore Beau-<br>leni.  | 29.953                          | 30.024                     | +0.072               | NE                    | 57.4                | 88.5                 | 1st Nov.                   | 59.7                | 2nd "         | 83.4                      | 63.7                              | 73.0                            | -0.3                                |
| Maldah                 | Maldah                  | 29.967                          | —                          | —                    | Calm                  | ?                   | 86.6                 | 1st Nov.                   | 60.9                | 4th "         | 83.8                      | 64.8                              | 74.3                            | —                                   |
| Dinagopore             | Dinagopore              | 29.899                          | 30.022                     | +0.047               | Variable              | 40.0                | 84.1                 | 29, 31 Oct. & 1st Nov.     | 61.2                | 4th "         | 83.5                      | 64.0                              | 74.2                            | +0.1                                |
| Rangpore               | Rangpore                | 29.904                          | 30.032                     | +0.020               | NE                    | 29.1                | 87.8                 | 1st "                      | 60.8                | 4th "         | 84.2                      | 64.1                              | 74.2                            | +0.5                                |
| Julpigoree             | Julpigoree              | 29.790                          | 30.055                     | +0.043               | Variable              | 37.6                | 83.9                 | 30th Oct.                  | 60.9                | 4th "         | 82.7                      | 62.1                              | 72.5                            | -0.6                                |
| Oooch Behar            |                         |                                 |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
| Darjeeling Hill Tracts | Darjeeling              | 29.978                          | —                          | +0.001               | NE                    | 34.4                | 57.6                 | 30th, 31st Oct.            | 41.7                | 2nd, 3rd Nov. | 56.2                      | 43.3                              | 49.8                            | -1.3                                |
| Purneah                | Purneah                 | 29.930                          | 30.060                     | +0.076               | C                     | 3.6                 | 83.2                 | 30th "                     | 59.7                | 4th "         | 82.3                      | 63.0                              | 72.7                            | -2.4                                |
| North Bhagulpore       |                         |                                 |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
| Mozufferpore           | Mozufferpore            |                                 |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
| Durbhunga              | Durbhunga               | 29.881                          | 30.053                     | +0.081               | North-<br>Westerly    | 65.0                | 82.0                 | 29th Oct.                  | 63.4                | 4th "         | 82.7                      | 66.9                              | 74.8                            | -0.6                                |
| Chumparan              | Motihari                | 29.780                          | 30.011                     | +0.062               | Variable              | 57.0                | 87.7                 | 1, 2, 3 Nov.               | 56.0                | 2nd Nov.      | 84.5                      | 59.9                              | 71.9                            | +0.3                                |
| Saran                  | Chupra                  | 29.830                          | 30.039                     | +0.062               | North-<br>easterly    | ?                   | 84.5                 | 29, 30, 31 Oct. & 1st Nov. | 61.9                | 31st Oct.     | 84.0                      | 62.5                              | 73.5                            | -1.4                                |
|                        | Dehree                  | .982                            | 30.015                     | +0.019               | SSW                   | 83.1                | 82.0                 | 2nd Nov.                   | 60.5                | 30th "        | 74.1                      | 63.2                              | 71.2                            | -2.9                                |
| Shahabad               | Buxar                   | .801                            | 30.049                     | +0.056               | Variable              | 63.1                | 85.4                 | 29th Oct. & 4th Nov.       | 61.4                | 4th Nov.      | 84.4                      | 63.0                              | 73.7                            | -1.7                                |
|                        | Arrah                   | .822                            | 30.024                     | +0.049               | SE                    | 24.7                | 85.8                 | 29th "                     | 60.8                | 29th Oct.     | 81.4                      | 61.7                              | 73.1                            | -1.2                                |
| Gya                    | Gya                     | .632                            | 30.018                     | +0.069               | Calm                  | 21.0                | 87.9                 | 31st "                     | 59.7                | 4th Nov.      | 85.3                      | 63.1                              | 74.2                            | -1.1                                |
| Patna                  | Bankipore               | .873                            | 30.061                     | +0.061               | North-<br>easterly.   | 32.0                | 87.4                 | 22nd Nov.                  | 63.3                | 4th "         | 80.1                      | 65.5                              | 75.8                            | +0.5                                |
| South Bhagulpore       |                         |                                 |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
| Monghyr                | Bhagulpore              | .873                            | .933                       | +0.066               | N                     | 32.9                | 83.4                 | 30th Oct.                  | 61.5                | 4th "         | 82.4                      | 64.3                              | 73.4                            | -1.2                                |
| South 24-Pergunnahs    | Doonika                 | .451                            | —                          | —                    | ENE                   | 31.4                | 84.6                 | 30th, 31st Oct.            | 61.2                | 29th Oct.     | 83.8                      | 64.1                              | 73.9                            | —                                   |
| Hazariabagh            | Hazariabagh             | 28.905                          | 30.861                     | +0.044               | Variable              | 123.0               | 81.4                 | 30th "                     | 58.8                | 4th Nov.      | 80.3                      | 60.9                              | 70.6                            | -0.5                                |
| Lohardugga             |                         |                                 |                            |                      |                       |                     |                      |                            |                     |               |                           |                                   |                                 |                                     |
| Manbhoom               | Ranches                 | 27.863                          | 30.019                     | +0.029               | NE                    | 114.1               | 80.5                 | 4th Nov.                   | 55.9                | 29th Oct.     | 78.4                      | 58.8                              | 69.6                            | -0.9                                |
| Singbhoom              | Chyobassa               | 29.232                          | —                          | —                    | NE                    | 37.4                | 85.5                 | 29th Oct.                  | 59.5                | 29th "        | 82.9                      | 66.3                              | 74.5                            | —                                   |
|                        | Siluasagar              | 29.737                          | 30.061                     | +0.052               | NE                    | 36                  | 81.6                 | 29th Oct. & 4th Nov.       | 61.3                | 31st "        | 80.2                      | 63.2                              | 71.7                            | -1.7                                |
|                        | Dhubri                  | .927                            | 30.048                     | +0.044               | ENN                   | 184.0               | 83.7                 | 29th Oct.                  | 65.4                | 2nd Nov.      | 82.2                      | 60.7                              | 71.5                            | -0.8                                |
|                        | Silchar                 | .916                            | 30.023                     | +0.041               | ENE & C               | 38                  | 89.5                 | 30, 31 Oct. 1st Nov.       | 64.3                | 30th Oct.     | 84.4                      | 64.9                              | 75.7                            | -2.1                                |

Station.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the readings during the same period for the past 10 years. The humidity of the atmosphere is expressed in percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 100. The amount of the rainfall in that district determined from the returns sent in by the district officers.



10 week ending Friday, the 4th November 1887.

| Average cloud amount at 10 A.M. for week. |      | Rainfall of week at observing station. |      | DISTRICT OBSERVATIONS. |      |                       |              |            |                    |              |            |                               |                              | Representative station. | DISTRICT. | METEOROLOGICAL DIVISION. |
|---|------|--|------|------------------------|------|-----------------------|--------------|------------|--------------------|--------------|------------|-------------------------------|------------------------------|-------------------------|-----------|--------------------------|
|   |      |  |      | OF WEEK.               |      | RAINFALL.             |              |            |                    |              |            |                               |                              |                         |           |                          |
|   |      |  |      |                        |      | Since 1st of October. |              |            | Since May 15th.    |              |            | Average number of rainy days. | Normal number of rainy days. |                         |           |                          |
|   |      |  |      |                        |      | Mean for district.    | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. |                               |                              |                         |           |                          |
| 8.7                                       | 1.93 |  |      |                        |      |                       |              |            |                    |              |            |                               | Gopalpore                    | ORISSA.                 |           |                          |
| 8.4                                       | 6.90 | 2.76                                   | 1.61 | 9.08                   | 9.10 | -0.11                 | 43.97        | 51.29      | -10.32             | 3.8          | 1.8        | False Point                   | Pooree                       |                         |           |                          |
| 8.9                                       | Nil  | 0.00                                   | 0.89 | 2.87                   | 6.23 | -3.36                 | 43.59        | 51.05      | -7.46              | 2.2          | 1.4        | Cuttack                       | Cuttack                      |                         |           |                          |
| 4.6                                       | 0.10 | 0.35                                   | 0.80 | 3.23                   | 5.80 | -2.57                 | 41.72        | 52.45      | -11.12             | 1.5          | 1.2        | Balasore                      | Balasore                     |                         |           |                          |
| 8.1                                       | 4.61 | 1.62                                   | 0.59 | 6.59                   | 7.99 | -1.31                 | 58.24        | 61.25      | -2.97              | 1.7          | 1.0        | Saugor Island                 | South-West Midnapore         | SOUTH-WEST BENGAL.      |           |                          |
| 5.6                                       | 0.12 | 0.05                                   | 0.21 | 2.29                   | 4.53 | -2.21                 | 56.46        | 50.70      | -0.24              | 0.3          | 0.7        | Midnapore                     | South 24-Pargunnahs          |                         |           |                          |
| 7.9                                       | 0.26 | 0.06                                   | 0.30 | 3.01                   | 4.42 | -1.41                 | 40.50        | 51.38      | -10.88             | 0.4          | 0.9        | Calcutta                      | Midnapore                    |                         |           |                          |
| 7.6                                       |      | 0.33                                   | 0.27 | 2.09                   | 4.27 | -2.18                 | 45.04        | 46.03      | -1.01              | 0.7          | 0.7        | Howrah                        | 24-Pargunnahs                |                         |           |                          |
| 4.4                                       |      | Nil                                    | 0.29 | 1.29                   | 4.27 | -2.98                 | 40.34        | 51.59      | -2.25              | 0.0          | 0.7        | Burdwan                       | Howrah                       | SOUTH-WEST BENGAL.      |           |                          |
| 4.4                                       |      | 0.47                                   | 0.14 | 2.75                   | 3.56 | -0.81                 | 47.71        | 51.75      | -4.04              | 0.3          | 0.4        | Bankoora                      | Hooghly                      |                         |           |                          |
| 6.3                                       |      | 0.06                                   | 0.15 | 3.59                   | 4.32 | -0.63                 | 58.85        | 49.00      | +9.85              | 0.3          | 0.3        | Raneegunge                    | Burdwan                      |                         |           |                          |
| 6.9                                       | 0.02 | 0.01                                   | 0.22 | 3.65                   | 4.34 | -0.69                 | 12.74        | 14.74      | -2.00              | 0.2          | 0.7        | Berhampore                    | Bankoora                     |                         |           |                          |
| 7.6                                       | 0.13 | 0.42                                   | 0.32 | 4.92                   | 4.57 | +0.35                 | 41.50        | 52.97      | -11.47             | 1.0          | 0.8        | Krishnagar                    | Beerbhoom                    | SOUTH-WEST BENGAL.      |           |                          |
| 7.6                                       | 3.75 | 8.78                                   | 0.82 | 15.57                  | 7.33 | +8.24                 | 96.08        | 114.35     | -16.32             | 4.0          | 1.2        | Jessore                       | West Burdwan                 |                         |           |                          |
| 7.3                                       | 5.26 | 4.62                                   | 0.88 | 8.72                   | 6.37 | +2.35                 | 59.32        | 76.79      | -17.47             | 3.5          | 1.5        | Chittagong                    | Moorshedabad                 |                         |           |                          |
| 5.6                                       | 4.84 | 4.35                                   | 1.19 | 9.60                   | 7.56 | +2.04                 | 72.67        | 107.01     | -34.34             | 4.0          | 1.3        | Demagiri                      | Nuddea                       |                         |           |                          |
| 3.1                                       | 0.25 | 0.41                                   | 0.27 | 4.77                   | 4.58 | +0.19                 | 35.91        | 55.58      | -19.67             | 1.0          | 0.8        | Furzedpore                    | Jessore                      | EAST BENGAL.            |           |                          |
| 5.9                                       | 1.09 | 1.11                                   | 0.57 | 5.00                   | 4.63 | +0.37                 | 40.29        | 60.28      | -19.99             | 1.8          | 0.7        | Dacca                         | Khoolna                      |                         |           |                          |
| 5.4                                       | 0.82 | 1.12                                   | 0.46 | 1.90                   | 5.58 | -0.68                 | 42.01        | 70.08      | -28.07             | 2.5          | 0.9        | Commillah                     | Chittagong                   |                         |           |                          |
| 5.3                                       | 0.97 | 0.12                                   | 0.15 | 5.31                   | 5.37 | -0.06                 | 60.5         | 60.80      | -0.30              | 0.6          | 0.5        | Mymensingh                    | Chittagong Hill Tracts       |                         |           |                          |
| 2.9                                       |      | Nil                                    | 0.08 | 4.32                   | 4.47 | -0.15                 | 60.4         | 56.27      | +4.21              | 0.0          | 0.3        | Bogra                         | Backergunge                  | NORTH BENGAL.           |           |                          |
| 3.6                                       |      | 0.06                                   | 0.15 | 4.24                   | 4.70 | -0.46                 | 43.99        | 53.18      | -9.19              | 0.5          | 0.5        | Serajunge                     | Noakholly                    |                         |           |                          |
| 2.7                                       | 0.03 | 0.15                                   | 0.14 | 3.68                   | 4.80 | -1.12                 | 49.57        | 53.62      | -4.05              | 0.3          | 0.3        | Rampore Beaulah               | Furzedpore                   |                         |           |                          |
| 2.1                                       |      | Nil                                    | 0.14 | 2.60                   | 3.75 | -1.15                 | 46.01        | 54.08      | -7.47              | 0.0          | 0.3        | Maldah                        | —                            |                         |           |                          |
| 2.6                                       |      | Nil                                    | 0.07 | 4.43                   | 3.08 | +0.75                 | 69.06        | 55.47      | +13.59             | 0.0          | 0.1        | Dinapore                      | —                            | NORTH BENGAL.           |           |                          |
| 0   |      | Nil                                    | 0.09 | 3.77                   | 4.07 | -1.20                 | 80.61        | 72.06      | +7.95              | 0.0          | 0.1        | Rungpore                      | Dinapore                     |                         |           |                          |
| 0   |      | Nil                                    | 0.20 | 2.11                   | 6.20 | -3.97                 | 117.42       | 109.91     | +7.51              | 0.0          | 0.2        | Julpigoree                    | Rungpore                     |                         |           |                          |
| 2.4                                       |      | Nil                                    | 0.37 | 4.96                   | 6.29 | -1.33                 | 117.09       | 119.62     | -2.53              | 0.0          | 0.4        | Darjeeling                    | Julpigoree                   |                         |           |                          |
| 0.4                                       |      | Nil                                    | 0.28 | 3.80                   | 3.63 | +0.17                 | 65.04        | 57.36      | +7.68              | 0.0          | 0.2        | Purneah                       | Cooch Behar                  | NORTH BENGAL.           |           |                          |
| 0.3                                       |      | Nil                                    | 0.23 | 4.50                   | 3.36 | +1.23                 | 46.91        | 52.44      | +5.47              | 0.0          | 0.2        | Mozufferpore                  | Darjeeling Hill Tracts       |                         |           |                          |
| 1.1                                       |      | Nil                                    | 0.11 | 3.28                   | 3.39 | -0.11                 | 40.62        | 43.57      | +2.95              | 0.0          | 0.1        | Durbhunga                     | Purneah                      |                         |           |                          |
| 0   |      | Nil                                    | 0.06 | 5.49                   | 4.32 | +1.17                 | 39.35        | 42.15      | -2.80              | 0.0          | 0.2        | Chupra                        | North Bhagulpore             |                         |           |                          |
| 0.7                                       |      |  |      |                        |      |                       |              |            |                    |              |            | Dehree                        | Mozufferpore                 | NORTH BENGAL.           |           |                          |
| 1.0                                       |      | Nil                                    | 0.13 | 5.00                   | 3.50 | +1.50                 | 37.55        | 39.13      | -1.58              | 0.0          | 0.3        | Buxar                         | Durbhunga                    |                         |           |                          |
| 0.3                                       |      |  |      |                        |      |                       |              |            |                    |              |            | Arrah                         | Chumprun                     |                         |           |                          |
| 2.6                                       |      | Nil                                    | 0.06 | 2.08                   | 2.81 | -0.73                 | 38.00        | 40.57      | -2.57              | 0.0          | 0.2        | Gya                           | Saru                         |                         |           |                          |
| 1.4                                       |      | Nil                                    | 0.07 | 2.02                   | 3.27 | -1.25                 | 36.34        | 40.63      | -4.29              | 0.0          | 0.3        | Bankipore                     | Shahabad                     | NORTH BENGAL.           |           |                          |
| 0.9                                       |      | Nil                                    | 0.13 | 2.10                   | 3.24 | -1.14                 | 42.03        | 42.33      | +0.30              | 0.0          | 0.2        | Bhagulpore                    | Gya                          |                         |           |                          |
| 1.4                                       |      | Nil                                    | 0.10 | 2.92                   | 4.06 | -1.14                 | 52.40        | 50.90      | +1.50              | 0.0          | 0.2        | Boomka                        | Patna                        |                         |           |                          |
| 6.4                                       |      | Nil                                    | 0.10 | 1.37                   | 3.44 | -2.07                 | 46.42        | 40.62      | +5.80              | 0.0          | 0.1        | Hazratnagar                   | South Bhagulpore             |                         |           |                          |
| 6.3                                       |      | Nil                                    | 0.25 | 1.87                   | 3.20 | -1.33                 | 41.34        | 46.42      | -5.08              | 0.0          | 0.1        | Rancher                       | Mongayr                      | NORTH BENGAL.           |           |                          |
| 5.7                                       |      | Nil                                    | 0.20 | 0.82                   | 3.16 | -2.34                 | 49.62        | 50.20      | -0.58              | 0.0          | 1.1        | Chyenassa                     | South 24-Pargunnahs          |                         |           |                          |
| 1.9                                       |      |  |      |                        |      |                       |              |            |                    |              |            | Shahgar                       | Chyenassa                    |                         |           |                          |
| 1.0                                       |      |  |      |                        |      |                       |              |            |                    |              |            | Ator                          | Manbhoom                     |                         |           |                          |





## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 4th of November 1887—

| Meteorological Division. | District. | Station.         | RAINFALL.               |                       |                       |                        |                          |                         |                       | TOTAL.                |                   | Total rain-fall since 1st of October. | Average total rain fall from 1st of October. | Total rain fall since 1st May 1887. | At ft. from 10 |
|--------------------------|-----------|------------------|-------------------------|-----------------------|-----------------------|------------------------|--------------------------|-------------------------|-----------------------|-----------------------|-------------------|---------------------------------------|--|-------------------------------------|----------------|
|                          |           |                  | Saturday, 29th October. | Sunday, 30th October. | Monday, 31st October. | Tuesday, 1st November. | Wednesday, 2nd November. | Thursday, 3rd November. | Friday, 4th November. | Number of rainy days. | of rainfall week. |                                       |  |                                     |                |
| NORTH BHAR—continued.    | Bhahabad  | Gopalganj        | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 5.55                                  | 5.51   | 41.80                               |                |
|                          |           | Nawa             | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.00                                  | 3.91   | 38.94                               |                |
| SOUTH BHAR               | Bhahabad  | Chaurah          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4.95                                  | 3.52   | 37.22                               |                |
|                          |           | Buxar            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4.74                                  | 3.26   | 35.56                               |                |
|                          |           | Deoria           | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.62                                  | ?  | 37.80                               |                |
|                          |           | Minicoot         | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4.95                                  | 3.19   | 40.74                               |                |
|                          |           | Sasaram          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4.43                                  | 3.63   | 35.44                               |                |
|                          |           | Arran            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 5.80                                  | 3.12   | 40.58                               |                |
|                          |           | Mohania          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3.20                                  | ?  | ?                                   |                |
|                          |           | Aurungabad       | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.08                                  | 2.85   | 39.23                               |                |
|                          |           | Nya              | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.73                                  | 2.40   | 42.13                               |                |
|                          |           | Nowadah          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.87                                  | 2.74   | 35.02                               |                |
|                          |           | Jehanabad        | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 8.62                                  | 3.19   | 45.51                               |                |
|                          |           | Arwal            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4.60                                  | ?  | 39.24                               |                |
|                          |           | Bandanagar       | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.40                                  | ?  | 27.51                               |                |
|                          |           | Sherghati        | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.87                                  | ?  | 36.75                               |                |
|                          |           | Kajuli           | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.20                                  | ?  | 27.43                               |                |
|                          |           | Pakri Narayan    | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.00                                  | ?  | 21.42                               |                |
|                          |           | Patna            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3.20                                  | 3.33   | 30.30                               |                |
|                          |           | Diwar            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.83                                  | 3.20   | 37.50                               |                |
|                          |           | Behar            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.16                                  | 3.30   | 34.30                               |                |
|                          |           | Hatta            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3.30                                  | 3.30   | 35.71                               |                |
|                          |           | Biakram          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.70                                  | ?  | 30.75                               |                |
|                          |           | Hilse            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3.38                                  | ?  | 33.54                               |                |
|                          |           | Mounhyr          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.51                                  | 3.23   | 48.86                               |                |
|                          |           | Begowara         | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3.64                                  | 3.61   | 40.64                               |                |
|                          |           | Mounhyr          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 3.07                                  | 3.03   | 38.09                               |                |
|                          |           | Jamui            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.00                                  | ?  | 42.63                               |                |
|                          |           | Gogri            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.05                                  | ?  | 24.18                               |                |
|                          |           | Sheikpura        | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.26                                  | 3.51   | 40.85                               |                |
|                          |           | Bungulipore      | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.04                                  | 3.03   | 39.34                               |                |
|                          |           | Banks            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.97                                  | ?  | 43.27                               |                |
|                          |           | Kolgaug          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4.00                                  | 3.27   | 57.73                               |                |
|                          |           | Rajmoula         | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.31                                  | 3.17   | 49.10                               |                |
|                          |           | Godda            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.39                                  | 4.34   | 77.75                               |                |
|                          |           | Paour            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.90                                  | 4.31   | 44.77                               |                |
|                          |           | Nya Doumka       | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.00                                  | 4.43   | 46.71                               |                |
|                          |           | Doumka           | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.29                                  | 3.28   | 33.86                               |                |
|                          |           | Jamtara          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.73                                  | ?  | 29.64                               |                |
|                          |           | Sinra            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.80                                  | 3.30   | 40.97                               |                |
|                          |           | Naxhat           | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.49                                  | 3.41   | 45.43                               |                |
|                          |           | Paonamba         | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.14                                  | 3.34   | 39.32                               |                |
|                          |           | (Girdi).         | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.10                                  | 2.91   | 40.26                               |                |
|                          |           | Hazaribagh       | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.20                                  | 4.27   | 57.10                               |                |
|                          |           | Chutra           | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.10                                  | ?  | 36.27                               |                |
|                          |           | Aarugdeha        | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.82                                  | ?  | 47.72                               |                |
|                          |           | Kumghar          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.30                                  | ?  | 72.16                               |                |
|                          |           | Lohardugga       | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.39                                  | ?  | 50.94                               |                |
|                          |           | Kanoni           | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.03                                  | 3.10   | 55.07                               |                |
|                          |           | Palanow          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.19                                  | 3.08   | 56.43                               |                |
|                          |           | Salla            | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.00                                  | 42.00  | 42.08                               |                |
|                          |           | Balumat          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.24                                  | ?  | 34.08                               |                |
|                          |           | Hosonabad        | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 4.70                                  | ?  | 52.70                               |                |
|                          |           | Gorwah           | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.52                                  | 3.16   | 49.02                               |                |
|                          |           | Chyotama         | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.08                                  | ?  | 36.09                               |                |
|                          |           | Chakradhar-pore. | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.80                                  | ?  | 53.40                               |                |
|                          |           | Chetilla         | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.72                                  | ?  | 38.64                               |                |
|                          |           | Banaragura       | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | 1                     | 0.04              | ?                                     | ?  | 44.11                               |                |
|                          |           | Purulia          | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.86                                  | 3.19   | 28.53                               |                |
|                          |           | Goudipore        | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 0.81                                  | 3.77   | 30.88                               |                |
|                          |           | Kaymanath-pore.  | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 2.08                                  | ?  | ?                                   |                |
|                          |           | Barrabhoom       | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | 1.37                                  | ?  | 40.92                               |                |
|                          |           | Jhalua           | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | ?                                     | ?  | ?                                   |                |
|                          |           | Chas             | .....                   | .....                 | .....                 | .....                  | .....                    | .....                   | .....                 | Nil                   | Nil               | ?                                     | ?  | ?                                   |                |

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returning, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 8th November 1887.

**SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS  
TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE 4TH OF  
NOVEMBER 1887.**

At the close of the previous week north-east monsoon conditions had been established in Bengal; pressure was high, temperature was comparatively low, cloud proportion and humidity were small, while a steady northerly wind current prevailed over the whole province. On the 27th of October, however, weather conditions over the south of the Bay became decidedly disturbed, winds strengthened at Diamond Island, and it is probable a distinct barometric depression was in process of formation in the south east of the Bay. These conditions continued on the 28th, and on this day probably the depression had formed and had moved towards the west of the Bay, for on Saturday, the 29th, a distinct cyclonic storm appeared in the south-west corner of the Bay, the centre of which was some little distance off the coast between Madras and Negapatam. Information of the existence of the barometric depression was sent on this day to the Port Officers of all the important ports from Madras southwards, with the statement that the storm was not an intense one. On the 31st the diffused storm had advanced in a northerly direction, and its centre was nearly opposite Madras, and with the movement of the storm intimation to this effect was telegraphed to the Port Officers at the stations south of Madras, while the Port Officers at the coast ports from Madras up to Vizagapatam were warned of the existence of the depression and its movement. The storm was by no means an intense one, but of decidedly diffused nature, and as it approached the coast to the north of Madras, it commenced to fill up rapidly and became more diffused, and finally ceased to exist as a definite storm. With the disintegration of the storm weather conditions became unsettled and squally over a large part of the Bay, and along the west coast in particular strong winds, heavy rain, and in some cases almost stormy weather prevailed. As a matter of fact, the slight depression left after the disintegration of the small storm continued to exist off the Madras coast for several days and did not pass inland as is usually the case. On the other hand the disturbed conditions brought by the storm gradually extended northwards, till on October 31st rain commenced to fall in moderate quantities in Orissa. They again extended further, and on November 1st general rain commenced in East Bengal and over some parts of South-West Bengal. These disturbed conditions continued to exist over those districts for three or four days, but the disturbance never extended further into the interior of the province, and North Bengal, Behar and Chutia Nagpur have been practically rainless for the week. As the disturbed conditions drifted over the head of the Bay and over South Bengal winds became strongly easterly and south-easterly at many of the stations in the province, skies clouded over rapidly in the parts affected and became almost overcast, humidity became high and temperature increased, but during the last day or two of the week it was evident these disturbed conditions were being steadily driven back by the northerly wind current blowing over the interior of the province, and at its close conditions had almost again become of the normal north-east monsoon character.

*Pressure.*—The most noticeable change in the distribution of the barometric pressure during the past week was a distinct fall which accompanied the drifting of the disturbed conditions over South Bengal. As pointed out above, the conditions only affected the southern parts of the province, and the mean pressure for the week has been comparatively low over this area. Thus, while at False Point the mean pressure for the week has been 0·021 inch in excess of the normal, and at Calcutta 0·023 inch, at Purneah the excess has been 0·076 inch, at Durbhunga 0·081 inch, and at Dacca 0·073 inch. For the whole province, taking only those stations into consideration from which observations have been received for many years, the mean pressure has been 0·016 inch in excess of the normal. In Assam pressure has also averaged 0·016 inch in excess of the normal.

*Temperature.*—The defective temperature, which was a prominent feature during the previous week, has been continued in the present, though it has not been quite so strongly marked, and its distribution has been rather changed. In Orissa, South-West and East Bengal, and North Behar, the mean temperature has been below the normal by amounts ranging from 1° up to 1·5°, and in North Bengal, South Behar and Chutia Nagpur, the defects have ranged from 0·5° up to 1°. The mean temperature of the whole province for the week has been about 1° in defect of the normal.

In the previous week the distribution of temperature was such that the defects were most marked in the night or minimum temperatures, but in the present week this has been reversed, and while the night or minimum temperatures have differed comparatively slightly from the normal, the day or maximum temperatures have been very markedly in defect. This is shown in the following table, where the mean maximum and minimum temperatures for the week at nine typical stations in different districts of the province are given, compared with the normal for the period, and thus while the mean minimum or night temperature of the nine stations has been only 0·5° in defect of the normal, the mean day or maximum temperature at the same stations has been 2° in defect. At such stations as Burdwan and Cuttack the mean maximum temperature has been between 2° and 3° below the normal; at Calcutta and Dacca the defect has been more than 3°, and at Purneah it has equalled 4°.

Table showing the excess or defect of the actual mean temperature from the normal for the week ending the 4th November 1887.

|                    | Normal mean maximum temperature for the week ending 4th November. | Actual mean maximum temperature for the week ending 4th November 1887. | Excess or defect from normal mean. | Normal mean minimum temperature for the week ending 4th November. | Actual mean minimum temperature for the week ending 4th November 1887. | Excess or defect from the normal mean. | Normal mean daily temperature for the week ending the 4th November 1887. | Actual mean daily temperature for the week ending 4th November 1887. | Excess or defect from the normal mean. |
|--------------------|---|--|------------------------------------|---|--|--|--|--|--|
| Cuttack ...        | 88.5  | 84.2   | -4.3                               | 70.7  | 70.9   | +0.2                                   | 78.6   | 77.5   | -1.1                                   |
| Calcutta (Alipore) | 83.8  | 80.1   | -3.7                               | 70.4  | 70.7   | +0.3                                   | 77.1   | 75.4   | -1.7                                   |
| Dacca              | 86.4  | 85.9   | -0.5                               | 71.1  | 70.3   | -0.8                                   | 76.8   | 76.7   | -0.1                                   |
| Burdwan            | 85.4  | 82.7   | -2.7                               | 69.4  | 69.4   | 0.0                                    | 77.9   | 76.0   | -1.9                                   |
| Patna (Bankipore)  | 85.6  | 84.2   | -1.4                               | 65.2  | 65.3   | +0.1                                   | 75.4   | 75.8   | +0.4                                   |
| Cyca               | 84.2  | 81.8   | -2.4                               | 64.5  | 63.1   | -1.4                                   | 75.4   | 74.3   | -1.1                                   |
| Purneah            | 86.3  | 82.3   | -4.0                               | 63.1  | 63.0   | -0.1                                   | 75.3   | 73.7   | -1.6                                   |
| Hazrighat          | 80.1  | 81.3   | +1.2                               | 62.1  | 60.9   | -1.2                                   | 71.1   | 70.6   | -0.5                                   |
| Darjeeling         | 67.9  | 66.3   | -1.6                               | 41.1  | 43.3   | +2.2                                   | 61.0   | 49.8   | -11.2                                  |

In Assam temperature has averaged 1.6° below the normal.

**Rainfall.**—The causes which have produced the rainfall during the past week have already been described. North and South Behar and Chutia Nagpur have been quite rainless, and North Bengal has been practically rainless. South-West Bengal has received an average fall of 0.25 inch, which is practically equal to the normal fall for the period. Orissa has received an average fall of 1.10 inches, which is distinctly larger than the usual fall at this time, and finally, East Bengal has received an average fall of 2.40 inches, which is more than four times the normal amount for the period. In South-West Bengal the districts which have received the heaviest falls are the following :—Midnapore, Burdwan, Khoolna and Jessore. In Orissa the largest falls have been received in the Pooree and Outtack districts, while in East Bengal the following districts have received very heavy falls :—Chittagong (where Cox's Bazar on November 2nd received the excessive amount of .10.73 inches) Backergunge, Noakholly, Dacca and Tipperah.

The following table gives the summary of the temperature and rainfall data of each, of the seven meteorological divisions of the province for the week ending Friday, the 4th of November 1887 :—

| METEOROLOGICAL DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  | RAINFALL. |                 |            |                         |                                |            |                       |                 |                      |                 |
|---------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|-------------------------|--------------------------------|------------|-----------------------|-----------------|----------------------|-----------------|
|                           | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week.  |                 |            | Rainy days.             |                                |            | Since 1st of October. |                 | Since 15th May 1887. |                 |
|                           |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average.  | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.              | Normal average. | Average.             | Normal average. |
|                           |                               |                              |                         |                        |                       |  |           |                 |            |                         |                                |            |                       |                 |                      |                 |
| Orissa ... ..             | 87.9                          | 62.0                         | 82.3                    | 70.5                   | 76.4                  | -1.3   | 1.10      | 0.08            | +0.12      | 2.5                     | 1.4                            | +1.1       | 4.71                  | 6.84            | 43.03                | 53.68           |
| South-West Bengal ...     | 86.6                          | 61.7                         | 82.3                    | 68.3                   | 75.6                  | -1.3   | 0.25      | 0.27            | -0.02      | 0.5                     | 0.7                            | -0.2       | 3.44                  | 4.58            | 40.66                | 51.39           |
| East Bengal ... ..        | 87.5                          | 63.1                         | 82.1                    | 69.4                   | 75.8                  | -1.5   | 2.40      | 0.55            | +1.85      | 2.5                     | 0.9                            | +1.6       | 6.73                  | 5.80            | 35.10                | 73.20           |
| North Bengal ... ..       | 86.3                          | 59.7                         | 83.3                    | 64.4                   | 73.9                  | -0.5   | 0.02      | 0.12            | -0.10      | 0.1                     | 0.2                            | -0.1       | 3.65                  | 4.70            | 73.50                | 69.30           |
| North Behar ... ..        | 87.7                          | 56.9                         | 83.5                    | 62.9                   | 73.2                  | -1.0   | Nil       | 0.18            | -0.18      | 0.0                     | 0.2                            | -0.2       | 4.61                  | 3.52            | 51.99                | 47.66           |
| South Behar ... ..        | 87.9                          | 59.7                         | 84.4                    | 63.6                   | 74.0                  | -0.9   | Nil       | 0.10            | -0.10      | 0.0                     | 0.2                            | -0.2       | 3.14                  | 3.38            | 41.85                | 43.19           |
| Cox's Bazar ... ..        | 81.4†                         | 53.9†                        | 79.4†                   | 59.8†                  | 69.6†                 | -0.7†  | Nil       | 0.21            | -0.21      | 0.0                     | 0.2                            | -0.2       | 1.47                  | 3.36            | 44.56                | 48.41           |
| Assam: ... ..             | 80.6                          | 61.3                         | 82.3                    | 65.6                   | 74.0                  | -1.6   |           |                 |            |                         |                                |            |                       |                 |                      |                 |

\* Dehra not included.  
† Chyethama not included.

METEOROLOGICAL OFFICE, BENGAL ;  
The 8th November 1887.

A. PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal.

**Results of the Meteorological Observations taken at the Alipore Observatory from  
30th October to 5th November 1887.**

| Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 59° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain.            | WEATHER.                                 |
|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|------------------|--|
|       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |                  |  |
| 7.    | O               |                                     | Inches                               | O            | O        | O      | O        | O              | Inches          | O          | %         |                       |                 | Inches.          |  |
| 30th  | 141.6           | 3.7                                 | 29.931                               | 74.5         | 82.0     | 16.1   | 65.9     | 70.4           | 0.690           | 68.2       | 81        | N and ESE ...         | 41              | Nil              | Chiefly cloudy, o, $\equiv$ , $\Delta$ . |
| 31st  | 110.0           | Nil                                 | .906                                 | 75.0         | 79.7     | 7.2    | 72.5     | 72.6           | .757            | 70.9       | 85        | ENE and NE by E       | 73              | 0.02             | Cloudy, o, g, d.                         |
| 1st   | 123.9           | ...                                 | .863                                 | 75.2         | 77.7     | 4.8    | 72.9     | 72.1           | .748            | 70.6       | 86        | ENE and NE ...        | 174             | Not measureable. | Cloudy, o, g, d.                         |
| 2nd   | 110.0           | 0.2                                 | .891                                 | 75.1         | 78.5     | 7.5    | 71.0     | 72.0           | .743            | 70.4       | 85        | NNE and NW ...        | 90              | Nil              | Cloudy,                                  |
| 3rd   | 94.5            | 0.1                                 | .956                                 | 75.4         | 78.5     | 5.8    | 72.7     | 72.8           | .774            | 71.6       | 88        | NW and SE ...         | 60              | 0.24             | Cloudy, o, g, p                          |
| 4th   | 134.5           | 8.3                                 | .981                                 | 75.9         | 82.5     | 12.0   | 70.5     | 70.6           | .677            | 67.6       | 77        | SE and NNE ...        | 86              | Nil              | Partially cloud o, g.                    |
| 5th   | 137.5           | 10.7                                | .987                                 | 72.5         | 81.6     | 17.1   | 64.5     | 64.7           | .506            | 59.2       | 63        | NNE and NNW ...       | 107             | .....            | Clear, $\Delta$ .                        |

|  |     |     |     |                  |
|--|-----|-----|-----|------------------|
| The mean pressure of the seven days  | ... | ... | ... | Inches.          |
| The average pressure of the corresponding period for 24 years, S. G.'s Office          | ... | ... | ... | 29.931           |
| The total number of hours of bright sunshine   | ... | ... | ... | Hours.           |
| The maximum possible number of hours of sunshine                                       | ... | ... | ... | 23.0             |
|  |     |     |     | 78.7             |
|  |     |     |     | O                |
| The mean temperature of the seven days   | ... | ... | ... | 74.9             |
| The average temperature of the corresponding period for 24 years, S. G.'s Office       | ... | ... | ... | 78.5             |
| The extreme variation of temperature   | ... | ... | ... | 18.0             |
| The maximum temperature  | ... | ... | ... | 82.5             |
|  |     |     |     | Miles.           |
| The highest velocity of the wind in one hour   | ... | ... | ... | 13               |
|  |     |     |     | lbs.             |
| The highest pressure of wind on one square foot  | ... | ... | ... | Not measureable. |
|  |     |     |     | %.               |
| The mean relative humidity   | ... | ... | ... | 81               |
| The average relative humidity of the corresponding period for 24 years, S. G.'s Office | ... | ... | ... | 74               |
|  |     |     |     | Inches.          |
| The total fall of rain from 30th October to 5th November 1887                          | ... | ... | ... | 0.26             |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | 0.38             |
| The total fall from 1st January to 5th November 1887                                   | ... | ... | ... | 58.07            |
| The average fall of the corresponding period for 24 years, S. G.'s Office              | ... | ... | ... | 64.73            |

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, from observations made at 6h, 10h, 16h and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet from the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, held at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy, d drizzling rain, p passing temporary showers,  $\Delta$  dew,  $\equiv$  fog.

A. PEDLER,  
for Offg. Meteorological Reporter to the Govt. of India.

**Abstract of the results of the Thermometric Observations taken at the Meteorological Office, Chowringhee, in the month of October 1887.**

|   |     |     |      |         |
|---|-----|-----|------|---------|
| The mean temperature during the month                         | ... | ... | 79.2 | Date.   |
| The highest temperature during the month                      | ... | ... | 94.0 | 6th     |
| The lowest temperature during the month                       | ... | ... | 68.9 | 27th    |
| The range of temperature during the month                     | ... | ... | 30.1 |         |
| The mean daily range of temperature during the month          | ... | ... | 14.9 |         |
| The greatest range of temperature in one day during the month | ... | ... | 21.8 | 29th    |
|   |     |     |      |         |
| The mean humidity during the month                            | ... | ... | 80   | %       |
| The mean vapour tension during the month                      | ... | ... | 80.2 | Inches. |
| The total rainfall of the month                               | ... | ... | 2.97 |         |
| The greatest fall in 24 hours                                 | ... | ... | 1.30 | 7th     |
| The number of rainy days in the month                         | ... | ... | 7    |         |

A. PEDLER,

*for Offg. Meteorological Reporter to the Govt. of India.*

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 7th November 1887.

**Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 30th October to 5th November 1887.**

| MONTH.   | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRI.     |            |           | Rain.   |
|----------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|          |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.    |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| October  | 30th  | 74.7         | 83.9     | 18.0   | 65.9     | 70.5           | .691            | 68.2       | 80        | Nil.    |
| "        | 31st  | 76.4         | 79.9     | 7.3    | 72.6     | 73.9           | .804            | 72.7       | 88        | —       |
| November | 1st   | 75.3         | 78.2     | 5.4    | 72.8     | 72.4           | .758            | 70.9       | 86        | 0.02    |
| "        | 2nd   | 74.2         | 79.1     | 8.8    | 70.8     | 72.3           | .768            | 71.3       | 90        | —       |
| "        | 3rd   | 76.2         | 79.9     | 7.1    | 72.8     | 73.6           | .795            | 72.3       | 88        | 0.03    |
| "        | 4th   | 77.2         | 84.9     | 14.7   | 70.2     | 71.3           | .688            | 68.1       | 73        | —       |
| "        | 5th   | 74.3         | 84.1     | 19.0   | 65.1     | 66.1           | .533            | 60.7       | 62        | —       |

|   |     |     |     |      |
|---|-----|-----|-----|------|
| The mean temperature of the seven days                        | ... | ... | ... | 75.5 |
| The extreme variation of temperature                          | ... | ... | ... | 19.8 |
| The maximum temperature                                       | ... | ... | ... | 84.9 |
|   |     |     |     |      |
| The mean relative humidity                                    | ... | ... | ... | 81   |
|   |     |     |     |      |
| The total fall of rain from 30th October to 5th November 1887 | ... | ... | ... | 0.05 |

The mean temperature and humidity are obtained by applying to the mean of the 10th, 16th, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,  
The 7th November 1887.

A. PEDLER,

*for Offg. Meteorological Reporter to the Govt. of India.*



MEMORANDUM.

THE returns received from the principal Municipalities in Bengal during the week ending 8th October 1887, disclose the following results:—

1. That during the week in question births and deaths were recorded in the proportions, respectively, of 25·8 and 33·1 per 1,000 of population, as opposed to 15·6 and 22·9 per 1,000, respectively, during the preceding week ending 1st October, indicating a very considerable advance in the registration of both.

2. That they were registered in the highest proportions by the following Municipalities:—

| <i>Births.</i> |     |                  | <i>Deaths.</i>      |     |                  |
|----------------|-----|------------------|---------------------|-----|------------------|
|                |     | Ratio per mille. |                     |     | Ratio per mille. |
| Bhagulpore     | ... | 68·8             | Puri                | ... | 67·1             |
| Gya            | ... | 41·7             | Bhagulpore          | ... | 58·8             |
| Narainganj     | ... | 41·3             | Burdwan             | ... | 56·4             |
| Durbhanga      | ... | 38·5             | Gya                 | ... | 53·3             |
| Uttorpara      | ... | 37·7             | Bali                | ... | 49·1             |
| Chittagong     | ... | 35·2             | Monghyr             | ... | 46·1             |
| Purneah        | ... | 34·6             | Serampore           | ... | 45·1             |
| Beauleah       | ... | 34·2             | Suburbs of Calcutta | ... | 43·2             |
| Arrah          | ... | 33·5             | Beauleah            | ... | 42·0             |
| Monghyr        | ... | 33·4             | Kishnaghur          | ... | 37·8             |
| Darjiling      | ... | 32·6             | Chittagong          | ... | 35·2             |
| Patna          | ... | 29·2             | Hughli              | ... | 33·6             |
|                |     |                  | Darjiling           | ... | 32·6             |
|                |     |                  | Purneah             | ... | 31·1             |

3. That the mortality from the specific death-causes stood as follows

|                  |     |     | Ratio per mille during the weeks ending— |                   |
|------------------|-----|-----|--|-------------------|
|                  |     |     | 8th October 1887.                        | 1st October 1887. |
| Cholera          | ... | ... | 4·0                                      | 1·2               |
| Small-pox        | ... | ... | 1  | ...               |
| Fever            | ... | ... | 13·5                                     | 10·4              |
| Bowel-complaints | ... | ... | 5·1                                      | 4·1               |
| Injury           | ... | ... | 6  | 4                 |
| Other causes     | ... | ... | 9·7                                      | 6·8               |

denoting that, in comparison with the preceding week, there occurred much increase of mortality from all the diseases excepting small-pox and injury.

4. That the following Municipalities suffered pre-eminently from cholera, fever, bowel-complaints, and the maladies grouped under the head of "Other causes," the rest of the diseases above named not demanding notice:—

| <i>Cholera.</i>     |                  | <i>Fever.</i> |                  | <i>Bowel-complaints.</i> |                  | <i>Other Causes.</i> |                  |
|---------------------|------------------|---------------|------------------|--------------------------|------------------|----------------------|------------------|
|                     | Ratio per mille. |               | Ratio per mille. |                          | Ratio per mille. |                      | Ratio per mille. |
| Puri                | 21·0             | Burdwan       | 36·6             | Darjiling                | 19·6             | Gya                  | 26·0             |
| Hughli              | 9·4              | Bhagulpore    | 29·9             | Puri                     | 18·8             | Puri                 | 21·0             |
| Suburbs of Calcutta | 6·2              | Kishnaghur    | 28·4             | Bali                     | 14·0             | Serampore            | 19·6             |
| Howrah              | 5·7              | Bali          | 24·5             | Serampore                | 13·7             | Bhagulpore           | 16·3             |
| Monghyr             | 5·4              | Beauleah      | 21·0             | Monghyr                  | 10·8             | Beauleah             | 15·8             |
| Patna               | 5·2              | Purneah       | 20·8             |                          |                  | Chittagong           | 14·1             |
| Bhagulpore          | 4·5              |               |                  |                          |                  | Suburbs of Calcutta  | 13·8             |
| Durbhanga           | 3·1              |               |                  |                          |                  | Burdwan              | 12·2             |
| Gya                 | 2·7              |               |                  |                          |                  |                      |                  |

5. That the death-rates, in relation to *Sex*, *Class* and *Age*, were returned at the rates noted below:—

| <i>According to Sex.</i>                        |                  | <i>According to Class.</i> |                  | <i>According to Age.</i> |                  |
|---|------------------|----------------------------|------------------|--------------------------|------------------|
|   | Ratio per mille. |                            | Ratio per mille. |                          | Ratio per mille. |
| Males   | 35·7             | Christians                 | 21·7             | Under 1 year             | 248·7            |
| Females   | 30·1             | Hindus                     | 35·3             | 1 and under 5 years      | 55·5             |
| Ratio of male deaths to every 100 female deaths | 134              | Mahomedans                 | 28·7             | 5 " " 10 "               | 20·6             |
|   |                  |                            |                  | 10 " " 15 "              | 13·6             |
|   |                  |                            |                  | 15 " " 20 "              | 19·9             |
|   |                  |                            |                  | 20 " " 30 "              | 22·1             |
|   |                  |                            |                  | 30 " " 40 "              | 21·6             |
|   |                  |                            |                  | 40 " " 50 "              | 23·3             |
|   |                  |                            |                  | 50 " " 60 "              | 34·4             |
|   |                  |                            |                  | 60 years and upwards     | 74·3             |

R. LIDDERDALE, M.D., *Deputy Surgeon-General,*

*The 1st November 1887.*

*Sanitary Commissioner for Bengal.*





MEMORANDUM.

From the annexed table, exhibiting the vital statistics of the principal Municipalities in Bengal for the week ending 15th October 1887, it appears—

1. That births and deaths were registered in these Municipalities at the rates, respectively, of 22·6 and 28· per 1,000 of population, against 25·8 and 33·1 per 1,000, respectively, during the preceding week ending 8th October, indicating a large reduction in the registration of both the events.

2. That in the following Municipalities, births and deaths were reported to have been recorded at the highest rates :—

| Births.    |     |                  | Deaths.             |     |                  |
|------------|-----|------------------|---------------------|-----|------------------|
|            |     | Ratio per mille. |                     |     | Ratio per mille. |
| Narainganj | ... | 53·8             | Puri                | ... | 54·6             |
| Arrah      | ... | 49·0             | Serampore           | ... | 53·0             |
| Monghyr    | ... | 39·8             | Gya                 | ... | 49·2             |
| Serampore  | ... | 37·3             | Suburbs of Calcutta | ... | 44·3             |
| Durbhanga  | ... | 37·0             | Narainganj          | ... | 37·2             |
| Gya        | ... | 36·2             | Kishnaghur          | ... | 34·1             |
| Bhagulpore | ... | 33·5             | Bhagulpore          | ... | 29·0             |
| Darjiling  | ... | 32·6             |                     |     |                  |
| Chittagong | ... | 30·5             |                     |     |                  |
| Ranaghat   | ... | 29·9             |                     |     |                  |

3. That, as compared with the results of the preceding week, there was a diminution of mortality, to a greater or less extent, from all the diseases (excepting small-pox, the death-rate from which presented no variation), particularly from fever :—

|                  | Ratio per mille during the weeks ending— |                |
|------------------|--|----------------|
|                  | 15th Oct. 1887.                          | 8th Oct. 1887. |
| Cholera          | 3·2                                      | 4·0            |
| Small-pox        | ·1                                       | ·1             |
| Fever            | 10·9                                     | 13·5           |
| Bowel-complaints | 4·6                                      | 5·1            |
| Injury           | ·4                                       | ·6             |
| Other causes     | 8·8                                      | 9·7            |

4. That while the mortality from small-pox and injury was nowhere high, the Municipalities named below were reported to have returned the highest death-rates from the rest of the diseases indicated in the foregoing table :—

| Cholera.            |                  | Fever.     |                  | Bowel-complaints. |                  | Other causes.       |                  |
|---------------------|------------------|------------|------------------|-------------------|------------------|---------------------|------------------|
|                     | Ratio per mille. |            | Ratio per mille. |                   | Ratio per mille. |                     | Ratio per mille. |
| Puri                | 8·4              | Kishnaghur | 26·5             | Serampore         | 17·7             | Gya                 | 22·5             |
| Suburbs of Calcutta | 6·4              | Darjiling  | 26·1             | Puri              | 12·6             | Puri                | 16·8             |
| Howrah              | 5·7              | Beauleah   | 23·6             | Gya               | 10·9             | Narainganj          | 16·5             |
| Monghyr             | 5·4              |            |                  |                   |                  | Suburbs of Calcutta | 15·9             |
| Durbhanga           | 4·7              |            |                  |                   |                  | Serampore           | 13·7             |
| Patna               | 3·9              |            |                  |                   |                  |                     |                  |

5. That the death-rates according to Sex, Class and Age stood as shown below :—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |  |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|--|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |  | Ratio per mille. |
| Males   | ... | 28·8             | Christians          | ... | 17·4             | Under 1 year         |  | 233·2            |
| Females   | ... | 27·0             | Hindus              | ... | 28·8             | 1 and under 5 years  |  | 37·0             |
| Ratio of male deaths to every 100 female deaths | 120 |                  | Mahomedans          | ... | 26·5             | 5     10     "       |  | 17·5             |
|   |     |                  | Buddhists           | ... | 24·2             | 10    15    "        |  | 10·9             |
|   |     |                  |                     |     |                  | 15    20    "        |  | 20·9             |
|   |     |                  |                     |     |                  | 20    30    "        |  | 17·7             |
|   |     |                  |                     |     |                  | 30    40    "        |  | 18·3             |
|   |     |                  |                     |     |                  | 40    50    "        |  | 22·1             |
|   |     |                  |                     |     |                  | 50    60    "        |  | 27·3             |
|   |     |                  |                     |     |                  | 60 years and upwards |  | 64·0             |

R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

The 3rd November 1887.

| DISTRICTS.           | NAMES OF MUNICI-<br>PALITIES. | POPULATION. |          |           | BIRTHS.    |          |  | DISEASE.     |            |        |                   |         |                 |  |   |        |          | SEX.   |          |  |  |  |
|----------------------|-------------------------------|-------------|----------|-----------|------------|----------|--|--------------|------------|--------|-------------------|---------|-----------------|--|---|--------|----------|--------|----------|--|--|--|
|                      |                               | Males.      | Females. | Total.    | NUMBER OF— |          | Ratio of male births to every 100 female births. | DEATHS FROM— |            |        |                   |         |                 | RATIO PER 1,000 OF POPULATION PER ANNUM. |   |        |          | Males. | Females. |  |  |  |
|                      |                               |             |          |           | Males.     | Females. |  | Cholera.     | Small-pox. | Fever. | Bowel-complaints. | Injury. | Other diseases. | All causes.                              | Ratio of deaths per 1,000 of population per annum in the previous week. | Males. | Females. |        |          |  |  |  |
|                      |                               |             |          |           |            |          |  |              |            |        |                   |         |                 |  |   |        |          |        |          |  |  |  |
| Baran                | ...                           | 18,043      | 16,017   | 34,060    | 2          | 3        | 5  | 30           | 6          | 7      | 6                 | 1       | 1               | 1  | 1   | 1      | 1        | 1      | 1        |  |  |  |
| Midnapore            | ...                           | 16,917      | 16,033   | 32,950    | 5          | 4        | 9  | 77           | 62         | 139    | 125               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Hughli and Chinsurah | ...                           | 19,178      | 19,846   | 39,024    | 8          | 6        | 14   | 107          | 81         | 143    | 133               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Barrackpore          | ...                           | 13,339      | 12,937   | 26,276    | 7          | 12       | 19   | 137          | 236        | 378    | 55                | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Uttarpara            | ...                           | 5,646       | 2,464    | 8,110     | 1          | 1        | 2  | 94           | 94         | 180    | 109               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Howrah               | ...                           | 53,158      | 37,660   | 90,818    | 15         | 13       | 28   | 86           | 74         | 100    | 113               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Bali                 | ...                           | 7,536       | 6,579    | 14,115    | 1          | 2        | 3  | 35           | 70         | 105    | 50                | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Suburbs of Calcutta  | ...                           | 147,201     | 104,231  | 251,432   | 53         | 55       | 108  | 113          | 114        | 230    | 101               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Kishoreganj          | ...                           | 13,253      | 14,214   | 27,467    | 2          | 6        | 8  | 38           | 113        | 151    | 33                | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Ranghat              | ...                           | 4,425       | 4,655    | 9,080     | 2          | 3        | 5  | 119          | 130        | 209    | 60                | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Santipore            | ...                           | 13,708      | 15,979   | 29,687    | 5          | 1        | 6  | 87           | 17         | 105    | 500               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Jessore              | ...                           | 4,830       | 3,605    | 8,435     | ...        | ...      | ...  | ...          | ...        | ...    | ...               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Rampore Beaulah      | ...                           | 10,766      | 9,025    | 19,791    | 5          | 6        | 11   | 131          | 155        | 250    | 83                | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Darjiling            | ...                           | 5,925       | 2,947    | 8,872     | 4          | 1        | 5  | 261          | 65         | 326    | 400               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Dacca                | ...                           | 42,752      | 37,379   | 80,131    | 5          | 2        | 7  | 32           | 13         | 15     | 250               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Narainjan            | ...                           | 7,009       | 4,966    | 11,975    | 10         | 3        | 13   | 114          | 124        | 258    | 333               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Chittagong           | ...                           | 13,340      | 8,790    | 22,130    | 7          | 6        | 13   | 104          | 131        | 305    | 118               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Comillah             | ...                           | 8,168       | 5,335    | 13,503    | 1          | 1        | 2  | 83           | 36         | 77     | 140               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Patna City           | ...                           | 75,703      | 81,475   | 157,178   | 46         | 27       | 73   | 150          | 97         | 237    | 170               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Gya                  | ...                           | 35,260      | 37,531   | 72,791    | 24         | 20       | 44   | 164          | 194        | 362    | 92                | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Arrah                | ...                           | 20,560      | 22,506   | 43,066    | 27         | 13       | 40   | 323          | 107        | 430    | 132               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Moussourie           | ...                           | 23,084      | 19,685   | 42,769    | 3          | 3        | 6  | 36           | ...        | ...    | ...               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Durbandha            | ...                           | 33,774      | 32,322   | 66,096    | 27         | 20       | 47   | 212          | 157        | 370    | 135               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Chupra               | ...                           | 26,044      | 27,205   | 53,249    | 3          | 4        | 7  | 20           | 39         | 63     | 75                | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Bhagalpore           | ...                           | 29,640      | 27,813   | 57,453    | 21         | 16       | 37   | 180          | 145        | 335    | 131               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Monghyr              | ...                           | 23,154      | 20,304   | 43,458    | 30         | 24       | 54   | 181          | 217        | 398    | 53                | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Purneah              | ...                           | 8,463       | 6,553    | 15,016    | 3          | 3        | 6  | 104          | 184        | 209    | 100               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| Puri                 | ...                           | 13,247      | 11,557   | 24,804    | 5          | 1        | 6  | 63           | 21         | 84     | 300               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |
| TOTAL                | ...                           | 702,880     | 619,091  | 1,321,971 | 313        | 263      | 576  | 133          | 103        | 226    | 119               | ...     | ...             | ...                                      | ...   | ...    | ...      | ...    | ...      |  |  |  |

Special census of the Europeans in the Municipalities was recently taken, as the census of this section of the community taken in February 1881, was not reliable owing to the Europeans being at a minimum in that month. The number of the natives as before, as it was not necessary to recalculate them. The figures have consequently been calculated on the revised population under all heads in the above table, except "Age," the ratios under which have been omitted, inasmuch as the census of the Europeans added to cannot be employed as a basis of calculation owing to the results of the census under this head not having been recouped under the authorized form of age classification.

MORTALITY ACCORDING TO—

Age.

Class.

RATIO PER 1,000 OF POPULATION PER ANNUM.

DEATHS AMONG—

RATIO PER 1,000 OF POPULATION PER ANNUM.

NAMES OF MUNICIPALITIES.

DISTRICTS.

| Districts.          | Municipalities.      | Deaths among— |         |            |                |             |         |            |                |               |                      | Deaths.               |                        |                        |                        |                        |                        |                        |                  |               |                      | Ratio per 1,000 of population per annum. |                        |                        |                        |                        |                        |                        |                  |      |       |
|---------------------|----------------------|---------------|---------|------------|----------------|-------------|---------|------------|----------------|---------------|----------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------|---------------|----------------------|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------|------|-------|
|                     |                      | Christians.   | Hindus. | Buddhists. | Other classes. | Christians. | Hindus. | Buddhists. | Other classes. | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and up. | Under 1 year. | 1 and under 5 years. | 5 and under 10 years.                    | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and up. |      |       |
| Burdwan             | Burdwan              | 5             | 5       | 5          | 5              | 4           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 92.2                 | 23.3                                     | 16.6                   | 16.6                   | 16.6                   | 16.6                   | 16.6                   | 16.6                   | 16.6             | 16.6 | 35.1  |
| Midnapore           | Midnapore            | 13            | 13      | 13         | 13             | 2           | 2       | 2          | 2              | 2             | 2                    | 2                     | 2                      | 2                      | 2                      | 2                      | 2                      | 2                      | 2                | 2             | 140.0                | 31.2                                     | 31.2                   | 31.2                   | 31.2                   | 31.2                   | 31.2                   | 31.2                   | 31.2             | 31.2 | 25.3  |
| Hughli              | Hughli and Chinsurah | 13            | 13      | 13         | 13             | 2           | 2       | 2          | 2              | 2             | 2                    | 2                     | 2                      | 2                      | 2                      | 2                      | 2                      | 2                      | 2                | 2             | 110.3                | 14.9                                     | 17.6                   | 17.6                   | 17.6                   | 17.6                   | 17.6                   | 17.6                   | 17.6             | 17.6 | 20.7  |
| Serampore           | Serampore            | 26            | 26      | 26         | 26             | 5           | 5       | 5          | 5              | 5             | 5                    | 5                     | 5                      | 5                      | 5                      | 5                      | 5                      | 5                      | 5                | 5             | 223.0                | 41.4                                     | 70.3                   | 70.3                   | 70.3                   | 70.3                   | 70.3                   | 70.3                   | 70.3             | 70.3 | 74.8  |
| Howrah              | Howrah               | 23            | 23      | 23         | 23             | 5           | 5       | 5          | 5              | 5             | 5                    | 5                     | 5                      | 5                      | 5                      | 5                      | 5                      | 5                      | 5                | 5             | 176.4                | 16.5                                     | 16.5                   | 16.5                   | 16.5                   | 16.5                   | 16.5                   | 16.5                   | 16.5             | 16.5 | 41.6  |
| Bali                | Bali                 | 3             | 3       | 3          | 3              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 23.3                 | 16.5                                     | 16.5                   | 16.5                   | 16.5                   | 16.5                   | 16.5                   | 16.5                   | 16.5             | 16.5 | 71.0  |
| Suburbs of Calcutta | Suburbs of Calcutta  | 119           | 119     | 119        | 119            | 15          | 15      | 15         | 15             | 15            | 15                   | 15                    | 15                     | 15                     | 15                     | 15                     | 15                     | 15                     | 15               | 15            | 57.9                 | 15.8                                     | 46.2                   | 46.2                   | 46.2                   | 46.2                   | 46.2                   | 46.2                   | 46.2             | 46.2 | 96.0  |
| Kishinagar          | Kishinagar           | 8             | 8       | 8          | 8              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 21.1                 | 90.8                                     | 75.3                   | 75.3                   | 75.3                   | 75.3                   | 75.3                   | 75.3                   | 75.3             | 75.3 | 30.1  |
| Ranaghat            | Ranaghat             | 2             | 2       | 2          | 2              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 61.5                 | 13.3                                     | 46.7                   | 46.7                   | 46.7                   | 46.7                   | 46.7                   | 46.7                   | 46.7             | 46.7 | 105.9 |
| Santipore           | Santipore            | 8             | 8       | 8          | 8              | 2           | 2       | 2          | 2              | 2             | 2                    | 2                     | 2                      | 2                      | 2                      | 2                      | 2                      | 2                      | 2                | 2             | 210.5                | 50.0                                     | 78.2                   | 78.2                   | 78.2                   | 78.2                   | 78.2                   | 78.2                   | 78.2             | 78.2 | 216.0 |
| Jessore             | Jessore              | 3             | 3       | 3          | 3              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 429.7                | 80.9                                     | 10.5                   | 10.5                   | 10.5                   | 10.5                   | 10.5                   | 10.5                   | 10.5             | 10.5 | 79.8  |
| Rajshahye           | Rajshahye            | 3             | 3       | 3          | 3              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 100.6                | 7.1                                      | 6.8                    | 6.8                    | 6.8                    | 6.8                    | 6.8                    | 6.8                    | 6.8              | 6.8  | 11.0  |
| Darjiling           | Darjiling            | 3             | 3       | 3          | 3              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 331.9                | 10.5                                     | 49.9                   | 49.9                   | 49.9                   | 49.9                   | 49.9                   | 49.9                   | 49.9             | 49.9 | 130.7 |
| Decca               | Decca                | 14            | 14      | 14         | 14             | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 92.4                 | 63.9                                     | 11.2                   | 11.2                   | 11.2                   | 11.2                   | 11.2                   | 11.2                   | 11.2             | 11.2 | 79.8  |
| Narainganj          | Narainganj           | 5             | 5       | 5          | 5              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 100.6                | 7.1                                      | 6.8                    | 6.8                    | 6.8                    | 6.8                    | 6.8                    | 6.8                    | 6.8              | 6.8  | 11.0  |
| Chittagong          | Chittagong           | 2             | 2       | 2          | 2              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 331.9                | 10.5                                     | 49.9                   | 49.9                   | 49.9                   | 49.9                   | 49.9                   | 49.9                   | 49.9             | 49.9 | 130.7 |
| Comillah            | Comillah             | 2             | 2       | 2          | 2              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 92.4                 | 63.9                                     | 11.2                   | 11.2                   | 11.2                   | 11.2                   | 11.2                   | 11.2                   | 11.2             | 11.2 | 79.8  |
| Patna               | Patna City           | 57            | 57      | 57         | 57             | 7           | 7       | 7          | 7              | 7             | 7                    | 7                     | 7                      | 7                      | 7                      | 7                      | 7                      | 7                      | 7                | 7             | 181.0                | 24.7                                     | 10.8                   | 10.8                   | 10.8                   | 10.8                   | 10.8                   | 10.8                   | 10.8             | 10.8 | 56.3  |
| Gya                 | Gya                  | 55            | 55      | 55         | 55             | 7           | 7       | 7          | 7              | 7             | 7                    | 7                     | 7                      | 7                      | 7                      | 7                      | 7                      | 7                      | 7                | 7             | 493.9                | 57.3                                     | 23.2                   | 23.2                   | 23.2                   | 23.2                   | 23.2                   | 23.2                   | 23.2             | 23.2 | 121.3 |
| Shahabad            | Shahabad             | 18            | 18      | 18         | 18             | 3           | 3       | 3          | 3              | 3             | 3                    | 3                     | 3                      | 3                      | 3                      | 3                      | 3                      | 3                      | 3                | 3             | 365.4                | 35.2                                     | 30.7                   | 30.7                   | 30.7                   | 30.7                   | 30.7                   | 30.7                   | 30.7             | 30.7 | 54.3  |
| Monterpore          | Monterpore           | 3             | 3       | 3          | 3              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 12.9                 | 12.9                                     | 13.1                   | 13.1                   | 13.1                   | 13.1                   | 13.1                   | 13.1                   | 13.1             | 13.1 | 21.4  |
| Durranga            | Durranga             | 25            | 25      | 25         | 25             | 6           | 6       | 6          | 6              | 6             | 6                    | 6                     | 6                      | 6                      | 6                      | 6                      | 6                      | 6                      | 6                | 6             | 200.4                | 41.0                                     | 6.6                    | 6.6                    | 6.6                    | 6.6                    | 6.6                    | 6.6                    | 6.6              | 6.6  | 49.3  |
| Chupra              | Chupra               | 2             | 2       | 2          | 2              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 36.0                 | 8.4                                      | 8.4                    | 8.4                    | 8.4                    | 8.4                    | 8.4                    | 8.4                    | 8.4              | 8.4  | 44.3  |
| Bhagalpore          | Bhagalpore           | 24            | 24      | 24         | 24             | 9           | 9       | 9          | 9              | 9             | 9                    | 9                     | 9                      | 9                      | 9                      | 9                      | 9                      | 9                      | 9                | 9             | 301.9                | 67.1                                     | 8.9                    | 8.9                    | 8.9                    | 8.9                    | 8.9                    | 8.9                    | 8.9              | 8.9  | 72.3  |
| Monghyr             | Monghyr              | 22            | 22      | 22         | 22             | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 35.0                 | 7.4                                      | 9.1                    | 9.1                    | 9.1                    | 9.1                    | 9.1                    | 9.1                    | 9.1              | 9.1  | 145.9 |
| Purneah             | Purneah              | 4             | 4       | 4          | 4              | 1           | 1       | 1          | 1              | 1             | 1                    | 1                     | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      | 1                | 1             | 35.0                 | 23.9                                     | 47.3                   | 47.3                   | 47.3                   | 47.3                   | 47.3                   | 47.3                   | 47.3             | 47.3 | 182.0 |
| Puri                | Puri                 | 26            | 26      | 26         | 26             | 3           | 3       | 3          | 3              | 3             | 3                    | 3                     | 3                      | 3                      | 3                      | 3                      | 3                      | 3                      | 3                | 3             | 514.9                | 115.7                                    | 37.0                   | 10.9                   | 26.9                   | 17.7                   | 18.2                   | 108.6                  | 175.1            | 27.3 | 64.9  |
| TOTAL               | TOTAL                | 4             | 4       | 4          | 4              | 136         | 78      | 44         | 31             | 40            | 92                   | 50                    | 68                     | 50                     | 68                     | 50                     | 68                     | 50                     | 68               | 50            | 233.3                | 37.0                                     | 17.5                   | 10.9                   | 26.9                   | 17.7                   | 18.2                   | 108.6                  | 175.1            | 27.3 | 64.9  |



## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

## ORISSA COAST CANAL.

LENGTH OF CANAL OPEN, 97½ MILES.

Statement showing Quantities of Goods carried during the month of September 1887.

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |                  |                      |           | PRIVATE..              |           | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|------------------|----------------------|-----------|------------------------|-----------|----------|
|                           |                                   | Quantity—Tons.                |                  |                      | Value.    | Quantity.              | Value.    |          |
|                           |                                   | Up.                           | Down.            | Total.               | Rupees.   | Tons.                  | Rupees.   |          |
| 168                       | 1. Grain ...                      | 1,428                         | 57               | 1,485                | 40,907    | 1,485                  | 40,907    |          |
| 2                         | 2. Cotton ...                     | 1                             | .....            | 1                    | 480       | 1                      | 480       |          |
| 8                         | 3. Oilseeds ...                   | 112                           | .....            | 112                  | 9,360     | 112                    | 9,360     |          |
| 37                        | 4. Salt ...                       | 1                             | 202              | 203                  | 14,112    | 203                    | 14,112    |          |
| 2                         | 5. Piece-goods ...                | .....                         | 4                | 4                    | 2,800     | 4                      | 2,800     |          |
| 2                         | 6. Metal ...                      | .....                         | 4                | 4                    | 650       | 2                      | 500       |          |
| 7                         | 7. Buildingmaterials ...          | 9                             | 12               | 21                   | 267       | 21                     | 267       |          |
| 451                       | 8. Miscellaneous ...              | 64                            | 333              | 397                  | 42,854    | 397                    | 42,854    |          |
| 7                         | 9. Fuel ...                       | 3                             | 47               | 50                   | 1,282     | 50                     | 1,282     |          |
| 263 rafts                 | 10. Timber ...                    | 3,704 c. ft.                  | 12 c. ft.        | 3,716 c. ft.         | 3,282     | 3,716 c. ft.           | 3,282     |          |
| 1 raft                    | 11. Bamboos ...                   | .....                         | 150 „            | 150 „                | 5         | 150 „                  | 5         |          |
| 684 & 264 rafts           | 12. Total ...                     | 1,618 & 3,704 c. ft.          | 659 & 162 c. ft. | 2,277 & 3,866 c. ft. | } 115,999 | { 2,275 & 3,866 c ft } | } 115,849 |          |
| 576 & 9 rafts             | 13. Total of same month last year | 1,097 & 205 c. ft.            | 447 & 30 c. ft.  | 1,544 & 235 c. ft.   | } 84,089  | { 1,544 & 235 c. ft. } | } 84,089  |          |

| Up.       | Down.     | Total.     | Rs. A. P.   |  |
|-----------|-----------|------------|---|--|
| 309       | 375       | 684        | Total tollage of month—<br>24+25+26 ... 3,467 12 3              |  |
| 106       | 85        | 191        | Total tollage of same month last year ... 1,571 6 6             |  |
| 3,362     | 2,506     | 5,868      | Memorandum of Tollage.  |  |
| 930       | 921       | 1,851      |   |  |
| 104,762   | 88,578    | 193,340    |   |  |
| 51,049    | 61,663    | 1,12,712   |   |  |
| 1,539     | 1,859     | 3,398      | Rs. A. P.   |  |
| .....     | 150       | 150        | 1. Balance not recovered on the 1st of the month ... 1,001 11 9 |  |
| 3,704     | 12        | 3,716      | 2. Tollage per month ... 3,467 12 3                             |  |
| 3,246     | 41        | 3,287      |   |  |
| 1,676-5-3 | 1,369-6-0 | 3,045-11-3 | 3. Total ... 4,469 8 0  |  |
| 166-13-0  | 193-2-0   | 359-15-0   | 4. Amount paid into treasury during the month ... 1,690 0 9     |  |
| 61-10-0   | 0-8-0     | 62-2-0     |   |  |
| .....     | .....     | 0-0-3      | 5. Balance due at the end of the month ... 2,779 7 3            |  |
| .....     | .....     | 1-9-9      |   |  |

Abstract for the month of September 1887, as compared with the corresponding month of the previous year.

|                | 1887-88.          |                      | 1886-87.          |                      |
|----------------|-------------------|----------------------|-------------------|----------------------|
|                | During the month. | To end of the month. | During the month. | To end of the month. |
|                | Rs. A. P.         | Rs. A. P.            | Rs. A. P.         | Rs. A. P.            |
| Tollage ... .. | 3,467 12 3        | 17,914 3 0           | 1,571 6 6         | 12,219 0 9           |

CALCUTTA,  
The 8th November 1887. }F. J. E. SPRING,  
Under-Secy. to the Govt. of Bengal.



## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

## CALCUTTA AND EASTERN CANALS.

Statement showing Quantities of Goods carried during the month of September 1887.

| Number of boats or rafts.                         | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |                         |                              | PRIVATE.  |                              | REMARKS.    |
|---|-----------------------------------|-------------------------------|-------------------------|------------------------------|---|------------------------------|-------------|
|   |                                   | Quantity—Tons.                |                         |                              | Value.  | Quantity.                    |             |
|   |                                   | Up.                           | Down.                   | Total.                       | Rupees.   | Tons.                        |             |
| 826   | 1. Grain ...                      | 10,148                        | .....                   | 10,148                       | 8,43,567  | 10,148                       | 8,43,567    |
| 1   | 2. Cotton ...                     | 3                             | .....                   | 3                            | 1,900   | 3                            | 1,900       |
| 10  | 3. Oilseeds ..                    | 188                           | .....                   | 188                          | 13,204  | 188                          | 13,204      |
| 271   | 4. Salt ...                       | 482                           | 4,305                   | 4,787                        | 4,02,150  | 4,787                        | 4,02,150    |
| .....   | 5. Piece-goods ...                | .....                         | .....                   | .....                        | .....   | .....                        | .....       |
| 5   | 6. Metal ...                      | 12                            | 30                      | 42                           | 4,650   | 42                           | 4,650       |
| 128   | 7. Building materials             | 3,310                         | 76                      | 3,386                        | 53,907  | 3,386                        | 53,907      |
| 1,593   | 8. Miscellaneous ...              | 11,725                        | 433                     | 12,158                       | 13,55,275   | 12,158                       | 13,55,275   |
| 606   | 9. Fuel ...                       | 9,574                         | 2,602                   | 12,176                       | 98,252  | 12,176                       | 98,252      |
| .....   | 10. Timber ...                    | .....                         | .....                   | .....                        | .....   | .....                        | .....       |
| 5 rafts   | 11. Bamboos ...                   | 96 No.                        | .....                   | 96 No.                       | 12  | 96 No.                       | 12          |
| 3,440 & 5 rafts.                                  | 12. Total ...                     | { 35,442<br>96 No. }          | { 7,446 }               | { 42,888 &<br>96 No. }       | 27,72,917   | { 42,888 &<br>96 No. }       | 27,72,917   |
| 3,670 & 16 rafts.                                 | 13. Total of same month last year | { 36,164<br>&<br>2,561 No. }  | { 7,504<br>&<br>1 No. } | { 43,668<br>&<br>2,562 No. } | 25,12,990   | { 43,668<br>&<br>2,562 No. } | 25,12,990   |
|   |                                   | Up.                           | Down.                   | Total.                       |   |                              | Rs. A. P.   |
| 14. Total number of boats plying cargo ...        | No.                               | 3,054                         | 386                     | 3,440                        | Total tollage of month—<br>24+25+26 ...           |                              | 27,229 8 6  |
| 14a. Ditto empty ...                              |                                   | 2,014                         | 596                     | 2,610                        | Total tollage of same month last year ...         |                              | 26,719 15 6 |
| 15. Total number of boats plying passenger ...    | No.                               | 153                           | 7                       | 160                          |   |                              |             |
| 16. Total registered tonnage, cargo               | Tons.                             | 1,17,440                      | 19,577                  | 1,37,017                     | Memorandum of Tollage.                            |                              |             |
| 17. Total registered tonnage, passenger           | Tons.                             | 608                           | 32                      | 640                          |   |                              |             |
| 18. Ton-mileage ...                               |                                   | .....                         | .....                   | .....                        |   |                              | Rs. A. P.   |
| 19. Estimated value of cargo                      | Rs.                               | 23,36,324                     | 4,36,581                | 27,72,905                    | 1. Balance not recovered on the 1st of the month  |                              | 1,039 1 3   |
| 20. Number of passengers ...                      |                                   | 554                           | 60                      | 614                          | 2. Tollage per month ...                          |                              | 27,229 8 6  |
| 21. Rafts, bamboos                                | c. ft.                            | 96                            | .....                   | 96                           | 3. Total ...                                      |                              | 28,268 9 9  |
| 22. Do., bullahs                                  | "                                 | .....                         | .....                   | .....                        |   |                              |             |
| 23. Estimated value of rafts ...                  |                                   | 12                            | .....                   | 12                           | 4. Amount paid into treasury during the month ... |                              | 27,271 8 6  |
| 24. Tollage on boats                              | Rs.                               | 22,431-15-0                   | 4,796-5-6               | 27,228-4-6                   |   |                              |             |
| 25. Compounded tollage on boats                   | Rs.                               | .....                         | .....                   | .....                        |   |                              |             |
| 26. Tollage on rafts                              | "                                 | 1-4-0                         | .....                   | 1-4-0                        |   |                              |             |
| 27. Total tollage on boats per ton-mile ...       |                                   | .....                         | .....                   | .....                        |   |                              |             |
| 28. Total tollage on rafts per 100 cubic feet ... |                                   | .....                         | .....                   | 1-5-0                        | 5. Balance due at the end of the month ...        |                              | 997 1 3     |

\* Boats in these canals do not pay per mile

ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).

CALCUTTA AND EASTERN CANALS.

| Number of<br>boats or<br>rafts. | DESCRIPTION.            | TOTAL GOVERNMENT AND PRIVATE. |       |        |           | PRIVATE.  |           | REMARKS. |
|---------------------------------|-------------------------|-------------------------------|-------|--------|-----------|-----------|-----------|----------|
|                                 |                         | Quantity—Tons.                |       |        | Value.    | Quantity. | Value.    |          |
|                                 |                         | Up.                           | Down. | Total. | Rupees.   | Tons.     | Rupees.   |          |
| 423                             | (a) Jute ...            | 6,499                         | ..... | 6,499  | 5,91,466  | 6,499     | 5,91,466  |          |
| 56                              | (b) Jaggery ...         | 490                           | ..... | 490    | 54,900    | 490       | 54,900    |          |
| 24                              | (c) Sugar ...           | 91                            | 21    | 112    | 21,945    | 112       | 21,945    |          |
| 2                               | (d) Tobacco ...         | 12                            | 7     | 19     | 3,300     | 19        | 3,300     |          |
| 214                             | (e) Fish ...            | 50                            | 1     | 51     | 14,466    | 51        | 14,466    |          |
| 4                               | (f) Hides ...           | 8                             | ..... | 8      | 1,800     | 8         | 1,800     |          |
| 85                              | (g) Poultry ...         | 23                            | ..... | 23     | 18,924    | 23        | 18,924    |          |
| 28                              | (h) Hay and straw ...   | 192                           | 7     | 199    | 4,332     | 199       | 4,332     |          |
| 28                              | (j) Oil ...             | 13                            | 340   | 353    | 49,500    | 353       | 49,500    |          |
| 53                              | (k) Earthenware ...     | 152                           | ..... | 152    | 2,129     | 152       | 2,129     |          |
| 676                             | (m) Other miscellaneous | 4,195                         | 57    | 4,252  | 5,92,513  | 4,252     | 5,92,513  |          |
| 1,593                           | Total Miscellaneous ..  | 11,725                        | 433   | 12,158 | 13,55,275 | 12,158    | 13,55,275 |          |

**SUPPLEMENT TO THE CALCUTTA GAZETTE, NOVEMBER 9, 1887.**

**PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.  
SOUTH-WESTERN CIRCLE.**

**TOLLY'S NULLAH.**

*Statement showing Quantities of Goods carried during the month of September 1887.*

| Number of boats or rafts.                         | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |           |                  |   | PRIVATE.         |             | REMARKS. |
|---|-----------------------------------|-------------------------------|-----------|------------------|---|------------------|-------------|----------|
|   |                                   | Quantity—Tons.                |           |                  | Value.  | Quantity.        | Value.      |          |
|   |                                   | Up.                           | Down.     | Total.           | Rupees.   | Tons.            | Rupees.     |          |
|   |                                   |                               |           |                  |   |                  |             |          |
| 2,408   | 1. Grain ...                      | 8,209                         | .....     | 8,209            | 6,02,325  | 8,209            | 6,02,325    |          |
| 4   | 2. Cotton ...                     | 19                            | .....     | 19               | 9,880   | 19               | 9,880       |          |
| 8   | 3. Oilseeds ...                   | 166                           | .....     | 166              | 20,925  | 166              | 20,925      |          |
| 127   | 4. Salt ...                       | 507                           | 825       | 1,332            | 1,11,900  | 1,332            | 1,11,900    |          |
| .....   | 5. Piece-goods ...                | .....                         | .....     | .....            | .....   | .....            | .....       |          |
| 1   | 6. Metal ...                      | 2                             | .....     | 2                | 1,250   | 2                | 1,250       |          |
| 254   | 7. Building materials ...         | 2,109                         | .....     | 2,109            | 9,439   | 2,109            | 9,439       |          |
| 1,234   | 8. Miscellaneous ...              | 4,089                         | 469       | 4,558            | 4,18,765  | 4,558            | 4,18,765    |          |
| 212   | 9. Fuel ...                       | 2,973                         | 3         | 2,976            | 24,440  | 2,976            | 24,440      |          |
| .....   | 10. Timber ...                    | .....                         | .....     | .....            | .....   | .....            | .....       |          |
| 9 rafts   | 11. Bamboos ...                   | 266 No.                       | .....     | 266 No.          | 33  | 266 No.          | 33          |          |
| 4,248 & 9 rafts.                                  | 12. Total ...                     | 18,074 & 266 No.              | 1,297     | 19,371 & 266 No. | 11,98,957   | 19,371 & 266 No. | 11,98,957   |          |
| 3,304 & 4 rafts.                                  | 13. Total of same month last year | 15,633 & 720 No.              | 943       | 16,576 & 720 No. | 7,26,206  | 16,576 & 720 No. | 7,26,206    |          |
|   |                                   | Up.                           | Down.     | Total.           |   |                  | Rs. A. P.   |          |
| 14. Total number of boats plying cargo No.        |                                   | 4,104                         | 144       | 4,248            | Total tollage of month—<br>24 + 25 + 26 ...                   |                  | 10,255 13 0 |          |
| 14a. Ditto empty ...                              |                                   | 999                           | 614       | 1,613            |   |                  |             |          |
| 15. Total number of boats plying passenger No.    |                                   | 423                           | 13        | 436              | Total tollage of same month last year ...                     |                  | 7,957 4 3   |          |
| 16. Total registered tonnage, cargo Tons.         |                                   | 55,268                        | 5,028     | 60,296           | Memorandum of Tollage.  |                  |             |          |
| 17. Total registered tonnage, passenger Tons.     |                                   | 963                           | 49        | 1,012            |   |                  |             |          |
| 18. Ton-mileage ...                               |                                   | .....                         | .....     | .....            | Rs. A. P.   |                  |             |          |
| 19. Estimated value of cargo ...                  |                                   | 10,75,918                     | 1,23,006  | 11,98,924        | 1. Balance not recovered on the 1st of the month ... 384 13 6 |                  |             |          |
| 20. Number of passengers ...                      |                                   | 3,073                         | 58        | 3,131            | 2. Tollage per month ... 10,255 13 0                          |                  |             |          |
| 21. Rafts, bamboos c. ft.                         |                                   | 266                           | .....     | 266              | 3. Total ... 10,640 10 6                                      |                  |             |          |
| 22. Do., bullahs "                                |                                   | .....                         | .....     | .....            | 4. Amount paid into treasury during the month ... 10,237 11 0 |                  |             |          |
| 23. Estimated value of rafts ...                  |                                   | 33                            | .....     | 33               | 5. Balance due at the end of the month ... 402 15 6           |                  |             |          |
| 24. Tollage on boats Rs.                          |                                   | 9,021-7-0                     | 1,232-2-0 | 10,253-9-0       |   |                  |             |          |
| 25. Compounded tollage on boats Rs.               |                                   | .....                         | .....     | .....            |   |                  |             |          |
| 26. Tollage on rafts "                            |                                   | 2-4-0                         | .....     | 2-4-0            |   |                  |             |          |
| 27. Total tollage on boats per ton-mile ...       |                                   | .....                         | .....     | .....            |   |                  |             |          |
| 28. Total tollage on rafts per 100 cubic feet ... |                                   | .....                         | .....     | 0-13-6           |   |                  |             |          |

\* Boats in this canal do not pay per mile.

ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).

TOLLY'S NULLAH.

| Number of<br>boats or<br>rafts. | DESCRIPTION.                  | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE.  |          | REMARKS. |
|---------------------------------|-------------------------------|-------------------------------|-------|--------|----------|-----------|----------|----------|
|                                 |                               | Quantity—Tons.                |       |        | Value.   | Quantity. | Value.   |          |
|                                 |                               | Up.                           | Down. | Total. | Rupees.  | Tons.     | Rupees.  |          |
| 10                              | (a) Jute ...                  | 39                            | ..... | 39     | 3,591    | 39        | 3,591    |          |
| 95                              | (b) Jaggery ...               | 534                           | ..... | 534    | 59,820   | 534       | 59,820   |          |
| .....                           | (c) Sugar ...                 | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| 18                              | (d) Tobacco ...               | 135                           | 13    | 148    | 24,900   | 148       | 24,900   |          |
| 16                              | (e) Fish ...                  | 2                             | ..... | 2      | 590      | 2         | 590      |          |
| .....                           | (f) Hides ...                 | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| 11                              | (g) Poultry ...               | 3                             | ..... | 3      | 1,344    | 3         | 1,344    |          |
| 728                             | (h) Hay and straw             | 1,227                         | ..... | 1,227  | 25,836   | 1,227     | 25,836   |          |
| 54                              | (i) Oil ...                   | 430                           | 14    | 444    | 67,125   | 444       | 67,125   |          |
| 77                              | (k) Earthenware ...           | 90                            | 2     | 92     | 1,292    | 92        | 1,292    |          |
| 225                             | (m) Other miscella-<br>neous. | 1,629                         | 440   | 2,069  | 2,34,267 | 2,069     | 2,34,267 |          |
| 1,234                           | Total Miscellaneous ...       | 4,089                         | 469   | 4,558  | 4,18,765 | 4,558     | 4,18,765 |          |

ABSTRACT FOR THE MONTH OF SEPTEMBER 1887 AS COMPARED WITH THE  
CORRESPONDING MONTH OF THE PREVIOUS YEAR.

|                                 | TRAFFIC, 1887-88. |    |    |                      |    |    | TRAFFIC, 1886-87. |    |    |                      |    |    |
|---------------------------------|-------------------|----|----|----------------------|----|----|-------------------|----|----|----------------------|----|----|
|                                 | During the month. |    |    | To end of the month. |    |    | During the month. |    |    | To end of the month. |    |    |
|                                 | Rs.               | A. | P. | Rs.                  | A. | P. | Rs.               | A. | P. | Rs.                  | A. | P. |
| Calcutta and Eastern Canals ... | 27,229            | 8  | 6  | 1,34,271             | 9  | 6  | 26,719            | 15 | 6  | 1,20,536             | 13 | 3  |
| Tolly's Nullah ... ..           | 10,255            | 13 | 0  | 52,493               | 11 | 0  | 7,957             | 4  | 3  | 40,508               | 14 | 9  |
| Total                           | 37,485            | 5  | 6  | 1,86,765             | 4  | 6  | 34,677            | 3  | 9  | 1,61,045             | 12 | 0  |

CALCUTTA,  
The 8th November 1887.

F. J. E. SPRING,  
Under-Secy. to the Govt. of Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 5th November 1887,  
compared with the corresponding week of the previous year.

| NATURE OF CARGO.      |     |     | WEEK ENDING SATURDAY, THE<br>5TH NOVEMBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>6TH NOVEMBER 1886. |                     |          |
|-----------------------|-----|-----|---|---------------------|----------|---|---------------------|----------|
|                       |     |     | Number of<br>boats.                             | Weight of<br>cargo. | Tollage. | Number of<br>boats.                             | Weight of<br>cargo. | Tollage. |
|                       |     |     | No.   | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy ... .. | ... | ... | 811   | 1,08,428            | 1,820    | 486   | 49,430              | 776      |
| Jute ... ..           | ... | ... | 289   | 1,51,645            | 2,846    | 175   | 92,645              | 1,678    |
| Firewood ... ..       | ... | ... | 165   | 75,335              | 1,060    | 170   | 94,125              | 1,267    |
| Other articles ... .. | ... | ... | 1,287   | 2,73,855            | 4,654    | 896   | 1,81,005            | 2,866    |
| Total                 | ... | ... | 2,552   | 6,09,463            | 10,380   | 1,727   | 4,17,205            | 6,607    |

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 29th October 1887, on 1,513½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings.   | TRAFFIC TRAIN-MILES RUN. |              |            |
|---|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-------------------|--------------------------|--------------|------------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |                   | Coaching.                | Merchandise. | Total.     |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.         |                          |              |            |
| Total traffic for the week ...                              | 241,973               | 2,80,320 5 0       | 22,40,333 0                      | 5,80,586 6 0  | 15,094 15 0                 | 8,02,001 10 0     | 68,908                   | 81,765½      | 148,607½   |
| Or per mile of railway ...                                  | ...                   | 1 5 2 11           | ...                              | 374 4 8       | 9 15 7                      | 509 7 2           | ...                      | ...          | ...        |
| For previous 16 weeks of half-year ...                      | 3,873,747             | 40,07,632 2 0      | 3,43,04,053 10                   | 73,49,310 3 2 | 2,04,150 11 9               | 1,16,21,002 15 11 | 1,049,048½               | 1,293,195½   | 2,342,243½ |
| Total for 17 weeks ...                                      | 5,115,719             | 42,87,972 7 0      | 3,65,44,385 10                   | 79,15,896 8 2 | 2,79,2 5 10 9               | 1,21,83,094 0 11  | 1,115,948½               | 1,374,961    | 2,490,909½ |
| COMPARISON.   |                       |                    |                                  |               |                             |                   |                          |              |            |
| Total for corresponding week of previous year ...           | 806,717½              | 2,02,162 1 7       | 22,75,048 20                     | 5,11,865 10 9 | 19,744 1 1                  | 7,93,571 13 5     | 60,540                   | 87,981       | 148,471.   |
| Per mile of railway corresponding week of previous year ... | ...                   | 173 0 8            | ...                              | 337 11 9      | 13 0 6                      | 523 12 11         | ...                      | ...          | ...        |
| Total to corresponding date of previous year ...            | 3,971,056             | 43,93,140 13 6     | 3,69,63,359 0                    | 87,26,330 5 3 | 3,04,707 13 1               | 1,34,10,178 15 10 | 1,181,704                | 1,847,609    | 2,729,403  |

\* The increase in coaching traffic is due to the running of troop extra trains from North-Western Railway to Cawnpore and Howrah and from Canal junction to Muglai Surai.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 30TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 29TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 1,515                                       | 7,93,572  | 524              | 1,513½                                      | 8,02,002  | 569              | 1,515  | 2,61,99,751     | 576              | 1,518½   | 2,49,00,642     | 546              | .....                   | 13,09,119               |

PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 29th October 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 15,731                | 8,337 5 0          | 34,300 0                         | 2,295 3 0   | 38 5 0                      | 10,670 13 0     | 1,840                    | 545          | 2,384  |
| Or per mile of railway ...                                  | 275                   | 145 12 1           | 599 30                           | 40 2 0      | 0 10 9                      | 180 8 10        | ...                      | ...          | ...    |
| For previous 16 weeks of half-year ...                      | 231,641               | 1,24,779 8 0       | 5,76,915 30                      | 37,742 7 0  | 607 1 0                     | 1,03,129 0 0    | 29,490½                  | 11,232½      | 40,623 |
| Total for 17 weeks ...                                      | 247,373               | 1,33,116 13 0      | 6,10,315 20                      | 40,037 10 0 | 615 6 0                     | 1,73,799 13 0   | 31,278½                  | 11,707½      | 43,046 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 10,614                | 5,640 14 4         | 34,528 0                         | 2,574 1 0   | 28 10 0                     | 8,243 9 4       | 1,029                    | 957          | 2,598  |
| Per mile of railway corresponding week of previous year ... | 186                   | 98 9 11            | 603 30                           | 45 0 0      | 0 8 0                       | 144 1 11        | ...                      | ...          | ...    |
| Total to corresponding date of previous year ...            | 261,387               | 1,49,487 14 1      | 7,64,502 20                      | 44,817 2 0  | 653 6 6                     | 1,04,458 6 7    | 31,338                   | 13,361       | 44,699 |

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 29TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 57½   | 8,334     | 144              | 57½   | 10,671    | 187              | 57½  | 3,21,146        | 187              | 57½  | 2,98,069        | 171              | .....                   | 23,067                  |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 29th October 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,720                 | 461 0 0            | 13,393 30                        | 251 14 0   | 7 0 0                       | 719 14 0        | 400½                     | 93           | 493½   |
| Or per mile of railway ...                                  | .....                 | 38 0 8             | .....                            | 20 15 10   | 0 9 4                       | 59 15 10        | .....                    | .....        | .....  |
| For previous 16 weeks of half-year ...                      | 45,951                | 7,827 8 0          | 1,39,166 0                       | 3,114 14 0 | 100 14 0                    | 11,043 4 0      | 6,425                    | 1,612        | 8,037  |
| Total for 17 weeks ...                                      | 49,677                | 8,298 8 0          | 1,52,559 30                      | 3,306 12 0 | 107 14 0                    | 11,763 2 0      | 6,825½                   | 1,705        | 8,530½ |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,124                 | 360 3 1            | 8,278 0                          | 191 10 0   | 16 8 0                      | 577 5 1         | 395                      | 96           | 493    |
| Per mile of railway corresponding week of previous year ... | .....                 | 30 12 3            | .....                            | 15 15 6    | 1 6 0                       | 48 1 9          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 45,047½               | 7,609 1 6          | 1,66,950 10                      | 3,250 4 0  | 143 2 0                     | 11,002 7 6      | 6,919                    | 1,944        | 8,863  |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH OCTOBER 1886. |                 | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 29TH OCTOBER 1887. |                 | Total increase in 1887. |                 | Total decrease in 1887. |                 |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|--|-----------------|-------------------------|-----------------|-------------------------|-----------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Mean mileage worked.                                     | Total receipts. | Mean mileage worked.    | Total receipts. | Mean mileage worked.    | Total receipts. |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             |  | Rs.             |                         | Rs.             |                         | Rs.             |
| 12  | 577       | 48               | 12  | 720       | 60               | 12   | 28,274          | 79   | 12              | 26,363                  | 73              | .....                   | 1,911           |

## SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 29th October 1887, on 74½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 5,580                 | 4,119 10 0         | 99,411 30                        | 5,294 3 0   | 92 0 0                      | 9,415 13 0      | 697                      | 1,160½       | 1,857½  |
| Or per mile of railway ...                                  | .....                 | 55 1 3             | .....                            | 69 9 2      | 1 3 8                       | 125 14 1        | .....                    | .....        | .....   |
| For previous 16 weeks of half-year ...                      | 85,023                | 62,378 9 9         | 14,00,811 36                     | 56,392 12 0 | 1,707 5 0                   | 1,20,478 10 9   | 11,702                   | 24,307½      | 36,009½ |
| Total for 17 weeks ...                                      | 90,603                | 66,498 3 9         | 15,00,223 20                     | 61,596 15 0 | 1,799 5 0                   | 1,29,684 7 9    | 11,809                   | 25,456½      | 37,327½ |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 6,469                 | 4,263 12 6         | 1,01,324 20                      | 3,022 15 0  | 47 0 0                      | 7,334 1 6       | 751                      | 1,140        | 1,900   |
| Per mile of railway corresponding week of previous year ... | .....                 | 57 0 8             | .....                            | 40 6 7      | 0 10 2                      | 99 0 9          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 92,245                | 66,884 6 1         | 14,56,494 0                      | 49,047 6 9  | 1,651 5 0                   | 1,16,593 1 10   | 12,239                   | 18,663       | 30,902  |

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH OCTOBER 1886. |                 | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 29TH OCTOBER 1887. |                 | Total increase in 1887. |                 | Total decrease in 1887. |                 |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|--|-----------------|-------------------------|-----------------|-------------------------|-----------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Mean mileage worked.                                     | Total receipts. | Mean mileage worked.    | Total receipts. | Mean mileage worked.    | Total receipts. |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             |  | Rs.             |                         | Rs.             |                         | Rs.             |
| 74½   | 7,334     | 98               | 74½   | 9,416     | 126              | 74½  | 2,12,067        | 95   | 74½             | 2,47,896                | 109             | 30,839                  | .....           |

## TARKESSUR BRANCH RAILWAY.

*Approximate Return of Traffic for week ended 29th October 1887, on 22½ miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 17,384                | 4,439 0 0          | 4,017 20                         | 172 11 0   | 8 0 0                       | 4,605 11 0      | 919                      | 40           | 959    |
| Or per mile of railway ...                                  | .....                 | 199 0 2            | .....                            | 7 12 2     | 0 3 7                       | 208 15 11       | .....                    | .....        | .....  |
| For previous 16 weeks of half-year ...                      | 265,314               | 68,396 12 0        | 66,515 30                        | 2,339 0 0  | 77 6 0                      | 70,813 9 0      | 15,157½                  | 792½         | 15,950 |
| Total for 17 weeks ...                                      | 282,708               | 72,824 12 0        | 70,533 10                        | 2,511 11 0 | 82 6 0                      | 75,418 13 0     | 16,076½                  | 841½         | 16,918 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 13,771½               | 3,410 7 0          | 2,643 0                          | 90 4 0     | 8 2 6                       | 3,517 13 6      | 946                      | 23           | 969    |
| Per mile of railway corresponding week of previous year ... | .....                 | 153 4 3            | .....                            | 4 7 5      | 0 5 10                      | 158 1 8         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 271,759               | 67,530 14 0        | 49,983 10                        | 1,323 14 0 | 90 14 3                     | 69,245 10 3     | 16,612                   | 1340         | 16,952 |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 29TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
| 22½   | Rs. 3,518 | Rs. 158          | 22½   | Rs. 4,606 | Rs. 207          | 22½  | Rs. 1,41,080    | Rs. 213          | 22½  | Rs. 1,52,401    | Rs. 228          | Rs. 10,511              | .....                   |

## INDIAN MIDLAND RAILWAY.

*Approximate Return of Traffic for week ended 29th October 1887, on 42 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,384                 | 1,077 0 0          | 1,09,174 20                      | 7,303 12 0  | 21 0 0                      | 8,401 12 0      | 316                      | 944          | 1,300  |
| Or per mile of railway ...                                  | .....                 | 25 10 3            | .....                            | 173 15 5    | 0 8 0                       | 200 0 8         | .....                    | .....        | .....  |
| For previous 16 weeks of half-year ...                      | 33,879                | 14,813 7 6         | 3,19,594 10                      | 20,905 0 0  | 261 5 0                     | 36,039 12 6     | 5,597                    | 4,987        | 10,584 |
| Total for 17 weeks ...                                      | 36,213                | 15,890 7 6         | 4,28,768 30                      | 28,268 12 0 | 282 5 0                     | 44,441 8 6      | 5,913                    | 5,931        | 11,844 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 1,893                 | 848 15 10          | 13,047 20                        | 1,125 2 0   | 33 6 0                      | 2,007 7 10      | 236                      | 382          | 598    |
| Per mile of railway corresponding week of previous year ... | .....                 | 20 3 5             | .....                            | 26 12 7     | 0 12 9                      | 47 12 9         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 42,762                | 18,350 9 10        | 2,00,742 34                      | 20,762 9 0  | 453 3 0                     | 36,575 6 4      | 5,144                    | 5,866        | 10,509 |

*Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 29TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
| 42  | Rs. 2,007 | Rs. 48           | 42  | Rs. 8,402 | Rs. 200          | 42   | Rs. 65,687      | Rs. 52           | 42   | Rs. 92,234      | Rs. 75           | Rs. 26,647              | .....                   |



## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., Dacca, K. AND D., AND ASSAM-BEHAR SECTIONS).

*Approximate Return of Traffic for week ended 23rd October 1887, on 645 miles open.*

|   | COACHING TRAFFIC.     |              | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------|----------------------------------|---------------|---|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.    | Weight carried.                  | Receipts.     |   |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.    | Mds. s.                          | Rs. A. P.     | Rs. A. P.   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                | 104,021               | 50,588 0 0   | 5,79,718 0                       | 1,41,439 0 0  | 12,058 0 0  | 2,04,086 0 0    | 20,152                   | 24,132       | 44,284  |
| Or per mile of railway ...                                    | 161                   | 78 0 0       | 890 0                            | 219 0 0       | 3 0 0*  | 300 0 0         | .....                    | .....        | .....   |
| For previous 16 weeks of half-year ...                        | 1,747,324             | 7,61,553 0 0 | 96,26,202 0                      | 18,92,055 0 0 | 2,30,907 0 0                                      | 22,03,615 0 0   | 304,931                  | 339,291      | 643,322 |
| Total for 16 weeks ...  | 1,851,868             | 8,12,142 0 0 | 1,02,05,960 0                    | 20,33,194 0 0 | 2,51,965 0 0                                      | 30,97,601 0 0   | 324,183                  | 363,423      | 707,606 |
| COMPARISON.   |                       |              |                                  |               |   |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 100,075               | 50,218 0 0   | 6,23,053 0                       | 1,36,168 0 0  | 11,500 0 0  | 1,97,876 0 0    | 18,150                   | 24,608       | 42,758  |
| Per mile of railway corresponding period of previous year ... | 165                   | 83 0 0       | 1,024 0                          | 225 0 0       | .....   | 308 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 1,856,277             | 7,94,708 0 0 | 80,03,184 0                      | 15,50,184 0 0 | 1,75,712 0 0                                      | 25,21,604 0 0   | 289,614                  | 339,758      | 619,676 |

\* Rs. 10,058, Steam-boat earnings have been excluded from calculation.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Eastern Bengal State Railway.*

| RECEIPTS FOR WEEK ENDING 23RD OCTOBER 1886. |              |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |              |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 23RD OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|--------------|------------------|---|--------------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts.    | Per mile worked. | Mean mileage worked.                        | Receipts.    | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 606   | Rs. 1,07,876 | Rs. 327          | 645   | Rs. 2,04,086 | Rs. 316          | 606  | Rs. 43,65,045   | Rs. 218          | 645  | Rs. 48,03,224*  | Rs. 262          | Rs. 5,28,179            | .....                   |

\* Audited up to 30th June 1887

## BENGAL CENTRAL RAILWAY.

*Approximate Return of Traffic for week ended 22nd October 1887, on 125 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 10,938                | 7,768 0 0          | 50,127 0                         | 3,066 0 0  | 37 0 0                      | 10,871 0 0      | 3,796                    | 2,378        | 6,144  |
| Or per mile of railway ...                                    | 150                   | 62 0 0             | 401 0                            | 25 0 0     | .....                       | 87 0 0          | .....                    | .....        | .....  |
| For previous 16 weeks of half-year ...                        | 354,686               | 1,17,509 0 0       | 6,68,883 0                       | 42,032 0 0 | 1,614 0 0                   | 1,61,295 0 0    | 54,408                   | 27,593       | 82,001 |
| Total for 16 weeks ...  | 374,524               | 1,25,367 0 0       | 7,19,010 0                       | 45,148 0 0 | 1,651 0 0                   | 1,72,166 0 0    | 58,194                   | 29,971       | 88,165 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 17,557                | * 6,804 0 0        | 18,711 0                         | 1,423 0 0  | 16 0 0                      | 8,243 0 0       | 3,935                    | 1,189        | 5,024  |
| Per mile of railway corresponding period of previous year ... | 140                   | 35 0 0             | 150 0                            | 11 0 0     | .....                       | 66 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 368,564               | 1,21,566 0         | 5,07,648 0                       | 24,372 0 0 | 374 0 0                     | 1,46,311 0 0    | 63,464                   | 22,199       | 85,663 |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Bengal Central Railway.*

| RECEIPTS FOR WEEK ENDING 23RD OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |            |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 23RD OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|------------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts.  | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 125   | Rs. 8,243 | Rs. 66           | 125   | Rs. 10,871 | Rs. 87           | 125  | Rs. 3,21,860    | Rs. 80           | 125  | Rs. 3,37,201*   | Rs. 93           | Rs. 15,332              | .....                   |

\* Audited up to 30th June 1887.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 22nd October 1887, on 86 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 12,407                | 4,881 0 0          | 35,852 0                         | 3,015 0 0  | 40 0 0                      | 7,936 0 0       | 2,161                    | 803          | 2,964  |
| Or per mile of railway ...                                    | 145                   | 57 0 0             | 417 0                            | 35 0 0     | .....                       | 92 0 0          | .....                    | .....        | .....  |
| For previous 15 weeks of half-year ...                        | 103,283               | 56,204 0 0         | 2,43,993 0                       | 19,787 0 0 | 1,991 0 0                   | 77,985 0 0      | 33,172                   | 15,442       | 48,614 |
| Total for 16 weeks ...  | 175,780               | 61,085 0 0         | 2,79,845 0                       | 23,802 0 0 | 2,034 0 0                   | 87,921 0 0      | 35,333                   | 16,245       | 51,578 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 9,493                 | 3,511 0 0          | 13,491 0                         | 1,592 0 0  | 302 0 0                     | 5,405 0 0       | 2,150                    | 714          | 2,870  |
| Per mile of railway corresponding period of previous year ... | 110                   | 41 0 0             | 157 0                            | 18 0 0     | .....                       | 50 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 155,897               | 50,314 0 0         | 1,30,425 0                       | 11,746 0 0 | 4,998 0 0                   | 70,058 0 0      | 25,771                   | 11,092       | 37,463 |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

| RECEIPTS FOR WEEK ENDING 23RD OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 23RD OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 86  | 5,465     | 64               | 86  | 7,936     | 92               | 86   | 1,36,158        | 55               | 86   | 1,60,647*       | 60               | 14,180                  | .....                   |

\* Audited up to 30th June 1887.

ASSAM-BEHAR STATE RAILWAY.

(PURNIAH SECTION.)

Approximate Return of Traffic for week ended 22nd October 1887, on 39 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,313                 | 945 0 0            | 5,146 0                          | 540 0 0    | 10 0 0                      | 1,495 0 0       | 729                      | 364          | 1,092  |
| Or per mile of railway ...                                    | 59                    | 24 0 0             | 132 0                            | 14 0 0     | .....                       | 38 0 0          | .....                    | .....        | .....  |
| For previous 15 weeks of half-year ...                        | 45,931                | 16,126 0 0         | 1,59,323 0                       | 15,321 0 0 | 354 0 0                     | 31,801 0 0      | 17,480                   | 8,040        | 16,520 |
| Total for 16 weeks ...  | 49,240                | 17,071 0 0         | 1,55,469 0                       | 15,861 0 0 | 364 0 0                     | 33,296 0 0      | 11,208                   | 8,404        | 17,612 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Assam-Bihar State Railway.

| RECEIPTS FOR WEEK ENDING 23RD OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 23RD OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| .....                                       | .....     | .....            | 39  | 1,459     | 38               | .....  | .....           | .....            | 39   | 73,531*         | 65               | 73,531                  | .....                   |

\* Audited up to 30th June 1887.

## NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ended 22nd October 1887, on 27½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 3,490½                | 1,254 2 7          | 7,202 20                         | 365 14 0  | 5 8 9                       | 1,625 9 4       | 509                      | 254          | 763     |
| Or per mile of railway ...                                  | 128                   | 46 0 0             | 264 0                            | 13 7 0    | 0 3 0                       | 59 10 0         |                          |              |         |
| For previous 16 weeks of half-year                          | 47,781½               | 16,050 13 5        | 1,39,769 20                      | 8,667 2 0 | 263 7 3                     | 25,881 6 8      | 7,817                    | 4,712½       | 12,529½ |
| Total for 16 weeks ...                                      | 51,263                | 18,205 0 0         | 1,46,992 0                       | 9,033 0 0 | 269 0 0                     | 27,507 0 0      | 8,326                    | 4,960½       | 13,292½ |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 3,044                 | 1,104 1 3          | 3,420 30                         | 286 1 0   | 7 0 0                       | 1,397 2 3       | 509                      | 254          | 763     |
| Per mile of railway corresponding week of previous year ... | 112                   | 40 8 0             | 126 0                            | 10 8 0    | 0 4 0                       | 51 4 0          |                          |              |         |
| Total to corresponding date of previous year ...            | 39,303½               | 15,060 5 9         | 15,258 20                        | 7,410 2 0 | 221 0 6                     | 22,700 8 3      | 8,362                    | 4,282        | 12,644  |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 23RD OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 22ND OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 23RD OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 22ND OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         |                         |
| 27½   | 1,397     | 51               | 27½   | 1,625     | 60               | 27½  | 47,037          | 60               | 27½  | 52,995          | 67               | 5,958                   | .....                   |

## NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 29th October 1887, on 27½ miles open.

|   | COACHING TRAFFIC.     |             | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|-------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Receipts.   | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.   | MDS. S.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 2,804                 | 1,041 7 0   | 4,076 10                         | 243 7 0   | 15 14 0                     | 1,390 12 0      | 509                      | 254          | 763     |
| Or per mile of railway ...                                  | 103                   | 38 3 0      | 150 0                            | 8 15 0    | 0 9 0                       | 47 11 0         |                          |              |         |
| For previous 16 weeks of half-year                          | 51,725                | 18,341 9 0  | 1,46,902 30                      | 9,002 9 0 | 265 2 0                     | 27,609 4 0      | 8,526                    | 4,960½       | 13,292½ |
| Total for 17 weeks ...                                      | 54,529                | 19,383 0 0  | 1,50,979 0                       | 9,396 0 0 | 281 0 0                     | 29,000 0 0      | 8,835                    | 5,220½       | 14,055½ |
| COMPARISON.   |                       |             |                                  |           |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 2,541½                | 937 6 9     | 6,654 0                          | 432 0 0   | 17 6 0                      | 1,386 12 9      | 509                      | 254          | 765     |
| Per mile of railway corresponding week of previous year ... | 93                    | 34 6 0      | 244 0                            | 15 14 0   | 0 10 0                      | 50 14 0         |                          |              |         |
| Total to corresponding date of previous year ...            | 41,845                | 16,006 12 6 | 1,01,916 20                      | 7,342 2 0 | 238 6 6                     | 24,087 5 0      | 8,871                    | 4,336        | 13,407  |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 29TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         |                         |
| 27½   | 1,387     | 51               | 27½   | 1,30      | 48               | 27½  | 18,423          | 50               | 27½  | 54,488          | 67               | 6,065                   | .....                   |

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ended 29th October 1887, on 249 miles open.

|   | COACHING TRAFFIC.     |                          | MERCHANDISE AND MINERAL TRAFFIC. |                     | Other earnings (estimated). | Total earnings.      | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------------|----------------------------------|---------------------|-----------------------------|----------------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts.       | Weight carried.                  | Receipts.           |                             |                      | Coaching.                | Merchandise. | Total.  |
| Total traffic for the week on 249 miles open                    | 59,792½               | Rs. A. P. (a) 39,607 6 4 | Mds. s. 1,04,454 0               | Rs. A. P. 9,780 4 0 | Rs. A. P. 3,020 10 2        | Rs. A. P. 39,408 4 6 | 6,541                    | 4,306        | 10,847  |
| Or per mile of railway  | 240                   | 166 14 0                 | 419 0                            | 39 4 0              | 2 14 0                      | 149 0 0*             | .....                    | .....        | .....   |
| For previous 16 weeks of half-year                              | 603,161½              | 2,11,795 9 8             | 18,43,074 0                      | 1,70,337 12 0       | 51,802 5 10                 | 4,34,023 11 6        | 100,434                  | 74,409       | 174,843 |
| Total for 17 weeks  | 662,954               | 2,38,403 0 0             | 19,47,538 0                      | 1,80,118 0 0        | 54,813 0 0                  | 4,73,436 0 0         | 106,975                  | 78,718       | 185,693 |
| COMPARISON.   |                       |                          |                                  |                     |                             |                      |                          |              |         |
| Total for corresponding week of previous year on 246 miles open | 29,361                | 10,264 6 2               | 1,29,183 0                       | 15,176 3 0          | 5,027 3 9                   | 30,467 12 11         | 4,835                    | 5,403        | 10,238  |
| Per mile of railway corresponding week of previous year         | 119                   | 41 12 0                  | 525 0                            | 61 11 0             | 9 8 0                       | 112 15 0*            | .....                    | .....        | .....   |
| Total to corresponding date of previous year                    | 556,574½              | 1,85,330 13 1            | 18,83,617 0                      | 1,80,038 2 9        | 53,264 12 10                | 4,20,263 12 8        | 87,166                   | 73,217       | 160,383 |

(a) Increase is due to rush of passengers for Sonapur mela.  
\* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |            |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |            |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 29TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|------------|------------------|---|------------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts.  | Per mile worked. | Mean mileage worked.                        | Receipts.  | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
| 246   | Rs. 30,468 | Rs. 124          | 249   | Rs. 39,408 | Rs. 158          | 246  | Rs. 8,77,381    | Rs. 119          | 248½   | 9,07,467        | Rs. 130          | Rs. 90,086              | .....                   |

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|  |     |     |     |                   |
|--|-----|-----|-----|-------------------|
| Approximate earnings for week ending 22nd October 1887 | ... | ... | ... | Rs. 9,962         |
| Corresponding week last year                           | ... | ... | ... | 8,782             |
| Increase   | ... | ... | ... | 1,180             |
| Receipts from 1st July to 22nd October 1887            | ... | ... | ... | 1,54,000          |
| From 1st July to 23rd October 1886                     | ... | ... | ... | 1,60,264          |
| Decrease   | ... | ... | ... | 6,264             |
| Miles open, week ending 22nd October 1887              | ... | ... | ... | Miles. 51         |
| Corresponding week last year                           | ... | ... | ... | 51                |
| Receipts per mile open, week ending 22nd October 1887  | ... | ... | ... | Rs. A. P. 195 5 4 |
| Corresponding week last year                           | ... | ... | ... | 172 3 1           |
| Increase   | ... | ... | ... | 23 2 3            |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 1st November 1887.

W. STEVENSON, Acting Manager.



SUPPLEMENT TO  
The Calcutta Gazette.

WEDNESDAY, NOVEMBER 16, 1887.

OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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RESOLUTION ON THE REPORT ON THE ADMINISTRATION OF THE SALT DEPARTMENT FOR THE YEAR 1886-87.

FINANCIAL DEPARTMENT—SALT.

*Calcutta, the 14th November 1887.*

RESOLUTION.

READ—

The Report of the Board of Revenue on the Administration of the Salt Department for the year 1886-87.

The following table compares the financial results of the department since 1881-82:—

| HEADS.              | 1881-82.    | 1882-83.    | 1883-84.    | 1884-85.    | 1885-86.    | 1886-87.    | Increase in 1886-87 compared with 1885-86. | Decrease in 1886-87 compared with 1885-86. |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|--|--|
| RECEIPTS.           | Rs.         | Rs.         | Rs.         | Rs.         | Rs.         | Rs.         | Rs.  | Rs.  |
| Imperial—           |             |             |             |             |             |             |  |  |
| Import duty on salt | 2,57,15,928 | 1,74,72,614 | 1,73,15,875 | 1,01,90,460 | 1,80,36,071 | 1,94,85,100 | 14,49,029                                  | .....                                      |
| Excise ditto        | 9,73,170    | 7,37,526    | 8,82,118    | 10,11,900   | 9,62,137    | 4,71,214    | .....                                      | 4,90,023                                   |
| Total               | 2,66,89,098 | 1,82,00,140 | 1,81,97,993 | 2,02,02,360 | 1,89,98,208 | 1,99,56,314 | 9,58,106                                   | .....                                      |
| Provincial—         |             |             |             |             |             |             |  |  |
| Rent of warehouses  | 1,07,409    | 1,23,582    | 60,160      | 85,245      | 65,193      | 68,444      | 3,252                                      | .....                                      |
| Miscellaneous       | 30,628      | 41,417      | 39,894      | 30,311      | 36,283      | 23,639      | .....                                      | 2,644                                      |
| Total               | 1,47,036    | 1,64,999    | 99,954      | 1,24,556    | 1,01,476    | 1,02,083    | 608  | .....                                      |
| Total Receipts      | 2,68,36,133 | 1,83,65,139 | 1,82,97,977 | 2,03,27,016 | 1,90,99,683 | 2,00,58,397 | 9,58,714                                   | .....                                      |

| HEADS.  | 1881-82.    | 1882-83.    | 1883-84.    | 1884-85.    | 1885-86.    | 1886-87.    | Increase in 1886-87 compared with 1885-86. | Decrease in 1886-87 compared with 1885-86. |
|---|-------------|-------------|-------------|-------------|-------------|-------------|--|--|
| CHARGES.  | Rs.         | Rs.         | Rs.         | Rs.         | Rs.         | Rs.         | Rs.  | Rs.  |
| <i>Imperial—</i>  |             |             |             |             |             |             |  |  |
| Salaries, establishments and contingencies.                     | .....       | .....       | 9,728       | 5,324       | 6,253       | .....       | .....                                      | 6,253                                      |
| Compensation paid under conventions with the French Government. | 20,000      | 20,000      | 20,000      | 20,000      | 20,000      | 20,000      | .....                                      | .....                                      |
| Salt preventive establishment in Orissa and Naraingunge.        | 19,400      | 16,064      | 15,117      | 13,109      | 12,362      | 217         | .....                                      | 12,145                                     |
| Refunds of Customs duty on salt                                 | 2,54,407    | 2,34,801    | 1,87,068    | 2,11,905    | 1,85,726    | 2,05,057    | 20,331                                     | .....                                      |
| Total   | 2,03,897    | 3,30,865    | 2,31,013    | 2,50,388    | 2,34,841    | 2,26,174    | 1,833                                      | .....                                      |
| <i>Provincial—</i>  |             |             |             |             |             |             |  |  |
| Salaries, establishments and contingencies.                     | 17,780      | 17,026      | 18,320      | 21,048      | 18,130      | 11,047      | .....                                      | 7,063                                      |
| Refunds other than Customs and Excise duty.                     | 84          | .....       | .....       | 65          | 59          | .....       | .....                                      | 59   |
| Total   | 17,864      | 17,026      | 18,320      | 21,113      | 18,189      | 11,047      | .....                                      | 7,142                                      |
| Total charges   | 3,11,760    | 3,38,891    | 2,50,233    | 2,71,451    | 2,42,630    | 2,37,221    | .....                                      | 5,309                                      |
| Approximate net revenue   | 2,45,24,363 | 1,80,26,648 | 1,80,47,744 | 2,00,55,564 | 1,88,57,153 | 1,98,21,170 | 9,64,023                                   | .....                                      |

The results of the year under review, as compared with the previous year, show an increase of Rs. 9,58,714 or 5 per cent. in the receipts, and a decrease of Rs. 5,309 or 2·1 per cent. in the charges, the increase appearing under the heads "Import duty" and "Rent of warehouses" only, while there has been a decrease under the heads "Excise duty" and "Miscellaneous." The advance in import duty is due to larger clearances, and that in the receipts from the rent of warehouses is attributable to the heavier importations during the year. The falling off in the charges is nominal, as the cost of the Preventive establishments employed in Orissa is no longer shown under Bengal, the Salt Department in Orissa having been transferred to the control of the Commissioner of Salt Revenue, Madras. The net receipts of the year under review were the highest of any year except 1884-85, since the reduction of duty in 1882.

2. The total quantity of salt in stock at the commencement of the year was 9,82,909 maunds, comprising 6,15,645 maunds of imported salt and 3,67,264 maunds of excise salt against 15,41,259 maunds of both descriptions of salt in 1885-86. During the year 1,04,46,171 maunds were imported or manufactured against 94,01,468 maunds in the previous year. The stock in hand at the close of the year was 10,14,529 maunds.

3. Calcutta and Chittagong were the only ports into which salt was imported during the year. There was an increase in the importations into both ports, amounting to 14,25,286 maunds, as compared with 1885-86. The chief sources of supply were the United Kingdom, Hamburg, Arabian and Persian Gulfs and Italy. The receipts from Bombay fell off owing chiefly, it is said, to the advance payment of duty in that Province. Over 62,000 maunds of salt were imported from Aden and a small quantity from Cape Town. A profitable trade seems likely to spring up in salt from Aden, where an enterprising firm has started manufacturing Kurkutch on a very large scale. This salt will have the advantage of low freights, as vessels taking coal to that port have hitherto been unable to get cargo there and have had to return in ballast.

4. The clearances of salt from shipboard increased by 7,28,031 maunds or 10·1 per cent. in Calcutta, and by 21,487 maunds or 35·1 per cent. in Chittagong. An additional quantity of 2,000 maunds was cleared from shipboard at Chittagong under bond for Naraingunge. The total quantity cleared from bond in all ports amounted to 18,09,213 maunds against 19,06,624 maunds in 1885-86, and realised a duty of Rs. 36,18,426 against Rs. 38,13,248.

5. Salt was manufactured under the Excise Rules in Orissa only. The increase which occurred in 1885-86 in the manufacture of Excise salt was not maintained in the year under review, the quantity manufactured having diminished by 3,80,783 maunds or 85·1 per cent. The decrease which was shared by all three districts of the division is ascribed to the fact that fewer licenses for the manufacture of salt were issued during the year and the existing licenses were resigned, as the trained supervision of the Madras officials has stamped out the old lax system under which salt was manufactured in Orissa.

6. There was a decrease in the sales of Excise salt amounting to 2,43,092 maunds or 50·7 per cent., and in the duty realised to Rs. 4,86,184 or 50·7 per cent. This decrease was far exceeded by the increase in importation.

7. The sales of salt in the saliferous districts rose from 10,35,979 maunds in 1885-86 to 10,68,515 maunds in the past year. The increase occurred in all the districts except Khulna, where there was a slight falling off of 1,139 maunds. There was a decrease of 15·7 per cent. in the number of seizures, while there was an increase of 353·2 per cent. in the quantity of salt attached, and of 432 maunds in the quantity confiscated. The cases instituted for offences against the salt laws were 425 against 469 in 1885-86. The amounts realised as fines and disbursed as rewards were Rs. 2,327 and Rs. 1,904 against Rs. 2,179 and Rs. 1,447 respectively in the previous year.

8. The following table shows the despatches of salt into the interior by the different water routes and railways during the last two years :—

| YEAR.    | Via Balli Khal. | Via Santail. | Via Gewakhally. | Via Kinderpore. | Via Balliaghatta. | Total carried by water. | By the East Indian Railway. | By the Eastern Bengal and Calcutta and South-Eastern Railways or via Chitpore. | Via Butthola Ghat. | Total carried by rail. | GRAND TOTAL. |
|----------|-----------------|--------------|-----------------|-----------------|-------------------|-------------------------|-----------------------------|--|--------------------|------------------------|--------------|
|          | Mds.            | Mds.         | Mds.            | Mds.            | Mds.              | Mds.                    | Mds.                        | Mds.   | Mds.               | Mds.                   | Mds.         |
| 1885-86  | 13,34,941       | 6,29,171     | 3,20,296        | 3,23,522        | 16,52,044         | 42,58,974               | 35,42,280                   | 4,44,447   | 5,53,087           | 45,39,854              | 87,98,828    |
| 1886-87  | 12,42,835       | 6,80,524     | 3,57,285        | 3,15,624        | 16,30,991         | 42,17,253               | 37,37,667                   | 6,06,408   | 5,23,834           | 48,04,299              | 90,45,552    |
| Increase | .....           | 52,353       | 36,989          | .....           | .....             | .....                   | 1,85,377                    | 1,62,321   | .....              | 3,28,445               | 2,86,704     |
| Decrease | 82,106          | .....        | .....           | 7,898           | 31,053            | 41,741                  | .....                       | .....  | 29,253             | .....                  | .....        |

The figures given above show a decrease of 41,741 maunds in the quantity conveyed by water, and an increase of 3,28,445 maunds in the despatches by rail. The quantity of salt bonded during 1886-87 was 21,01,423 maunds against 14,88,290 maunds in the previous year. The increase has been attributed to the larger importations during the year. The quantity remaining in store at the end of the year was 8,08,374 maunds against 4,51,765 maunds at the commencement. The rent charged by Government for bonding salt in the Sulkeah Golahs has been reduced from Rs. 5 to Rs. 3 per thousand maunds, and the reduced rate has come into force with effect from the 1st April 1887.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

Secretary to the Government of Bengal.

**LIBERALITY OF THE LATE KUMAR GRISH CHUNDRA  
SING OF PAIKPARA.**

**RESOLUTION.**

*Calcutta, the 14th November 1887.*

**READ—**

A letter from the Commissioner of the Presidency Division, No. 19J.M., dated the 5th October 1887.

The late Kumar Grish Chundra Singh of Paikpara in a Will, executed prior to his death on the 13th October 1877, bequeathed a sum of Rs. 1,25,000 for the construction and maintenance of a dispensary at Kandi, in the district of Moorshedabad, and directed that the Trustees appointed by him should cause a suitable building to be constructed at a cost not exceeding Rs. 15,000, and make it over to Government, together with the balance of the endowment and any interest that might in the interim accrue thereto.

The Commissioner of the Presidency Division has reported that the building has now been completed, and that the Trustees are prepared, under the terms of the Will, shortly to hand over, along with it, a sum of approximately Rs. 1,36,000, representing an annual income of about Rs. 6,200.

The Lieutenant-Governor is pleased to accept the munificent bequest, and while tendering to the Trustees his thanks for the manner in which they have executed the trust, to place on record his appreciation of the liberality and public spirit displayed by Kumar Grish Chundra Singh. The Magistrate of Moorshedabad will be directed to take over the building and the funds from the Trustees on behalf of Government, and a Committee will be appointed by the Commissioner to undertake the management and control of the dispensary.

By order of the Lieutenant-Governor of Bengal,

**J. WARE EDGAR,**  
*Chief Secretary to the Govt. of Bengal.*



## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 12th November 1887.

| No.                       | District and date of return. | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|---------------------------|------------------------------|---------------------------------------|---|
| <b>BENGAL.</b>            |                              |                                       |   |
| <i>Western Districts.</i> |                              |                                       |   |
| <b>BURDWAN DIVN.</b>      | 1 Burdwan, Nov. 12, '87      | Nil                                   | Early cold weather. Prospects of main rice harvest rather below the average. Common rice sells at about 21 seers per runce. Public health improving.  |
|                           | 2 Bankoora „ 12, '87         | Nil                                   | Weather—seasonable. Harvesting of <i>aman</i> paddy is nearly completed. <i>Amun</i> rice is in ear. <i>Rubbi</i> sowings still proceed. Sugarcane is doing well. Prices stationary. Public health good.                            |
|                           | 3 Beerbhoom „ 12, '87        | Nil                                   | Weather—days clear, nights cool. <i>Amun</i> is beginning to ripen. Prospect of sugarcane good. Lands are being prepared for <i>rubbi</i> crops and sowing has already commenced in many places. Fever prevails. Prices stationary. |
|                           | 4 Midnapur „ 12, '87         | Nil                                   | Weather—getting cooler. Crops doing well except in a few pergunnahs. Fever prevalent in parts, and a few cases of cholera.  |
|                           | 5 Hooghly „ 12, „            | Nil                                   | Weather—set fair. Winter rice crop will vary between 8 and 12 annas. As last year's crop was above the average, there is not likely to be any scarcity. Cold-weather crops are doing well. Fever and cholera here and there.        |
|                           | Howrah „ 14, '87             | Nil                                   | Ordinary cold weather. <i>Amun</i> rice harvest has commenced. All prospects good.  |
| <i>Central Districts.</i> |                              |                                       |   |
| <b>PRESIDENCY DIVN.</b>   | 6 24 Parghs. Nov. 15, '87    | Nil                                   | Weather—clear and cool. Prospects of <i>aman</i> crop continue promising. Ploughing for <i>rubbi</i> crops continues. Public health generally good.   |
|                           | 7 Nudda „ 12, „              | Nil                                   | Weather—seasonable. <i>Amun</i> and sugarcane not so good in the south as in the north of the district. Wheat sowings have been finished. Winter crops doing well. Public health generally improving.                               |
|                           | 8 Khoolna „ 12, '87          | Nil                                   | Weather—clear and rather cool at night. <i>Amun</i> rice progressing satisfactorily. Winter crops coming up; prospects favourable. Some fever, but public health fair.  |
|                           | 9 Jessore „ 12, „            | Nil                                   | Cold weather is setting in; heavy dew falls at night. <i>Amun</i> crop is being harvested in some places. Sowing of winter crops continues. Prospects good. Fever reported from the Jhenidah, Narail and Bongong subdivisions.      |
|                           | 10 Moorshedabad „ 12, '87    | Nil                                   | Weather—cool. <i>Amun</i> paddy is in ear; its prospect is good. <i>Kalai</i> and <i>roog</i> are being harvested. <i>Til</i> and <i>rahar</i> are progressing.   |
| <b>RAJSHAHY DIVN.</b>     | 11 Dinagepur „ 12, '87       | Nil                                   | Weather—seasonable. Standing crops doing well. State and prospects of <i>kaimanti</i> crop good. Best rice 13 seers and coarse rice 20 seers per rupee. Public health fair.   |
|                           | 12 Rajshahye „ 12, '87       | Nil                                   | Weather—seasonable. Prospects of crops excellent. Public health generally good.   |
|                           | 13 Rungpur „ 12, '87         | Nil                                   | Prospects of crops good. Mustard is being sown. Public health improving.  |
|                           | 14 Bogra „ 12, '87           | Nil                                   | Weather—seasonable. State and prospects of crops continue satisfactory. Public health fair.   |
|                           | 15 Pubna „ 12, '87           | Nil                                   | Weather—seasonable. Prospects of all crops good. <i>Amun</i> rice is being reaped in places. Public health good for the time of the year.   |
|                           | 16 Dasjeeing „ 12, '87       | 0.03                                  | Weather—cool and bright. State and prospects of crops favourable.   |
|                           | 17 Jangipore „ 12, „         | Nil                                   | Weather—seasonable. Transplanting of tobacco going on. Mustard sowing continues. Prospects of winter rice crop favourable. Much fever in Alipore tehsil.  |
| <i>Eastern Districts.</i> |                              |                                       |   |
| <b>DACCA DIVISION.</b>    | 18 Dacca, Nov. 12, '87       | Nil                                   | Weather—fine and cool. <i>Amun</i> paddy is being harvested. Winter crops are being sown. Prospects continue good. Public health generally good, but in the Manickgunge sub-division malarious fever has broken out in some places. |
|                           | 19 Farra dpar „ 12, '87      | Nil                                   | Weather—seasonable. Harvesting of <i>aman</i> in progress; outturn good. Cold-weather crops are being sown. Public health fair.   |
|                           | 20 Backergunge „ 11, '87     | 0.30                                  | Weather—seasonable. Prospects of crops very good. Price of rice has fallen. General health fair, but fever prevails in places as usual at this season.  |
|                           | 21 Mymensingh „ 11, '87      | Nil                                   | Weather—seasonable. Prospects of crops and public health good.  |

| No.                                | District and date of return. | Rainfall at Sudder Station in inches | Character of the weather, state and prospects of the crops, and state of health at date   |
|------------------------------------|------------------------------|--------------------------------------|---|
| <b>BENGAL—contd.</b>               |                              |                                      |   |
| <i>Eastern Districts—contd.</i>    |                              |                                      |   |
| CHITTAGONG DIV.                    | 25 Chittagong Nov. 15, '87   | Nil                                  | Weather—seasonable. Prospects of crops good. Ploughing for winter crops continues. Prices steady. Cholera still reported; public health otherwise good.   |
|                                    | 23 Noakholly „ 11, „         | Nil                                  | Weather—seasonable. Late <i>aus</i> is still being reaped. Prospects of <i>amun</i> good. General health good.  |
|                                    | 24 Tipperah „ 10, „          | 2.00                                 | Weather—seasonable. Prospects of standing crops excellent, and those of high lands improved by late shower. Lands are being prepared for winter crops. Public health generally good.  |
|                                    | Brahmanbariah „ „            | 0.07                                 |   |
|                                    | Chandpur „ „                 | 1.45                                 |   |
| CHITTAGONG HILL TRACTS.            | 22 Chittagong Hill „ 8, „    | 0.55                                 | Weather—cloudy with drizzling rain during the first part of the week. Harvesting of cotton commenced. Lands are being ploughed for mustard and other cold-weather crops.  |
|                                    | Hill Tipperah „ 9, „         | 2.92                                 | Weather—getting cold. <i>Amun</i> paddy promising well. Prospects of cotton fair. Sugarcane thriving. Public health good.   |
| <b>BEHAR.</b>                      |                              |                                      |   |
| PATNA DIV.                         | 26 Patna „ 12, '87           | Nil                                  | Weather—fine and seasonable. <i>Rubbi</i> sowings still going on. Poppy sowing also progressing. Much of the rice has come into ear. Public health good.  |
|                                    | 27 Gya „ 12, „               | Nil                                  | Weather—cold. Paddy ripening and being harvested in places. <i>Rubbi</i> coming on well. Poppy being sown. Cholera reported from Atrai, Aurangabad and Nubbinaggar thanas, and fever from all parts of the district.  |
|                                    | 28 Shahabad „ 12, „          | Nil                                  | Weather—seasonable. Sowing of <i>rubbi</i> crops still continues. Paddy looks promising; in some places the harvesting of the crop has begun. A few cases of fever reported from the Buxar sub-division, otherwise public health good.  |
|                                    | 29 Darbhanga „ 12, „         | Nil                                  | Weather—settling cool. Prospects of <i>aghani</i> rice continue favourable. <i>Kartika</i> paddy in some places is being harvested. <i>Rubbi</i> sowings are still in progress. Prices stationary. Public health generally good.  |
|                                    | 3 Mozufferpur „ 12, „        | Nil                                  | Weather—fine and normal. Prospects of all crops good. Poppy sowings progressing favourably. Fever rather prevalent.   |
| BHAGALPORE DIV.                    | 6 Saran „ 12, „              | Nil                                  | Weather—fair and bright. <i>Aghani</i> paddy fast ripening. <i>Rubbi</i> crops coming on well. Poppy sowings almost completed. Prospects of crops continue favourable. Public health good.  |
|                                    | 33 Champaran „ 12, „         | Nil                                  | Weather—cool. Early <i>rubbi</i> germinating. Paddy in ear. Prospects continue favourable. Public health good.  |
|                                    | 34 Moudouy „ 12, „           | Nil                                  | Weather—fair and getting cold. Prospects of winter rice continue favourable. Seedlings of <i>rubbi</i> crops look promising. Public health on the whole good. Prices stationary.  |
|                                    | 34 Bhagulpur „ 12, „         | Nil                                  | Wheat sowings still in progress. <i>Kurthi</i> promises a fine yield. Late rice coming on well except in south-east. A good deal of fever in the north.   |
|                                    | 35 Purneah „ 12, „           | Nil                                  | Weather—seasonable. <i>Aghani</i> crops doing well.   |
| BHAGALPORE DIV.                    | 36 Maldah „ 12, „            | Nil                                  | Weather—seasonable. Prospects of crops continue favourable. Common rice selling at an average of 22 seers per rupee. Fever has abated to some extent.   |
|                                    | 37 Sonthal Bergha „ 12, „    | Nil                                  | Weather—seasonable. Harvesting of high land paddy has commenced; outturn below the average. Other crops are good. Prices stationary. Public health fair.  |
| <b>ORISSA.</b>                     |                              |                                      |   |
| ORISSA DIV.                        | 38 Cuttack „ 11, „           | Nil                                  | Weather—hot and cloudy to-day (11th) <i>Laghu sarad</i> rice is being cut with fair outturn. <i>Gum sarad</i> is flowering and doing well. <i>Rubbi</i> crops are growing well. Wheat is being sown. Common rice sells at 18½ seers per rupee in town. Fever prevails in many places, but public health generally good.   |
|                                    | 39 Pooree Khorda „ 10, „     | 1.05                                 | Weather—seasonable. <i>Laghu sarad</i> rice is being harvested. Late <i>sarad</i> is in ear. Prospects of the crops in the Chilka tracts and Gope thana are bad. Common rice 21 seers 6 chittacks per rupee in the Sudder sub-division and 20 seers 3 chittacks in the Khorda sub-division. Cholera has re-appeared in the town as well as in the interior of the district probably owing to the influx of pilgrims for the Panchuk festival. |
|                                    | 40 Balaasore „ 11, „         | 0.62                                 | Weather—seasonable. Late <i>sarad</i> rice is ripening. Harvesting of early <i>sarad</i> has commenced. <i>Rubbi</i> is growing well. A little more rain is wanted. Public health good, except a few cases of fever and of cholera in the town.   |
| <b>CHOTA NAGPORE.</b>              |                              |                                      |   |
| <i>South-West Frontier Agency.</i> |                              |                                      |   |
| CHOTA NAGPORE DIV.                 | 41 Hazaribagh Nov. 11, '87   | Nil                                  | Weather—bright and clear; cold at night. Rice being harvested; outturn from 8 to 12 annas. Rain wanted for <i>rubbi</i> crops. Sugarcane doing well. General health good.   |
|                                    | 42 Lohardugga „ 12, „        | Nil                                  | Weather—getting cold. Paddy suffering for want of rain. No change in prices. Public health good.  |
|                                    | 43 Singbhum „ 11, „          | Nil                                  | No rain. Weather rather warm. Winter <i>dhan</i> is being reaped; only a 10-anna outturn is expected. <i>Rubbi</i> prospects fair, but rain is wanted. General health good.   |
|                                    | 44 Manuohom „ 12, „          | Nil                                  | Weather—cool and fair. Rain wanted for <i>rubbi</i> crops in Govindpur. Prospects of spring crops in other parts of the district fair. Public health good except in Topchanchi thana, where fever prevails.   |

Published for general information.

CALCUTTA, REVENUE DEPT. :  
The 15th November 1887.P. NOLAN.  
Secy. to the Govt. of Bengal.

**Re-uns of the Meteorological Observations taken at the Alipore Observatory from  
6th to 12th November 1887.**

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 55 Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |                 | Rain.   | WEATHER.                               |
|--------|-------|-----------------|-------------------------------------|-------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|--|
|        |       |                 |                                     |                                     | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. | Miles recorded. |         |  |
| 1887.  |       |                 |                                     | Inches                              | °            | °        | °      | °        | °              | Inches          | °          | %         |                       |                 | Inches. |  |
| Nov.   | 6th   | 136.2           | 10.7                                | 29.986                              | 71.1         | 80.7     | 18.7   | 62.0     | 65.3           | 0.551           | 61.7       | 74        | W by N and NNW        | 86              | Nil     | Clear, $\overline{\text{D}}$ .         |
| "      | 7th   | 134.9           | 10.7                                | .930                                | 72.2         | 81.5     | 18.0   | 63.5     | 66.6           | .580            | 63.2       | 75        | NNW and calm          | 53              | "       | Chiefly clear, $\overline{\text{D}}$ . |
| "      | 8th   | 135.4           | 10.3                                | .938                                | 73.1         | 81.9     | 17.0   | 64.9     | 67.7           | .609            | 64.6       | 76        | W by N and N by W     | 46              | "       | Clear, $\overline{\text{D}}$ .         |
| "      | 9th   | 136.3           | 10.1                                | .927                                | 74.0         | 83.5     | 18.4   | 65.1     | 69.1           | .649            | 66.4       | 78        | W and calm            | 36              | "       | Chiefly clear, $\overline{\text{D}}$ . |
| "      | 10th  | 138.5           | 10.7                                | .908                                | 75.1         | 85.0     | 17.6   | 67.4     | 70.6           | .691            | 68.2       | 80        | W by S and NW         | 47              | "       | Chiefly clear, $\overline{\text{D}}$ . |
| "      | 11th  | 136.8           | 10.2                                | .920                                | 73.1         | 82.0     | 16.1   | 65.9     | 66.2           | .554            | 61.8       | 70        | NNW and NW            | 73              | "       | Clear, $\overline{\text{D}}$ .         |
| "      | 12th  | 134.5           | 10.2                                | .963                                | 69.9         | 80.5     | 19.5   | 61.0     | 63.2           | .491            | 58.4       | 70        | NNW                   | 73              | "       | Chiefly cloudy $\overline{\text{D}}$ . |

The mean pressure of the seven days

The average pressure of the corresponding period for 24 years, S. G.'s Office

Inches.

29.982

The total number of hours of bright sunshine

The maximum possible number of hours of sunshine

Hours.

72.9

77.8

The mean temperature of the seven days

The average temperature of the corresponding period for 24 years, S. G.'s Office

The extreme variation of temperature

The maximum temperature

°

72.6

76.7

24.0

85.0

The highest velocity of the wind in one hour

The highest pressure of wind on one square foot

Miles.

8

lbs.

Not measureable

%

The mean relative humidity

The average relative humidity of the corresponding period for 24 years, S. G.'s Office

75

73

The total fall of rain from 6th to 12th November 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

The total fall from 1st January to 12th November 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

Inches.

Nil

0.37

58.07

65.10

The mean pressure, temperature, &amp;c., are deduced from the traces of the Barograph and Thermograph.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 46, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

- fog,  $\overline{\text{D}}$ .

JOHN ELLIOT,

Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 14th November 1887.

## Meteorological Report of the Province of Bengal.

## STATION OBSERVATIONS.

|                        |                         | STATION OBSERVATIONS.           |                            |                      |                            |                     |                      |                       |                     |                  |                           |                                   |                                 |                                     |                           |
|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|----------------------------|---------------------|----------------------|-----------------------|---------------------|------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|---------------------------|
| DISTRICT.              | Representative station. | AIR PRESSURE.                   |                            |                      | WIND.                      |                     | TEMPERATURE.         |                       |                     |                  |                           |                                   |                                 |                                     |                           |
|                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction.      | Mean wind velocity. | Highest during week. | Date.                 | Lowest during week. | Date.            | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean 10 A.M. temperature. |
| Barrackpore            | Gopalpore               | 29.081                          | 30.031                     | +0.04                | Calm                       | 144.0               | 84.2                 | 11th Nov.             | 71.8                | 5th Nov.         | 81.0                      | 73.5                              | 77.0                            | +0.4                                | 82.4                      |
|                        | False Point             | 30.011                          | 30.033                     | +0.02                | NE & NW                    | 134.0               | 85.4                 | 10th & 11th Nov.      | 66.0                | 7th to 10th Nov. | 83.6                      | 69.2                              | 75.9                            | +0.2                                | 81.7                      |
| Cuttack                | Cuttack                 | 29.950                          | 30.034                     | +0.08                | alm & ENE                  | 31.0                | 90.9                 | 10th "                | 67.3                | 7th "            | 88.2                      | 70.6                              | 79.4                            | +1.7                                | 82.7                      |
| Balasore               | Balasore                | 29.984                          | 30.044                     | +0.06                | Variable                   | 53.5                | 89.4                 | 11th "                | 61.0                | 7th "            | 86.0                      | 61.6                              | 5.3                             | +1.3                                | 80.1                      |
| South-West Midnapore   | Saugor Island           | 30.010                          | 30.037                     | +0.06                | NW                         | 175.0               | 83.2                 | 10th & 11th Nov.      | 64.9                | 7th "            | 81.2                      | 68.6                              | 75.1                            | -1.3                                | 75.8                      |
| South 24 Pargunnahs    | Midnapore               | 29.900                          | 30.053                     | +0.07                | N                          | 55.7                | 88.8                 | 11th "                | 59.2                | 6th "            | 85.9                      | 63.3                              | 74.6                            | +1.1                                | 80.5                      |
| 24 Pargunnahs          | Calcutta                | 30.005                          | 30.027                     | +0.02                | North-Westerly             | 65.0                | 85.0                 | 11th "                | 63.0                | 6th "            | 82.3                      | 64.8                              | 73.6                            | -1.5                                | 76.1                      |
| Howrah                 | Burdwan                 | 29.932                          | 30.034                     | +0.00                | NNW                        | 34.6                | 87.0                 | 11th "                | 63.9                | 11th "           | 84.0                      | 61.1                              | 74.4                            | -1.2                                | 78.5                      |
| Bankura                | Bankoora                | 29.711                          | -                          | -                    | Calm                       | 3.6                 | 88.6                 | 11th "                | 61.2                | 7th "            | 86.4                      | 65.9                              | 70.2                            | -                                   | 79.8                      |
| Barisal                | Raneegunge              | 29.699                          | 30.011                     | +0.01                | Variable                   | 63.0                | 80.3                 | 11th "                | 60.6                | 5th "            | 86.9                      | 63.1                              | 75.0                            | +1.3                                | 81.1                      |
| West Burdwan           | Berhampur               | 29.911                          | 30.030                     | +0.08                | NNW                        | 58.1                | 84.7                 | 11th "                | 64.2                | 5 & 6 "          | 82.9                      | 63.3                              | 74.1                            | -1.7                                | 78.5                      |
| Hooghly                | Krishnaghur             | -                               | -                          | -                    | Observations not received. |                     |                      |                       |                     |                  |                           |                                   |                                 |                                     |                           |
| Jessore                | Jessore                 | 29.999                          | 30.028                     | +0.03                | N 10th-Westerly            | 42.6                | 86.7                 | 10th & 11th Nov.      | 61.5                | 6th Nov.         | 85.3                      | 63.6                              | 74.5                            | -1.3                                | 79.6                      |
| Chittagong             | Chittagong              | 29.943                          | 30.011                     | +0.07                | N                          | 31.0                | 84.1                 | 11th "                | 65.0                | 8th & 11th Nov.  | 83.0                      | 61.9                              | 75.3                            | -1.3                                | 79.3                      |
| Chittagong Hill Tracts | Demagiri                | -                               | -                          | -                    | Observations not received. |                     |                      |                       |                     |                  |                           |                                   |                                 |                                     |                           |
| Chittagong             | Barrisal                | 29.990                          | 30.038                     | +0.05                | Variable                   | 50.5                | 83.8                 | 10th "                | 61.1                | 8th "            | 82.4                      | 65.6                              | 74.0                            | -1.3                                | 74.7                      |
| Chittagong             | Noakholly               | 29.980                          | 30.030                     | +0.05                | Calm                       | ?                   | 83.7                 | 10th & 11th Nov.      | 62.2                | 7th "            | 83.0                      | 63.7                              | 75.4                            | -2.0                                | 79.3                      |
| Chittagong             | Furriedpore             | 30.011                          | 30.031                     | +0.02                | NW                         | 36.1                | 83.5                 | 11th "                | 60.5                | 5th "            | 82.3                      | 60.2                              | 71.3                            | 0                                   | 78.1                      |
| Dacca                  | Dacca                   | 29.957                          | 30.010                     | +0.05                | North-Westerly             | 45.0                | 84.6                 | 9th "                 | 62.4                | 5th "            | 83.7                      | 65.3                              | 74.5                            | -2.6                                | 78.9                      |
| Comilla                | Comilla                 | 29.906                          | 30.002                     | +0.04                | NW                         | 32.4                | 86.4                 | 7th "                 | 61.9                | 8th "            | 85.4                      | 63.0                              | 74.5                            | -1.0                                | 80.1                      |
| Mymensingh             | Mymensingh              | 29.970                          | 30.025                     | +0.05                | Calm                       | 34.0                | 84.1                 | 7th "                 | 61.9                | 5th "            | 83.3                      | 63.4                              | 73.4                            | -0.8                                | 77.5                      |
| Bogra                  | Bogra                   | 29.927                          | 30.011                     | +0.08                | N & Calm                   | 33.8                | 82.7                 | 8th & 9th Nov.        | 57.4                | 5th "            | 82.5                      | 61.1                              | 71.9                            | -                                   | 77.0                      |
| Serajpore              | Serajpore               | 29.965                          | 30.011                     | +0.05                | N                          | 21.1                | 84.9                 | 6th "                 | 58.8                | 5th "            | 83.7                      | 61.8                              | 72.8                            | -0.8                                | 74.0                      |
| Rampore                | Rampore Beau            | 29.956                          | 30.027                     | +0.07                | NW & Northerly             | 65.3                | 83.2                 | 6th, 8th, & 11th Nov. | 67.7                | 5th "            | 82.5                      | 60.1                              | 71.3                            | -0.1                                | 78.3                      |
| Maldah                 | Maldah                  | 29.967                          | -                          | -                    | Calm                       | ?                   | 85.0                 | 11th "                | 57.9                | 5th "            | 83.4                      | 59.7                              | 71.6                            | -                                   | 77.5                      |
| Dinapore               | Dinapore                | 29.976                          | 30.030                     | 0                    | Variable                   | 38.0                | 84.1                 | 8th "                 | 67.2                | 5th "            | 85.0                      | 61.3                              | 72.3                            | -0.2                                | 78.3                      |
| Rungpore               | Rungpore                | 29.897                          | 30.015                     | -0.07                | Calm                       | 19                  | 84.4                 | 5th "                 | 58.7                | 5th "            | 83.1                      | 61.6                              | 71.4                            | +0.7                                | 78.1                      |
| Julpigoree             | Julpigoree              | 29.720                          | 30.014                     | -0.07                | S                          | 132.3               | 82.9                 | 9th "                 | 59.9                | 5th "            | 81.9                      | 63.0                              | 72.5                            | +0.4                                | 76.1                      |
| Darjeeling Hill Tracts | Darjeeling              | 29.956                          | -                          | -0.12                | Variable                   | 31.6                | 87.0                 | 6th "                 | 43.2                | 5th & 6th Nov.   | 84.4                      | 43.7                              | 49.0                            | +0.1                                | 82.5                      |
| Purneah                | Purneah                 | 29.917                          | 30.047                     | +0.03                | Calm                       | 8.7                 | 83.2                 | 8th "                 | 59.7                | 5th to 9th Nov.  | 81.2                      | 60.0                              | 70.6                            | -2.9                                | 75.6                      |
| North Bhagulpore       | Mozufferpore            | -                               | -                          | -                    | Observations suspended.    |                     |                      |                       |                     |                  |                           |                                   |                                 |                                     |                           |
| Durbhunga              | Durbhunga               | 29.969                          | 30.039                     | +0.03                | WNW                        | 74.1                | 82.2                 | 10th & 11th Nov.      | 61.4                | 11th "           | 81.6                      | 63.6                              | 72.6                            | -0.8                                | 74.8                      |
| Chumbarun              | Motihari                | 29.770                          | 30.012                     | +0.03                | Westerly                   | 109.0               | 83.7                 | 11th "                | 54.9                | 11th "           | 82.4                      | 58.9                              | 70.2                            | +0.0                                | 79.7                      |
| Barua                  | Chupra                  | 29.811                          | 30.031                     | +0.04                | WNW                        | -                   | 84.6                 | 10th "                | 60.9                | 5th & 6th Nov.   | 82.7                      | 61.8                              | 72.5                            | +0.6                                | 77.3                      |
| Shahabad               | Dhree                   | 29.684                          | 30.010                     | -0.01                | SSW                        | 145.0               | 86.7                 | 10th "                | 58.0                | 6th "            | 82.3                      | 63.3                              | 72.8                            | +1.1                                | 78.1                      |
| Shahabad               | Buxar                   | 29.717                          | 30.045                     | +0.13                | W & WNW                    | 97.0                | 85.4                 | 5th & 10th Nov.       | 56.4                | 11th "           | 84.3                      | 61.6                              | 72.9                            | +0.6                                | 74.7                      |
| Shahabad               | Arrah                   | 29.819                          | 30.022                     | +0.03                | W                          | 50.3                | 85.3                 | 5th & 10th Nov.       | 50.4                | 10th "           | 83.9                      | 58.0                              | 71.0                            | -0.6                                | 76.5                      |
| Gya                    | Gya                     | 29.916                          | 30.011                     | +0.05                | W                          | 42.8                | 86.9                 | 10th "                | 57.8                | 5th "            | 84.8                      | 60.5                              | 72.7                            | -1.3                                | 80.5                      |
| Patna                  | Bankipore               | 29.865                          | 30.041                     | +0.03                | W                          | ?                   | 87.4                 | 9th "                 | 57.5                | 11th "           | 85.5                      | 62.0                              | 73.8                            | +0.8                                | 75.1                      |
| South Bhagulpore       | Bhagulpore              | 29.960                          | 30.025                     | +0.08                | NW                         | 42.0                | 83.3                 | 10th "                | 58.0                | 11th "           | 82.4                      | 59.8                              | 71.1                            | -0.3                                | 78.7                      |
| Monghyr                | Doonka                  | 29.910                          | -                          | +0.01                | Calm                       | 5.4                 | 88.1                 | 11th "                | 56.8                | 11th "           | 84.4                      | 59.9                              | 72.1                            | +0.7                                | 74.4                      |
| Hazaribagh             | Hazaribagh              | 29.907                          | 30.032                     | +0.12                | WNW                        | 162.0               | 82.2                 | 10th "                | 57.6                | 11th "           | 81.2                      | 59.7                              | 70.4                            | +0.8                                | 75.0                      |
| Loharagga              | Ranchee                 | 27.875                          | 30.026                     | +0.10                | NW                         | 106.0               | 82.2                 | 9th "                 | 56.4                | 11th "           | 80.2                      | 58.8                              | 69.5                            | +2.4                                | 74.8                      |
| Manbhoom               | Chyotassa               | 29.819                          | -                          | +0.09                | SSW                        | 16.0                | 88.4                 | 11th "                | 58.3                | 6th "            | 85.8                      | 61.6                              | 74.2                            | +1.6                                | 80.2                      |
| Singbhoom              | Singbhoom               | -                               | -                          | -                    | Observations not received. |                     |                      |                       |                     |                  |                           |                                   |                                 |                                     |                           |
| Asansol                | Dhubri                  | -                               | -                          | -                    | Observations not received. |                     |                      |                       |                     |                  |                           |                                   |                                 |                                     |                           |
| Asansol                | Silchar                 | -                               | -                          | -                    | Observations not received. |                     |                      |                       |                     |                  |                           |                                   |                                 |                                     |                           |

Summary. - Summary. - The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the past ten years. The normal mean of the atmosphere is expressed as percentage, separated, or being represented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The number

for the week ending Friday, the 11th November 1887.

| DISTRICT OBSERVATIONS.      |   |  |                    |              |                     |                    |              |                 |        |        |                               |                              |                 | Representative station. | DISTRICT. | METEOROLOGICAL DIVISION. |
|-----------------------------|---|--|--------------------|--------------|---------------------|--------------------|--------------|-----------------|--------|--------|-------------------------------|------------------------------|-----------------|-------------------------|-----------|--------------------------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | OF WEEK.           |              | RAINFALL.           |                    |              |                 |        |        |                               |                              |                 |                         |           |                          |
|                             |   |  |                    |              | Since 1st of month. |                    |              | Since May 15th. |        |        | Average number of rainy days. | Normal number of rainy days. |                 |                         |           |                          |
|                             |   |  | Mean for district. | Normal mean. | Variation.          | Mean for district. | Normal mean. | Variation.      |        |        |                               |                              |                 |                         |           |                          |
| 70                          | 8.1                                       | 0.03                                   |                    |              |                     |                    |              |                 |        |        |                               |                              |                 | Gopalpore               | Pooree    | ORISSA.                  |
| 67                          | 1.6                                       | Nil                                    | Nil                | 0.42         | 1.88                | 1.46               | +0.42        | 43.97           | 54.71  | -10.74 | 0.0                           | 0.0                          | False Point     | Cuttack                 | ...       | SOUTH-WEST BENGAL.       |
| 60                          | 2.0                                       | Nil                                    | Nil                | 0.18         |                     | 0.57               |              | 43.29           | 51.23  | -7.94  | 0.0                           | 0.0                          | Cuttack         | Balasore                | ...       |                          |
| 68                          | 1.3                                       | Nil                                    | Nil                | 0.34         | 0.11                | 0.67               | -0.56        | 41.73           | 53.19  | -11.46 | 0.0                           | 0.5                          | Balasore        | South-West Midnapore    | ...       |                          |
| 68                          | 0.4                                       | Nil                                    | Nil                | 0.18         | 1.35                | 0.50               | +0.35        | 58.28           | 61.43  | -3.15  | 0.0                           | 0.5                          | Rangor Island   | South 24-Pergunnahs     | ...       | SOUTH-WEST BENGAL.       |
| 53                          | 0   | Nil                                    | Nil                | 0.04         | 0.06                | 0.19               | -0.14        | 50.46           | 50.78  | -0.30  | 0.0                           | 0.3                          | Midnapore       | Midnapore               | ...       |                          |
| 60                          | 0.1                                       | Nil                                    | Nil                | 0.10         | 0.04                | 0.28               | -0.24        | 40.50           | 51.48  | -10.98 | 0.0                           | 0.3                          | Calcutta        | 24-Pergunnahs           | ...       |                          |
| 50                          | 0   | Nil                                    | Nil                | 0.10         | 0.33                | 0.29               | +0.04        | 45.04           | 46.15  | -1.11  | 0.0                           | 0.3                          | Burdwan         | Howrah                  | ...       | SOUTH-WEST BENGAL.       |
| 55                          | 0   | Nil                                    | Nil                | 0.09         | Nil                 | 0.31               | -0.32        | 49.34           | 51.68  | -2.34  | 0.0                           | 0.3                          | Bankoora        | Hooghly                 | ...       |                          |
| 44                          | 0   | Nil                                    | Nil                | 0.10         | Nil                 | 0.14               | -0.14        | 47.71           | 51.85  | -4.14  | 0.0                           | 0.3                          | Raneegunge      | Burdwan                 | ...       |                          |
| 66                          | 0.3                                       | Nil                                    | Nil                | 0.15         | Nil                 | 0.25               | -0.25        | 58.55           | 40.18  | +9.67  | 0.0                           | 0.3                          | Berhampore      | West Burdwan            | ...       | SOUTH-WEST BENGAL.       |
|                             |   | Nil                                    | Nil                | 0.20         | 0.01                | 0.30               | -0.29        | 42.78           | 48.94  | -6.16  | 0.0                           | 0.2                          | Krishnaghar     | Moorshedabad            | ...       |                          |
| 60                          | 0   | Nil                                    | Nil                | 0.13         | 0.42                | 0.29               | +0.13        | 41.50           | 53.10  | -11.60 | 0.0                           | 0.3                          | Jessore         | Nudda                   | ...       |                          |
| 72                          | 1.0                                       | Nil                                    | Nil                | 0.47         | 3.76                | 1.00               | +2.76        | 90.08           | 112.82 | -16.79 | 0.0                           | 0.6                          | Chittagong      | Jessore                 | ...       | SOUTH-WEST BENGAL.       |
|                             |   | Nil                                    | Nil                | 0.67         | 3.98                | 1.30               | +2.68        |                 | 80.57  |        |                               |                              | Dennagiri       | Khoolna                 | ...       |                          |
| 65                          | 0   | Nil                                    | Nil                | 0.20         | 4.86                | 0.89               | +3.97        | 59.32           | 76.90  | -17.67 | 0.0                           | 0.6                          | Barrisal        | Chittagong Hill Tracts  | ...       |                          |
| 64                          | 0.7                                       | Nil                                    | Nil                | 0.07         | 4.82                | 1.74               | +3.08        | 72.67           | 107.68 | -35.01 | 0.0                           | 0.6                          | Noakholly       | Backergunge             | ...       | SOUTH-WEST BENGAL.       |
| 61                          | 0   | Nil                                    | Nil                | 0.14         | 0.41                | 0.23               | +0.13        | 35.91           | 55.72  | -19.81 | 0.0                           | 0.3                          | Furreedpore     | Noakholly               | ...       |                          |
| 67                          | 0   | Nil                                    | Nil                | 0.09         | 1.08                | 0.40               | +0.68        | 40.29           | 60.37  | -20.08 | 0.0                           | 0.2                          | Dacca           | Furreedpore             | ...       |                          |
| 63                          | 0.3                                       | Nil                                    | Nil                | 0.17         | 1.12                | 0.53               | +0.59        | 42.01           | 70.25  | -28.24 | 0.0                           | 0.4                          | Commillah       | Dacca                   | ...       | SOUTH-WEST BENGAL.       |
| 72                          | 2.3                                       | Nil                                    | Nil                | 0.12         | 0.12                | 0.21               | -0.09        | 60.53           | 67.01  | -6.48  | 0.0                           | 0.2                          | Mymensingh      | Commillah               | ...       |                          |
| 65                          | 0   | Nil                                    | Nil                | 0.27         | Nil                 | 0.34               | -0.34        | 60.48           | 56.54  | +3.94  | 0.0                           | 0.4                          | Bogra           | Mymensingh              | ...       |                          |
| 63                          | 0   | Nil                                    | Nil                | 0.18         | 0.05                | 0.25               | -0.20        | 43.99           | 53.36  | -9.37  | 0.0                           | 0.4                          | Sorajunge       | Bogra                   | ...       | SOUTH-WEST BENGAL.       |
| 63                          | 0   | Nil                                    | Nil                | 0.17         | 0.15                | 0.20               | -0.05        | 49.57           | 53.79  | -4.22  | 0.0                           | 0.2                          | Rampore Beanlah | Pubna                   | ...       |                          |
| 59                          | 0   | Nil                                    | Nil                | 0.17         | Nil                 | 0.17               | -0.17        | 46.61           | 54.25  | -7.64  | 0.0                           | 0.3                          | Maldah          | Rajahshaye              | ...       |                          |
| 63                          | 0.6                                       | Nil                                    | Nil                | 0.04         | Nil                 | 0.04               | -0.04        | 69.06           | 55.31  | +13.55 | 0.0                           | 0.1                          | Dinapore        | Maldah                  | ...       | SOUTH-WEST BENGAL.       |
| 61                          | 0   | Nil                                    | Nil                | 0.08         | Nil                 | 0.08               | -0.08        | 80.61           | 72.74  | +7.87  | 0.0                           | 0.1                          | Rungpore        | Dinapore                | ...       |                          |
| 73                          | 0   | Nil                                    | Nil                | 0.02         | Nil                 | 0.03               | -0.03        | 117.48          | 109.83 | +7.49  | 0.0                           | 0.1                          | Julpigoree      | Rungpore                | ...       |                          |
| 73                          | 5.0                                       | 0.03                                   | 0.01               | 0.01         | 0.01                | 0.06               | -0.05        | 117.10          | 119.63 | -2.53  | 0.2                           | 0.1                          | Darjeeling      | Julpigoree              | ...       | SOUTH-WEST BENGAL.       |
| 70                          | 0   | Nil                                    | Nil                | 0.03         | Nil                 | 0.03               | -0.03        | 65.04           | 57.39  | +7.65  | 0.0                           | 0.1                          | Purneah         | Cooch Behar             | ...       |                          |
|                             |   | Nil                                    | Nil                | 0.04         | Nil                 | 0.04               | -0.04        | 46.91           | 42.48  | +4.43  | 0.0                           | 0.1                          | Mozufferpore    | Darjeeling Hill Tracts  | ...       |                          |
| 73                          | 0.3                                       | Nil                                    | Nil                | 0.03         | Nil                 | 0.01               | -0.02        | 49.62           | 43.39  | +6.03  | 0.0                           | 0.1                          | Durbhunga       | Purneah                 | ...       | SOUTH-WEST BENGAL.       |
| 60                          | 2.3                                       | Nil                                    | Nil                | Nil          | Nil                 | Nil                | Nil          | 49.38           | 45.42  | +3.76  | 0.0                           | 0.0                          | Mothari         | North Bhagulpore        | ...       |                          |
| 66                          | 0.1                                       | Nil                                    | Nil                | 0.04         | Nil                 | 0.04               | -0.04        | 39.35           | 48.19  | -8.84  | 0.0                           | 0.1                          | Chupra          | Mozufferpore            | ...       |                          |
| 44                          | 0.3                                       | -                                      |                    |              |                     |                    |              |                 |        |        |                               |                              | Dehree          | Durbhunga               | ...       | SOUTH-WEST BENGAL.       |
| 45                          | 0.7                                       | Nil                                    | Nil                | 0.13         | Nil                 | 0.13               | -0.12        | 37.15           | 39.25  | -1.70  | 0.0                           | 0.1                          | Buxar           | Chumparan               | ...       |                          |
| 53                          | 0.6                                       | -                                      |                    |              |                     |                    |              |                 |        |        |                               |                              | Arrah           | Sarun                   | ...       |                          |
| 47                          | 1.1                                       | Nil                                    | Nil                | 0.14         | Nil                 | 0.14               | -0.14        | 38.00           | 40.71  | -2.71  | 0.0                           | 0.2                          | Gya             | Shahabad                | ...       | SOUTH-WEST BENGAL.       |
| 56                          | 1.0                                       | Nil                                    | Nil                | 0.09         | Nil                 | 0.10               | -0.10        | 30.04           | 40.74  | -1.08  | 0.0                           | 0.1                          | Bankipore       | Gya                     | ...       |                          |
| 55                          | 0   | Nil                                    | Nil                | 0.11         | Nil                 | 0.13               | -0.12        | 42.03           | 42.44  | +0.40  | 0.0                           | 0.1                          | Bhagulpore      | Patna                   | ...       |                          |
| 46                          | 0   | Nil                                    | Nil                | 0.13         | Nil                 | 0.13               | -0.13        | 52.49           | 50.23  | +2.27  | 0.0                           | 0.3                          | Doonka          | South Bhagulpore        | ...       | SOUTH-WEST BENGAL.       |
| 36                          | 0   | Nil                                    | Nil                | 0.12         | Nil                 | 0.22               | -0.22        | 46.42           | 40.74  | -5.32  | 0.0                           | 0.4                          | Hazaribagh      | Monghyr                 | ...       |                          |
| 50                          | 1.0                                       | Nil                                    | Nil                | 0.09         | Nil                 | 0.23               | -0.23        | 44.34           | 46.51  | -2.17  | 0.0                           | 0.4                          | Manchae         | Southal Pergunnahs      | ...       |                          |
| 46                          | 0   | Nil                                    | Nil                | 0.17         | Nil                 | 0.23               | -0.23        | 40.63           | 50.46  | -9.84  | 0.0                           | 0.7                          | Chyebasen       | Hazaribagh              | ...       | SOUTH-WEST BENGAL.       |
|                             |   |  |                    |              |                     |                    |              |                 |        |        |                               |                              | Sibsagar        | Lohardugga              | ...       |                          |
|                             |   |  |                    |              |                     |                    |              |                 |        |        |                               |                              | Dhubri          | Manbhoom                | ...       |                          |
|                             |   |  |                    |              |                     |                    |              |                 |        |        |                               |                              | Silchar         | Singhmoom               | ...       |                          |

1. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.  
2. The average cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means are the means of the district are the numerical averages of the rainfall returns received in the district, i.e., from the total rainfall at the sub-divisions.





Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 11th of November 1887—*continued*.

| Meteorological Division.        | District.           | Station.         | RAINFALL.               |                       |                       |                        |                          |                          |                        | TOTAL.                |            | Total rainfall since 1st of month. | Average total rainfall from 1st of month. | Total rainfall since 1st May 1887. | Average rainfall from 1st May to date. |
|---------------------------------|---------------------|------------------|-------------------------|-----------------------|-----------------------|------------------------|--------------------------|--------------------------|------------------------|-----------------------|------------|------------------------------------|---|------------------------------------|--|
|                                 |                     |                  | Saturday, 5th November. | Sunday, 6th November. | Monday, 7th November. | Tuesday, 8th November. | Wednesday, 9th November. | Thursday, 10th November. | Friday, 11th November. | Number of rainy days. | of inches. |                                    |   |                                    |  |
| ORTH BENGAL— <i>continued</i> . | Barisal             | Gopalgunge       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'04                                      | 41'90                              | 48'36                                  |
|                                 |                     | Sowon            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'04                                      | 38'94                              | 48'40                                  |
| OUTH BENGAL                     | Shahabad            | Chunrah          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'08                                      | 57'53                              | 50'73                                  |
|                                 |                     | Buxar            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'06                                      | 55'58                              | 57'74                                  |
|                                 |                     | Deouree          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 57'98                              | ?                                      |
|                                 |                     | Muboonah         | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'35                                      | 40'74                              | 50'53                                  |
|                                 |                     | Banseran         | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'05                                      | 55'44                              | 50'90                                  |
|                                 |                     | Arrah            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'05                                      | 40'35                              | 50'30                                  |
|                                 |                     | Mohanah          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | ?                                  | ?                                      |
|                                 | Gya                 | Aurangabad       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'12                                      | 39'23                              | 42'10                                  |
|                                 |                     | Gya              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'32                                      | 44'13                              | 41'03                                  |
|                                 |                     | Nowadah          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'09                                      | 35'02                              | 50'52                                  |
|                                 |                     | Johanabad        | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'14                                      | 45'51                              | 50'55                                  |
|                                 |                     | Arwal            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 39'34                              | ?                                      |
|                                 |                     | Daudnagar        | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 37'51                              | ?                                      |
|                                 |                     | Sherrghati       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 38'75                              | ?                                      |
|                                 |                     | Rajauli          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 37'43                              | ?                                      |
|                                 |                     | Pakri Barman     | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 31'48                              | ?                                      |
|                                 |                     |                  | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | ?                                  | ?                                      |
|                                 | Patna               | Patna            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'05                                      | 30'30                              | 41'40                                  |
|                                 |                     | Dinapore         | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'05                                      | 37'55                              | 40'80                                  |
|                                 |                     | Behar            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'13                                      | 34'20                              | 41'38                                  |
|                                 |                     | Barh             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'15                                      | 32'71                              | 38'73                                  |
|                                 |                     | Bickram          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 30'75                              | ?                                      |
|                                 |                     | Kites            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 33'54                              | ?                                      |
|                                 | Monghyr             | Bagoosra         | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'21                                      | 48'34                              | 58'32                                  |
|                                 |                     | Monghyr          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'07                                      | 46'64                              | 55'54                                  |
|                                 |                     | Jamui            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'03                                      | 55'50                              | 62'33                                  |
|                                 |                     | Gogri            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 45'53                              | ?                                      |
|                                 |                     | Shoikpura        | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 28'13                              | ?                                      |
|                                 | South Bhagulpore.   | Bhagulpore       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'21                                      | 40'75                              | 41'53                                  |
|                                 |                     | Banka            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'06                                      | 30'34                              | 43'33                                  |
|                                 |                     | Kolga            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 49'27                              | ?                                      |
|                                 | Southal Pergunnahs. | Rajmohal         | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'11                                      | 57'73                              | 51'53                                  |
|                                 |                     | Godda            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'05                                      | 49'10                              | 44'30                                  |
|                                 |                     | Pakour           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'05                                      | 77'75                              | 53'00                                  |
|                                 |                     | Kya Duomha       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'18                                      | 44'77                              | 54'33                                  |
|                                 |                     | Booghar          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'09                                      | 46'71                              | 49'33                                  |
|                                 |                     | Jamara           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'30                                      | 33'85                              | 49'16                                  |
|                                 |                     | Amra             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | ?                                  | ?                                      |
|                                 |                     | Nasihat          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 38'54                              | ?                                      |
| UTIA NAG-VE.                    | Hazaribagh          | Pachamba (Girdi) | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'16                                      | 40'97                              | 47'13                                  |
|                                 |                     | Hazaribagh       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'18                                      | 48'43                              | 47'25                                  |
|                                 |                     | Semtagurah       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'19                                      | 39'32                              | 45'55                                  |
|                                 |                     | Alahudi Hills    | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'40                                      | 40'35                              | 46'93                                  |
|                                 |                     | Jhoomrah Hills   | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'14                                      | 57'10                              | 61'31                                  |
|                                 |                     | Barhi            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 38'37                              | ?                                      |
|                                 |                     | Chakra           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 47'73                              | ?                                      |
|                                 |                     | Karagdeha        | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 73'16                              | ?                                      |
|                                 |                     | Kamghar          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 50'34                              | ?                                      |
|                                 |                     |                  | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | ?                                  | ?                                      |
|                                 | Lohardugga          | Lohardugga       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 53'57                              | ?                                      |
|                                 |                     | Kanchi           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'27                                      | 54'43                              | 50'73                                  |
|                                 |                     | Palamow          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'33                                      | 48'36                              | 41'03                                  |
|                                 |                     | Silli            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 46'06                              | ?                                      |
|                                 |                     | Balumat          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 34'96                              | ?                                      |
|                                 |                     | Kossonabad       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 52'70                              | ?                                      |
|                                 |                     | Garwah           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | ?                                  | ?                                      |
|                                 | Singbheem           | Uyenaness        | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'23                                      | 49'03                              | 50'50                                  |
|                                 |                     | Chakradher-pore. | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 34'99                              | ?                                      |
|                                 |                     | Chattalia        | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 53'40                              | ?                                      |
|                                 |                     | Bakaragura       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 38'34                              | ?                                      |
|                                 | Manbheem            | Parulia          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'16                                      | 44'11                              | 45'43                                  |
|                                 |                     | Gobindpore       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | 0'14                                      | 38'33                              | 45'03                                  |
|                                 |                     | Raghunath-pore.  | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 38'33                              | ?                                      |
|                                 |                     | Barrahbeem       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | ?                                  | ?                                      |
|                                 |                     | Jhaida           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | 40'28                              | ?                                      |
|                                 |                     | Chas             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                      | Nil                    | Nil                   | Nil        | Nil                                | ?   | ?                                  | ?                                      |

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are missing, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 15th November 1887.



# SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS TAKEN IN ASSAM, FOR THE WEEK ENDING FRIDAY, THE 11TH OF NOVEMBER 1887.

DURING the latter half of the previous week, weather conditions were somewhat disturbed over South Bengal and Orissa, skies had become heavily clouded, and light rain had fallen at many stations. These conditions had been brought about by the breaking up of a feeble cyclonic storm off the Madras coast. On Friday, the 4th, however, it was evident that these disturbed conditions were being steadily driven back, and that north-east monsoon conditions were again becoming established in Bengal. For the first two or three days of the present week, therefore, northerly winds were blowing over the whole of the province, skies cleared rapidly, while humidity and temperature fell, and ordinary cold weather conditions obtained. On the 6th, however, conditions became slightly disturbed over the Central Provinces, and moderate general rain commenced to fall on this day and on the 7th. This had the effect of partially stopping and deflecting the cool dry northerly wind current which had been blowing over Bengal, and from the 8th temperature at many of the stations in the province of Bengal commenced to increase, while humidity also became higher and winds became light and variable. The effect of these disturbed conditions in the Central Provinces shortly afterwards disappeared, and at the close of the week the cool northerly wind current had again set in over Bengal and was becoming more pronounced, temperature had commenced to fall, while humidity had become smaller and ordinary cold weather conditions again obtained. The meteorological conditions in Bengal during the week were therefore of comparatively little importance, and except for a few drops of rain which fell in North Bengal at Darjeeling on the 10th, the whole province has been rainless throughout the week.

**Pressure.**—The variations of pressure during the week have been small, and have been to a great extent of the oscillatory character which is usual during the continuation of settled weather. The difference between the actual mean pressure for the week and the normal is very small, and only amounts to an excess of 0.01 inch. The distribution of pressure has also become much more nearly normal than it was, and thus while during the previous week pressure was comparatively low over South-West Bengal and Orissa, in the present week the distribution of the excess is fairly equal, the largest excess being only 0.03 inch at Durbhunga, while on the other hand at Patna the mean pressure has been almost absolutely normal.

**Temperature.**—Was comparatively low at the commencement and end of the week, while it generally rose somewhat from the 7th to the 9th. For the whole week the mean temperature of the province has been almost absolutely normal, though in different districts there have been rather considerable variations. Thus in Chutia Nagpur, which is the district nearest to the Central Provinces, where disturbed conditions existed on the 6th and 7th as stated previously, the mean temperature for the week has been 1.6° in excess of the normal. In South Behar and Orissa also temperatures have been about half a degree in excess of the normal. On the other hand in East Bengal the mean temperature has been 1.4° in defect of the normal, while South-West Bengal and North Behar also show defects of between half and one degree. In North Bengal the mean temperature has been quite normal.

During this week, as in the week ending the 28th of October, the defects from normal temperature have been most noticeable in the night or minimum temperatures. This is shown in the following table, where the mean maximum and minimum temperatures for the week at nine typical stations in different districts in the province are given compared with the normal for the period, and thus while the mean minimum or night temperatures of these nine stations is 1° below the normal, the mean maximum or day temperature has been only 0.2° in defect. The defects in the night temperatures have been most marked at Calcutta, Dacca, Burdwan, and Purneah, where they have varied from 2° to 3°.

*Table showing the excess or defect of the actual temperature from the normal for the week ending the 11th November 1887.*

|                        | Normal<br>mean maxi-<br>mum tem-<br>perature for<br>the week<br>ending 11th<br>November. | Actual<br>mean maxi-<br>mum tem-<br>perature for<br>the week<br>ending 11th<br>November<br>1887. | Excess or<br>defect from<br>normal<br>mean. | Normal<br>mean mini-<br>mum tem-<br>perature for<br>the week<br>ending 11th<br>November. | Actual<br>mean mini-<br>mum tem-<br>perature for<br>the week<br>ending 11th<br>November<br>1887. | Excess or<br>defect from<br>the normal<br>mean. | Normal<br>mean daily<br>tempera-<br>ture for<br>the week<br>ending the<br>11th Novem-<br>ber. | Actual<br>mean daily<br>tempera-<br>ture for the<br>week end-<br>ing 11th<br>November<br>1887. | Excess or<br>defect from<br>the normal<br>mean. |
|------------------------|--|--|---|--|--|---|---|--|---|
| Outlook ...            | 87.1   | 86.2   | +1.1  | 68.3   | 70.6   | +2.3  | 77.7  | 79.4   | +1.7  |
| Calcutta (Alipore) ... | 82.9   | 82.3   | -0.6  | 67.3   | 64.6   | -2.5  | 75.1  | 73.6   | -1.5  |
| Dacca ...              | 85.6   | 84.7   | -0.9  | 68.5   | 65.3   | -3.2  | 77.1  | 74.5   | -2.6  |
| Burdwan ...            | 84.5   | 84.6   | +0.1  | 66.6   | 64.1   | -2.5  | 75.6  | 74.4   | -1.2  |
| Patna (Bankipore) ...  | 84.1   | 85.3   | +1.4  | 61.9   | 62.0   | +0.1  | 73.0  | 73.8   | +0.8  |
| Gya ...                | 84.6   | 84.8   | +0.2  | 62.3   | 60.5   | -1.8  | 73.5  | 72.7   | -0.8  |
| Purneah ...            | 84.6   | 81.2   | -3.4  | 62.4   | 60.0   | -2.4  | 73.5  | 70.6   | -2.9  |
| Hararibagh ...         | 79.0   | 81.2   | +2.2  | 60.2   | 59.7   | -0.5  | 69.6  | 70.4   | +0.8  |
| Darjeeling ...         | 55.6   | 54.4   | -1.2  | 42.2   | 43.7   | +1.5  | 48.9  | 49.0   | +0.1  |

**Rainfall.**—As above stated, has been entirely absent from the province, except for a slight shower at Darjeeling on the 10th.

The following table gives the summary of the temperature and rainfall data of each, of the seven meteorological divisions of the province for the week ending Friday, the 11th of November 1887:—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |     | RAINFALL. |                 |            |                         |                                |            |                     |                 |                      |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|-----|-----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. |     | Of week.  |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 15th May 1887. |                 |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  |     | Average.  | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. | Average.             | Normal average. |
|                              |                               |                              |                         |                        |                       |  |     |           |                 |            |                         |                                |            |                     |                 |                      |                 |
|                              |                               |                              |                         |                        |                       |  |     |           |                 |            |                         |                                |            |                     |                 |                      |                 |
| Orissa ... ..                | 90·9                          | 61·8                         | 84·9                    | 60·2                   | 77·1                  | +0·9   | Nil | 0·31      | -0·31           | 0·0        | 0·0                     | -0·0                           | 0·73       | 0·35                | 46·08           | 53·04                |                 |
| South-West Bengal ...        | 89·3                          | 59·2                         | 84·6                    | 64·3                   | 74·7                  | -0·7   | Nil | 0·13      | -0·13           | 0·0        | 0·3                     | -0·3                           | 0·29       | 0·25                | 46·06           | 51·52                |                 |
| East Bengal ... ..           | 86·4                          | 60·6                         | 83·4                    | 65·0                   | 74·2                  | -1·4   | Nil | 0·25      | -0·25           | 0·0        | 0·4                     | -0·4                           | 1·46       | 0·66                | 35·40           | 73·45                |                 |
| North Bengal ... ..          | 86·0                          | 57·2                         | 82·8                    | 61·3                   | 72·1                  | 0  | Nil | 0·11      | -0·11           | 0·0        | 0·2                     | -0·2                           | 0·08       | 0·14                | 73·50           | 60·43                |                 |
| North Behar ... ..           | 84·5                          | 54·9                         | 82·3                    | 60·9                   | 71·5                  | -0·6   | Nil | 0·03      | -0·03           | 0·0        | 0·1                     | -0·1                           | Nil        | 0·08                | 51·90           | 47·69                |                 |
| South Behar ... ..           | 87·4                          | 59·4                         | 83·9                    | 60·7                   | 72·3                  | +0·3   | Nil | 0·12      | -0·12           | 0·0        | 0·2                     | -0·2                           | Nil        | 0·12                | 41·38           | 45·25                |                 |
| Central Nagpur ... ..        | 82·2*                         | 56·4*                        | 80·7*                   | 59·3*                  | 70·0*                 | +1·6*  | Nil | 0·11      | -0·11           | 0·0        | 0·4                     | -0·4                           | Nil        | 0·23                | 44·58           | 46·52                |                 |
| Assam ... ..                 |                               |                              |                         |                        |                       |  |     |           |                 |            |                         |                                |            |                     |                 |                      |                 |

\* Chybbassa not included.

METEOROLOGICAL OFFICE, BENGAL;

A. PEDLER,

The 15th November 1887.

Offg. Meteorological Reporter to the Govt. of Bengal.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 6th to 12th November 1887.

| MONTH.   | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|----------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|          |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.    |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| November | 6th   | 78·1         | 82·9     | 21·8   | 61·1     | 67·0           | ·515            | 59·8       | 54        | Nil     |
| "        | 7th   | 73·4         | 83·9     | 21·0   | 62·9     | 67·1           | ·581            | 63·2       | 71        | "       |
| "        | 8th   | 74·7         | 84·9     | 20·5   | 64·4     | 68·7           | ·623            | 65·2       | 72        | "       |
| "        | 9th   | 75·8         | 86·0     | 20·1   | 65·9     | 69·1           | ·622            | 65·2       | 70        | "       |
| "        | 10th  | 77·4         | 88·0     | 20·2   | 67·8     | 71·4           | ·690            | 68·2       | 73        | "       |
| "        | 11th  | 74·7         | 84·0     | 18·1   | 65·9     | 67·1           | ·564            | 62·3       | 66        | "       |
| "        | 12th  | 71·1         | 83·2     | 22·3   | 60·9     | 63·8           | ·496            | 58·7       | 65        | "       |

The mean temperature of the seven days ... .. 75·0  
The extreme variation of temperature ... .. 27·1  
The maximum temperature ... .. 88·0  
The mean relative humidity ... .. 67  
Inches.

The total fall of rain from 6th to 12th November 1887 ... Nil

The mean temperature and humidity are obtained by applying to the mean of the 10th, 11th, and 12th readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,

JOHN ELIOT,

The 14th November 1887.

Offg. Meteorological Reporter to the Govt. of India.

## MEMORANDUM.

THE table appended to this memorandum furnishes the following particulars in connection with the mortuary statistics of the districts in Bengal for the month of August 1887 :—

1. That 138,079 deaths occurred among a population of 66,163,824, representing an annual death-rate of 24·96 per 1,000, against 24·84 per 1,000 in the preceding month, and 20·64 per 1,000 in the corresponding month of the preceding year, indicating, as compared with the last-named period, a considerable improvement in the number of deaths recorded.

2. That the undermentioned districts furnished the highest proportions of deaths :—

| <i>Districts.</i> |     |     |                         | <i>Districts.</i> |     |     |                         |
|-------------------|-----|-----|-------------------------|-------------------|-----|-----|-------------------------|
|                   |     |     | <i>Ratio per mille.</i> |                   |     |     | <i>Ratio per mille.</i> |
| Gya               | ... | ... | 61·92                   | Puri              | ... | ... | 33·36                   |
| Shahabad          | ... | ... | 52·92                   | Darjiling         | ... | ... | 33·24                   |
| Monghyr           | ... | ... | 48·60                   | Bhagulpore        | ... | ... | 29·64                   |
| Lohardugga        | ... | ... | 48·00                   | Rajshahye         | ... | ... | 27·84                   |
| Patna             | ... | ... | 47·28                   | Dinajpur          | ... | ... | 25·44                   |
| Sarun             | ... | ... | 39·12                   | Bogra             | ... | ... | 25·18                   |
| Hazaribagh        | ... | ... | 34·80                   | Chumparun         | ... | ... | 25·08                   |

3. That referring to the incidence of diseases specified below, it is seen that cholera and fever prevailed with much greater severity during the month under notice than during the corresponding month of the preceding year, but that the death-rates under other heads exhibited only fractional variations :—

|                  |     |     |     | <i>Ratio per mille during—</i> |                     |
|------------------|-----|-----|-----|--------------------------------|---------------------|
|                  |     |     |     | <i>August 1887.</i>            | <i>August 1886.</i> |
| Cholera          | ... | ... | ... | 3·48                           | ·84                 |
| Small-pox        | ... | ... | ... | ·02                            | ·03                 |
| Fever            | ... | ... | ... | 16·56                          | 15·00               |
| Bowel-complaints | ... | ... | ... | 1·08                           | ·84                 |
| Injury           | ... | ... | ... | ·60                            | ·72                 |
| Other causes     | ... | ... | ... | 3·12                           | 3·00                |

4. That the following districts returned the highest death-rates per 1,000 of population from the abovementioned diseases, excepting small-pox, bowel-complaints, and injury, which do not appear to have presented any local severity :—

| <i>Cholera.</i> |                         | <i>Fever.</i> |                         | <i>Other Causes.</i> |                         |
|-----------------|-------------------------|---------------|-------------------------|----------------------|-------------------------|
|                 | <i>Ratio per mille.</i> |               | <i>Ratio per mille.</i> |                      | <i>Ratio per mille.</i> |
| Lohardugga      | 20·64                   | Gya           | 36·48                   | Puri                 | 12·60                   |
| Shahabad        | 16·80                   | Monghyr       | 32·76                   | Sarun                | 10·08                   |
| Gya             | 16·20                   | Shahabad      | 30·60                   |                      |                         |
| Sarun           | 13·68                   | Hazaribagh    | 28·56                   |                      |                         |
| Puri            | 12·60                   | Rajshahye     | 26·52                   |                      |                         |
| Patna           | 7·80                    | Patna         | 26·52                   |                      |                         |
| Chumparun       | 6·72                    | Dinajpur      | 23·40                   |                      |                         |
| Monghyr         | 6·36                    | Bogra         | 22·44                   |                      |                         |
| Cuttack         | 5·76                    | Bhagulpore    | 22·44                   |                      |                         |
| Mozufferpore    | 3·72                    | Maldah        | 21·48                   |                      |                         |
| Durbhanga       | 3·00                    | Murshidabad   | 20·64                   |                      |                         |
| Balasore        | 2·52                    |               |                         |                      |                         |
| Bhagulpore      | 2·16                    |               |                         |                      |                         |

5. That the mortality of the month distributed under the heads of *Sex*, *Class* and *Age*, stood as follows :—

| <i>According to Sex.</i>                        |                         | <i>According to Class.</i> |                         | <i>According to Age.</i> |                         |
|---|-------------------------|----------------------------|-------------------------|--------------------------|-------------------------|
|   | <i>Ratio per mille.</i> |                            | <i>Ratio per mille.</i> |                          | <i>Ratio per mille.</i> |
| Males   | 28·64                   | Christians                 | 15·12                   | Under 1 year             | 157·68                  |
| Females   | 23·40                   | Hindus                     | 27·36                   | 1 and under 5 years      | 36·72                   |
| Ratio of male deaths to every 100 female deaths | 112                     | Mahomedans                 | 19·68                   | 5 " " 10 "               | 15·84                   |
|   |                         | Buddhists                  | 18·00                   | 10 " " 15 "              | 12·72                   |
|   |                         | Other classes              | 32·52                   | 15 " " 20 "              | 15·36                   |
|   |                         |                            |                         | 20 " " 30 "              | 16·08                   |
|   |                         |                            |                         | 30 " " 40 "              | 17·40                   |
|   |                         |                            |                         | 40 " " 50 "              | 21·48                   |
|   |                         |                            |                         | 50 " " 60 "              | 31·44                   |
|   |                         |                            |                         | 60 years and upwards     | 48·84                   |

R. LADDENDALE, M.D., *Deputy Surgeon-General,*

*Sanitary Commissioner for Bengal.*

The 11th November 1887.

Statement showing the Results of the Registration of Deaths in the Districts in Bengal for the month of August 1887.

| DIVISIONS. |  | DISTRICTS. |  | POPULATION. |  | MORTALITY ACCORDING TO— |  |  |  |  |  |  |  |  |  | Sex.                                     |  |  |  |
|------------|--|------------|--|-------------|--|-------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DEATHS FROM—            |  |  |  |  |  |  |  |  |  | COMPARISON WITH PREVIOUS PERIOD.         |  | DEATHS AMONG—                            |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |
|            |  |            |  |             |  | DISEASE.                |  |  |  |  |  |  |  |  |  | RATIO PER 1,000 OF POPULATION PER ANNUM. |  |  |  |

[illegible]

OFFICE OF SANITARY COMMISSIONER FOR BEHGAL, }  
*The 11th November 1887.*

## MEMORANDUM.

THE birth and death returns of the principal Municipalities in Bengal furnish the following results for the week ending 22nd October 1887 :—

1. That the birth-rate in these Municipalities amounted to 22·9 per 1,000 of population as opposed to very nearly the same proportion, viz. 22·6 per 1,000, during the preceding week ending 15th October, and the death-rate to 28· per 1,000 against the same ratio.

2. That the following Municipalities returned the highest proportions of births and death :—

| <i>Births.</i> |     |                  | <i>Deaths.</i>      |     |                  |
|----------------|-----|------------------|---------------------|-----|------------------|
|                |     | Ratio per mille. |                     |     | Ratio per mille. |
| Durbhanga      | ... | 40·9             | Serampore           | ... | 66·7             |
| Bhagulpore     | ... | 39·8             | Puri                | ... | 54·6             |
| Monghyr        | ... | 38·9             | Kishnaghur          | ... | 48·4             |
| Narain anj     | ... | 37·3             | Suburbs of Calcutta | ... | 45·3             |
| Gya            | ... | 33·5             | Gya                 | ... | 36·9             |
| Arrah          | ... | 32·3             | Bali                | ... | 35·1             |
|                |     |                  | Monghyr             | ... | 31·6             |
|                |     |                  | Beaulcah            | ... | 31·5             |
|                |     |                  | Purneah             | ... | 31·1             |
|                |     |                  | Durbhanga           | ... | 30·7             |

3. That the mortality from the specific death-causes stood as follows in comparison with the similar information for the preceding week :—

|                  |     |     |     |     | Ratio per mille during the weeks ending— |                |
|------------------|-----|-----|-----|-----|--|----------------|
|                  |     |     |     |     | 22nd Oct. 1887.                          | 15th Oct 1887. |
| Cholera          | ... | ... | ... | ... | 2·2                                      | 3·2            |
| Small-pox        | ... | ... | ... | ... | ·03                                      | ·1             |
| Fever            | ... | ... | ... | ... | 13·2                                     | 10·9           |
| Bowel-complaints | ... | ... | ... | ... | 4·5                                      | 4·6            |
| Injury           | ... | ... | ... | ... | ·1                                       | ·4             |
| Other causes     | ... | ... | ... | ... | 7·9                                      | 8·8            |

indicating chiefly that there was a sensible abatement in the death-rates from cholera and the maladies classed under the head of "Other causes," with a noticeable increase in that from fever.

4. That the following Municipalities appear to have suffered the most from the diseases specified in the above table, excepting small-pox and injury, the casualties from which were nowhere above normal.

| <i>Cholera.</i>     |                  | <i>Fever.</i> |                  | <i>Bowel-complaints.</i> |                  | <i>Other causes.</i> |                  |
|---------------------|------------------|---------------|------------------|--------------------------|------------------|----------------------|------------------|
|                     | Ratio per mille. |               | Ratio per mille. |                          | Ratio per mille. |                      | Ratio per mille. |
| Bali                | 21·1             | Kishnaghur    | 36·0             | Serampore                | 13·7             | Puri                 | 16·8             |
| Serampore           | 13·7             | Beaulcah      | 28·9             | Puri                     | 12·6             | Suburbs of Calcutta  | 15·7             |
| Suburbs of Calcutta | 5·0              | Serampore     | 27·5             |                          |                  | Gya                  | 13·7             |
| Monghyr             | 4·5              | Purneah       | 24·2             |                          |                  | Serampore            | 11·8             |
| Howrah              | 2·9              |               |                  |                          |                  |                      |                  |

5. That under the heads of *Sex*, *Class* and *Age*, the mortality stood as follows :—

| <i>According to Sex.</i>                        |     |                  | <i>According to Class.</i> |     |                  | <i>According to Age.</i> |     |                  |
|---|-----|------------------|----------------------------|-----|------------------|--------------------------|-----|------------------|
|   |     | Ratio per mille. |                            |     | Ratio per mille. |                          |     | Ratio per mille. |
| Males   | ... | 29·2             | Christians                 | ... | 30·4             | Under 1 year             | ... | 241·8            |
| Females   | ... | 26·7             | Hindus                     | ... | 29·4             | 1 and under 5 years      | ... | 39·8             |
| Ratio of male deaths to every 100 female deaths | 124 |                  | Mahomedans                 | ... | 24·8             | 5 " 10 "                 | ... | 19·8             |
|   |     |                  | Other classes              | ... | 36·4             | 10 " 15 "                | ... | 8·6              |
|   |     |                  |                            |     |                  | 15 " 20 "                | ... | 9·4              |
|   |     |                  |                            |     |                  | 20 " 30 "                | ... | 16·9             |
|   |     |                  |                            |     |                  | 30 " 40 "                | ... | 19·1             |
|   |     |                  |                            |     |                  | 40 " 50 "                | ... | 23·7             |
|   |     |                  |                            |     |                  | 50 " 60 "                | ... | 27·9             |
|   |     |                  |                            |     |                  | 60 years and upwards     | ... | 67·8             |

R. LIDDERDALE, M.D., Deputy Surgeon-General,

The 12th November 1887.

Sanitary Commissioner for Bengal.

| DISTRICTS.          | POPULATION.                   |            |          | BIRTHS.  |        |  | DISEASE.     |        |             |            |        |   |         |        |          |        | SEX.     |                 |  |            |  |        |                   |         |                 |             |      |                   |
|---------------------|-------------------------------|------------|----------|--|--------|--|--------------|--------|-------------|------------|--------|---|---------|--------|----------|--------|----------|-----------------|--|------------|--|--------|-------------------|---------|-----------------|-------------|------|-------------------|
|                     | NAMES OF MUNICI-<br>PALITIES. | NUMBER OF— |          | RATIO PER 1,000<br>OF POPULATION<br>PER ANNUM. |        | Ratio of male<br>births to every<br>100 female births. | DEATHS FROM— |        |             |            |        | RATIO PER 1,000 OF POPULATION PER<br>ANNUM. |         |        |          |        | DEATHS.  |                 | RATIO PER<br>1,000 OF<br>POPULA-<br>TION PER<br>ANNUM. |            | Ratio of male<br>deaths to every<br>100 female deaths. |        |                   |         |                 |             |      |                   |
|                     |                               | Males.     | Females. | Total.   | Males. |  | Females.     | Total. | All causes. |            |        |   |         | Males. | Females. | Males. | Females. |                 |  |            |  |        |                   |         |                 |             |      |                   |
|                     |                               |            |          |  |        |  |              |        | Cholera.    | Small-pox. | Fever. | Bowel-complaints.                           | Injury. |        |          |        |          | Other diseases. | Cholera.   | Small-pox. |  | Fever. | Bowel-complaints. | Injury. | Other diseases. | All causes. |      |                   |
| Burdwan             | 18,065                        | 16,017     | 34,082   | 10   | 4      | 14   | 15.3         | 6.1    | 21.4        | 250        | ...    | 9   | 4       | ...    | 3        | 16     | ...      | 1.7             | 6.1  | ...        | 4.6  | 24.4   | 15.2              | 10      | 6               | 25.8        | 19.5 | 108               |
| Midnapore           | 16,977                        | 10,638     | 27,615   | 8  | 2      | 10   | 15.3         | 3.1    | 7.7         | 160        | ...    | 6   | 8       | 1      | 1        | 11     | ...      | 9.3             | 4.8  | 1.3        | 1.3  | 17.0   | 13.6              | 4       | 7               | 12.3        | 21.9 | 57                |
| Hughli              | 19,179                        | 19,539     | 38,718   | 8  | 11     | 19   | 10.7         | 4.8    | 25.5        | 72         | ...    | 13  | 5       | ...    | 2        | 20     | ...      | 17.4            | 6.7  | ...        | 2.7  | 26.9   | 20.1              | 10      | 10              | 27.1        | 28.6 | 100               |
| Serampore           | 18,589                        | 12,987     | 31,576   | 6  | 7      | 13   | 11.8         | 13.7   | 25.5        | 85         | ...    | 14  | 7       | ...    | 6        | 31     | 13.7     | 27.5            | 13.7   | ...        | 11.8   | 63.7   | 53.0              | 2       | 14              | 76.7        | 56.3 | 142               |
| Uttarpara           | 8,041                         | 2,464      | 10,505   | 1  | 1      | 2  | 9.4          | 9.4    | 18.9        | 100        | ...    | ...   | ...     | ...    | ...      | ...    | ...      | ...             | ...  | ...        | ...  | ...    | ...               | ...     | ...             | ...         | ...  | No female deaths. |
| Howrah              | 53,153                        | 37,680     | 90,833   | 23   | 15     | 38   | 13.2         | 9.6    | 21.8        | 163        | ...    | 10  | 7       | ...    | 5        | 25     | ...      | 5.7             | 4.0  | ...        | 2.9  | 15.5   | 18.3              | 21      | 6               | 20.5        | 8.3  | 350               |
| Bali                | 7,636                         | 6,979      | 14,615   | 6  | 1      | 7  | 21.1         | 3.5    | 24.6        | 600        | ...    | 1   | 2       | ...    | 1        | 10     | 21.1     | ...             | ...  | ...        | ...  | ...    | 10.5              | 8       | 5               | 53.1        | 14.9 | 400               |
| Suburbs of Calcutta | 147,295                       | 104,234    | 251,529  | 50   | 52     | 102  | 10.3         | 10.8   | 21.1        | 96         | ...    | 83  | 34      | 1      | 76       | 210    | 5.0      | 17.2            | 7.0  | ...        | 2  | 15.7   | 44.3              | 124     | 96              | 43.8        | 47.4 | 130               |
| Kishinagar          | 13,363                        | 14,214     | 27,577   | 9  | 4      | 13   | 17.0         | 7.5    | 24.6        | 225        | ...    | 19  | ...     | ...    | 4        | 24     | 1.3      | 36.0            | ...  | ...        | ...  | ...    | 34.1              | 16      | 8               | 62.7        | 29.3 | 200               |
| Banaghat            | 4,028                         | 4,655      | 8,683    | ...  | ...    | ...  | ...          | ...    | ...         | ...        | ...    | 2   | ...     | ...    | ...      | ...    | ...      | 12.0            | ...  | ...        | ...  | ...    | 18.0              | 2       | ...             | 25.5        | ...  | No female deaths. |
| Santipore           | 12,708                        | 13,979     | 26,687   | 1  | 3      | 4  | 1.7          | 5.2    | 7.0         | 33         | ...    | 10  | ...     | ...    | ...      | ...    | ...      | 17.5            | ...  | ...        | ...  | ...    | 15.8              | 2       | 8               | 7.6         | 26.0 | 35                |
| Jessore             | 4,830                         | 3,665      | 8,495    | 1  | 2      | 3  | 6.1          | 12.3   | 18.4        | 60         | ...    | ...   | ...     | ...    | ...      | ...    | ...      | ...             | ...  | ...        | ...  | ...    | 19.4              | 1       | ...             | 10.8        | ...  | No female deaths. |
| Rajshahye           | 10,766                        | 9,025      | 19,791   | 4  | 7      | 11   | 10.5         | 19.4   | 28.9        | 57         | ...    | ...   | ...     | ...    | ...      | ...    | ...      | ...             | ...  | ...        | ...  | ...    | ...               | ...     | ...             | ...         | ...  | No female deaths. |
| Darjiling           | 5,929                         | 2,947      | 7,976    | 1  | 1      | 2  | 6.5          | 6.5    | 13.0        | 100        | ...    | ...   | ...     | ...    | ...      | ...    | ...      | ...             | ...  | ...        | ...  | ...    | ...               | ...     | ...             | ...         | ...  | No female deaths. |
| Dacca               | 42,782                        | 37,379     | 80,161   | 12   | 8      | 20   | 7.8          | 5.2    | 13.0        | 180        | ...    | 6   | 4       | ...    | 10       | 20     | ...      | 3.9             | 2.8  | ...        |  |        |                   |         |                 |             |      |                   |

female as before, as it was not necessary to re-census them. The ratios have consequently been calculated on the pooled population under all heads in the above table, except "Age", the ratios under which have been omitted, inasmuch as the census of the Europeans in February 1881, was not reliable owing to the Europeans being at a minimum in that month. The number of the natives born in 1881 cannot be employed as a basis of calculation owing to the results of the census of the natives in 1881 being not having been recorded under the authorized form of age classification.





## PUBLIC WORKS DEPARTMENT, BENGAL.

## IRRIGATION BRANCH.

IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1887-88.

Areas leased for Irrigation up to end of September 1887.

| CIRCLE.            | DISTRICT.   | CANAL.  | Esti-<br>mated<br>full dis-<br>charge. | Average<br>discharge<br>utilised. | C. ft. | C. ft.  | Approx-<br>imate<br>area of<br>land<br>irrigated<br>during<br>the year<br>up to the<br>end of the<br>month. | Approx-<br>imate<br>area of<br>land<br>irrigated<br>during<br>the year<br>up to the<br>end of the<br>month. | DETAILS OF AREAS LEASED. |        |                 |                      |        |                |        |         |       |       | RAINFALL,<br>1887-88. |                  | RAINFALL,<br>1886-87.     |                  | REMARKS. |  |       |
|--------------------|-------------|---|--|-----------------------------------|--------|---------|---|---|--------------------------|--------|-----------------|----------------------|--------|----------------|--------|---------|-------|-------|-----------------------|------------------|---------------------------|------------------|----------|--|-------|
|                    |             |   |  |                                   |        |         |   |   | Kharif.                  | Rabi.  | Sugar.<br>cane. | Bha loi.<br>weather. | Total. | ANNUAL LEASES. |        |         |       |       | Grand<br>Total.       | During<br>month. | Up to<br>end of<br>month. | During<br>month. |          | Up to<br>end of<br>month.                        |       |
|                    |             |   |  |                                   |        |         |   |   |                          |        |                 |                      |        | Acre.          | Acre.  | Acre.   | Acre. | Acre. |                       |                  |                           |                  |          |  | Acre. |
| OZISSA             | Cuttack     | Taldunda, 1st<br>Reach.                                   | 1,312                                  | 434                               | 2473   | 4,382   | 4,249   | 4,060   | 1,591                    | 40,382 | 37              | 9                    | 8      | 107            | 17     | 18,923  | 3 61  | 45 30 | 9 14                  | 48 43            | 9 00                      | 40 37            | 42 15    | Whole month discharging.<br>13 days discharging. |       |
|                    |             | Taldunda, 2nd<br>Reach.                                   | 566                                    | 84                                | 2734   | ...     | ...   | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  | ...   |
|                    |             | Vachkong  | 776                                    | 247                               | ...    | ...     | 17,377  | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  | ...   |
|                    |             | Kendrapara  | 1,939                                  | 479                               | ...    | ...     | 31,492  | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  | ...   |
|                    |             | Gouri   | 372-82                                 | 17-45                             | ...    | ...     | 7,722   | 5,388   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  | ...   |
| OZISSA             | Balsore     | Pattamonndi   | 1,012                                  | 895                               | 255-85 | 7,722   | 5,388   | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      | Whole month discharging.<br>13 days discharging. |       |
|                    |             | High Level.   | 675                                    | 297                               | 131    | 13,778  | 13,611  | ...   | 14,358                   | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Range I.  | ...                                    | ...                               | ...    | ...     | ...   | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | High Level.   | 727-16                                 | 35-19                             | 5-00   | 452     | 407   | ...   | 422                      | ...    | 34              | ...                  | ...    | ...            | 34     | 456     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Range II.   | ...                                    | ...                               | ...    | ...     | ...   | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
| SOUTH-<br>WESTERN. | Midnapore   | High Level.   | 737-16                                 | 97-46                             | 97-46  | 6,963   | 5,776   | ...   | 6,453                    | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      | Whole month discharging.<br>13 days discharging. |       |
|                    |             | Range III.  | ...                                    | ...                               | ...    | ...     | ...   | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Total   | ...                                    | ...                               | ...    | ...     | 73,801  | ...   | 95,257                   | 37     | 5-5             | 130                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Total of the corresponding<br>period of last year.        | ...                                    | ...                               | ...    | ...     | ...   | ...   | 78,807                   | 19     | 2,134           | 143                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Midnapore   | 1,411                                  | 663                               | 830    | 57,652  | 61,440  | ...   | 57,070                   | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  | ...   |
| SOUTH-<br>WESTERN. | Howrah      | Panchikoorh   | 823                                    | 47                                | 26     | 5,463   | 613   | ...   | 517                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      | Whole month discharging.<br>13 days discharging. |       |
|                    |             | Tidal Ranges I and II.                                    | ...                                    | ...                               | ...    | ...     | ...   | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Total   | ...                                    | ...                               | ...    | ...     | ...   | ...   | 62,373                   | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Total of the corresponding period<br>of last year.        | ...                                    | ...                               | ...    | ...     | ...   | ...   | 64,313                   | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Shahabad  | 4,322                                  | 2,043                             | 100    | 16,119  | 13,934  | ...   | 1,595                    | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  | ...   |
| SOUTH-<br>WESTERN. | Bonga       | Barua   | 1,223                                  | 512                               | 419    | 57,225  | 40,374  | ...   | 40,382                   | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      | Whole month discharging.<br>13 days discharging. |       |
|                    |             | Arrah   | 1,050                                  | 1,054                             | 704    | 114,156 | 94,181  | ...   | 13,218                   | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Patna and Eastern Main                                    | 1,466                                  | 1,046                             | 737    | 66,711  | 35,361  | ...   | 11,552                   | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Gya.  | ...                                    | ...                               | ...    | ...     | ...   | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Total   | ...                                    | ...                               | ...    | 242,572 | 186,343   | ...   | 30,934                   | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
| SOUTH-<br>WESTERN. | Grand Total | Total of the corresponding period<br>of last year.        | ...                                    | ...                               | ...    | ...     | 157,44  | ...   | 13,355                   | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      | Whole month discharging.<br>13 days discharging. |       |
|                    |             | Grand Total   | ...                                    | ...                               | ...    | 391,501 | 312,201   | ...   | 175,660                  | 36,071 | 555             | 4,002                | 143    | 9,313          | 51,074 | 301,707 | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | Grand Total of the correspond-<br>ing period of last year | ...                                    | ...                               | ...    | ...     | ...   | ...   | 149,410                  | 43,404 | 2,438           | 5,821                | 308    | 8,619          | 60,590 | 380,040 | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | ...   | ...                                    | ...                               | ...    | ...     | ...   | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |
|                    |             | ...   | ...                                    | ...                               | ...    | ...     | ...   | ...   | ...                      | ...    | ...             | ...                  | ...    | ...            | ...    | ...     | ...   | ...   | ...                   | ...              | ...                       | ...              | ...      |  |       |

The 15th November 1887.

A. D. MCARTHUR, Major, R.E.  
Under-Secretary to the Govt. of Bengal.

**CIRCULAR AND EASTERN CANALS.**

*Approximate return of traffic for the week ending Saturday, the 12th November 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>12TH NOVEMBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>12TH NOVEMBER 1886. |                     |          |
|--------------------|--|---------------------|----------|--|---------------------|----------|
|                    | Number of<br>boats.                              | Weight of<br>cargo. | Tollage. | Number of<br>boats.                              | Weight of<br>cargo. | Tollage. |
|                    | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... | 736  | 80,775              | 1,368    | 593  | 67,753              | 1,109    |
| Jute ...           | 313  | 1,09,925            | 3,481    | 319  | 1,25,512            | 2,160    |
| Firewood ...       | 147  | 55,500              | 897      | 187  | 82,830              | 1,226    |
| Other articles ... | 1,048  | 2,50,365            | 4,162    | 1,224  | 2,23,651            | 3,673    |
| " Total ...        | 2,244  | 5,86,565            | 9,908    | 2,323  | 4,99,736            | 8,168    |

## Nalhati State Railway.

*Statement showing increases and Decreases in tonnage of Staples carried over the Nalhati State Railway during the month of September 1887, as compared with the same month of the previous year*

| STAPLES.   | 1886. |       | 1887. |       | 1886.  | 1887.  | Increase. | Decrease. |
|--|-------|-------|-------|-------|--------|--------|-----------|-----------|
|  | Up.   | Down. | Up.   | Down. | Total. | Total. |           |           |
| I.—Coal ... ..                                   | Tons. | Tons. | Tons. | Tons. | Tons.  | Tons.  | Tons.     | Tons.     |
| II.—Cotton, raw ... ..                           | 444   | ..... | 624   | ..... | 444    | 624    | 179       | .....     |
| III.—Cotton twist and yarn—                      | 10    | ..... | 11    | ..... | 10     | 11     | 1         | .....     |
| 1.—European ... ..                               | ..... | ..... | 1     | ..... | .....  | 1      | 1         | .....     |
| IV.—Cotton piece-goods—                          | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 1.—European ... ..                               | 146   | 4     | 90    | 4     | 150    | 94     | .....     | 56        |
| 2.—Indian ... ..                                 | 2     | ..... | ..... | ..... | 2      | .....  | .....     | 2         |
| V.—Jute—   | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 1.—Raw ... ..                                    | ..... | 1     | ..... | ..... | 1      | 1      | .....     | .....     |
| 2.—Gunny-bags and cloths ... ..                  | 2     | 1     | 6     | 5     | 3      | 11     | 8         | .....     |
| VII.—Grains—                                     | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 1.—Wheat ... ..                                  | ..... | ..... | 1     | ..... | .....  | 1      | 1         | .....     |
| 2.—Rice ... ..                                   | 43    | 1     | 129   | 378   | 44     | 507    | 463       | .....     |
| 4.—Gram ... ..                                   | 5     | ..... | ..... | ..... | 5      | .....  | .....     | .....     |
| 5.—Others ... ..                                 | 20    | 5     | 3     | 6     | 25     | 9      | .....     | 15        |
| VIII.—Hides and skins—                           | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 1.—Hides of cattle—                              | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| a.—Dressed ... ..                                | 1     | 2     | ..... | 1     | 3      | 1      | .....     | 2         |
| 2.—Skins of sheep, goats and small animals—      | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| b.—Undressed ... ..                              | 2     | ..... | 1     | 1     | 2      | 1      | 1         | .....     |
| XII.—Leather, manufactured ... ..                | 2     | ..... | ..... | ..... | 2      | .....  | .....     | .....     |
| XIV.—Metals—                                     | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 2.—Iron ... ..                                   | 3     | ..... | 3     | ..... | 3      | 3      | .....     | .....     |
| 4.—Others ... ..                                 | 6     | 6     | 2     | 5     | 12     | 7      | .....     | 5         |
| XV.—(Oil)—                                       | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 2.—Kerosine ... ..                               | 2     | ..... | 3     | ..... | 2      | 3      | 1         | .....     |
| 3.—Others ... ..                                 | ..... | ..... | 1     | ..... | .....  | 1      | 1         | .....     |
| XIX.—Provisions—                                 | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 1.—Ghee ... ..                                   | 5     | ..... | 4     | ..... | 5      | 4      | .....     | 1         |
| 2.—Dried fruits and nuts ... ..                  | ..... | 7     | ..... | ..... | 7      | .....  | .....     | 7         |
| XX.—Railway plant and rolling-stock ... ..       | 61    | 1     | 7     | ..... | 62     | 7      | .....     | 55        |
| XXI.—Salt ... ..                                 | 79    | ..... | 38    | ..... | 79     | 38     | .....     | 41        |
| XVI.—Oilseeds—                                   | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 2.—Mustard and rape ... ..                       | 37    | 1     | 25    | 2     | 38     | 27     | .....     | 11        |
| 4.—Others ... ..                                 | 13    | ..... | 104   | 10    | 13     | 114    | 101       | .....     |
| XXIII.—Silk, raw—                                | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 2.—Indian ... ..                                 | 2     | 49    | 1     | 19    | 51     | 30     | .....     | 21        |
| XXIV.—Silk piece-goods—                          | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 2.—Indian ... ..                                 | 2     | 7     | ..... | 3     | 9      | 3      | .....     | 6         |
| XXVII.—Stone and lime ... ..                     | 7     | ..... | 68    | ..... | 7      | 68     | 61        | .....     |
| XXVI.—Sugar—                                     | ..... | ..... | ..... | ..... | .....  | .....  | .....     | .....     |
| 1.—Drained ... ..                                | 32    | ..... | 17    | ..... | 31     | 15     | .....     | 17        |
| 2.—Undrained ... ..                              | 2     | ..... | 2     | ..... | 2      | 2      | .....     | .....     |
| XXX.—Tobacco ... ..                              | 1     | ..... | 1     | 3     | 1      | 4      | .....     | 3         |
| XXVIII.—Paper and paste-board ... ..             | 3     | ..... | 4     | ..... | 3      | 4      | .....     | 1         |
| XXXIII.—All other articles of merchandise ... .. | 62    | 17    | 42    | 32    | 79     | 74     | .....     | 5         |
| Total ... ..                                     | 996   | 102   | 1,180 | 470   | 1,098  | 1,656  | 519       | 290       |

## INCREASE.

Tons.

Coal

176

This increase is due partly to steamer service and partly to silk factories being worked by steam-power to greater extent.

Gunny-bags and cloths

8

The increase in this traffic is due to increased grain traffic.

Grains—(2).—Rice

463

The increase in this commodity is due to greater despatches from intermediate stations owing to good crops this year.

Oilseeds—(6).—Others

101

This increase is due to greater demand.

Stone and Lime

61

This increase is due to larger quantity carried this year.

## DECREASE.

Piece-goods

56

This traffic for Khagra, Berhampore, and Ghorabazar is carried this year by the steamer that plies between Calcutta and Jeangunge at a lower rate; also the piece-goods traffic for Rampur Beauliah is carried by the steamer service to Rampur Beauliah.

Grains—(5).—Others

15

This decrease is due to bazar being dull.

Railway plant and rolling-stock.

55

This decrease is due to less railway materials carried during the month.

Salt

41

This decrease is due to this being carried by river this year.

Oilseeds—(2).—Mustard and rape

11

The decrease in this traffic is due to dull market.

Silk, raw—(3).—Indian

31

The decrease in this traffic is owing to this being partly carried by steamer this year.

Silk piece-goods.

6

This decrease is due to this being partly carried by steamer this year.

Sugar—Drained

17

This decrease is due to dull market.

NALHATI, the 4th November 1887.

B. G. MOOKERJEE, Manager.

## EAST INDIAN RAILWAY.

Statement of Goods Traffic in Staples carried during the 4 weeks ended 24th September 1887, as compared with the same period of 1886

| STAPLES.  | 1887.     |           | 1886      |           | Increase. |          | Decrease. |          |
|---|-----------|-----------|-----------|-----------|-----------|----------|-----------|----------|
|   | Weight.   | Freight.  | Weight.   | Freight.  | Weight.   | Freight. | Weight.   | Freight. |
|   | Mds.      | Rs.       | Mds.      | Rs.       | Mds.      | Rs.      | Mds.      | Rs.      |
| <b>ANIMALS, LIVING,</b>   | No. 183   | 3,070     | No. 191   | 4,700     | No. 15    | 415      | No. 8     | 1,600    |
| FOR SALE.   | 487       | 3,874     | 472       | 3,450     | 15        | 425      | 8         | 1,600    |
| Horses, ponies, and mules   | 2,283     | 2,147     | 2,113     | 1,775     | 170       | 372      |           |          |
| Cattle  | 484       | 507       | 680       | 475       |           |          | 305       | 108      |
| Sheep and goats   | 46        | 46        | 40        | 42        | 6         | 4        |           |          |
| Other kinds   | 18        | 17        |           |           | 18        | 17       |           |          |
| Borax   | 43        | 44        | 18        | 30        | 25        | 8        |           |          |
| Canes and rattans   | 5,10,047  | 1,65,481  | 5,52,717  | 2,10,821  |           |          | 43,070    | 33,340   |
| Caoutchouc (Indian-rubber)  | 10,38,081 | 2,75,720  | 14,51,761 | 1,00,985  | 4,80,920  | 75,740   |           |          |
| Chinese and Japanese ware   | 22,004    | 24,412    | 33,003    | 27,439    |           |          | 305       | 3,027    |
| Coal and coke, up   | 7,410     | 10,700    | 7,614     | 10,788    |           |          | 204       | 28       |
| Do., down   | 15,744    | 0,807     | 13,800    | 7,851     | 2,374     | 2,010    |           |          |
| Cotton, raw   | 1,30,440  | 1,30,175  | 1,11,388  | 1,17,280  | 19,252    | 21,805   |           |          |
| COTTON, MANU-FACTURED.  | 24,706    | 16,182    | 23,716    | 11,044    | 991       | 1,338    |           |          |
| Twist and yarn (European)   | 153       | 102       | 101       | 52        | 55        | 50       |           |          |
| Do., (Indian)   | 1,171     | 1,830     | 1,147     | 1,541     | 24        | 89       |           |          |
| Piece-goods (European)  | 980       | 517       | 1,101     | 471       |           | 40       | 112       |          |
| Do., (Indian)   |           |           |           |           |           |          |           |          |
| Drugs and Me- DICINES.  |           |           |           |           |           |          |           |          |
| Intoxicating drugs (other than opium, i.e., arsenic, blang, ganja, and churus, &c.) | 2,480     | 722       | 2,481     | 673       | 0         | 49       |           |          |
| Indigo  |           |           |           |           |           |          |           |          |
| DYING MAT-ERIALS.   |           |           |           |           |           |          |           |          |
| Madder or manjit  | 225       | 116       | 155       | 102       | 70        | 14       |           |          |
| Safflower   | 8,786     | 6,088     | 10,423    | 9,250     |           |          | 1,637     | 3,171    |
| Turmeric  | 4,031     | 4,205     | 6,019     | 4,207     |           |          | 1,988     | 2        |
| Other kinds   | 6,473     | 3,085     | 6,461     | 3,090     | 0         |          |           | 8        |
| Earthenware and porcelain   | 4,715     | 7,197     | 9,273     | 4,977     | 31,442    | 2,320    | 18,715    | 10,873   |
| Jute, raw   | 35,006    | 17,143    | 54,321    | 28,014    |           |          |           |          |
| Do., manufactured (gunny bags and cloths).  |           |           |           |           |           |          |           |          |
| FIBROUS PRO-DUCTS.  |           |           |           |           |           |          |           |          |
| Other fibres, raw   | 400       | 276       | 6,263     | 3,431     |           |          | 5,764     | 3,145    |
| Do., manufactured   | 1,094     | 540       | 1,953     | 730       |           |          | 859       | 190      |
| FRUITS & NUTS   |           |           |           |           |           |          |           |          |
| Cocoanuts   | 11,982    | 6,010     | 7,082     | 4,330     | 3,990     | 1,680    |           |          |
| All other kinds   | 20,440    | 25,657    | 21,570    | 20,543    | 7,879     | 5,014    |           |          |
| Wheat   | 2,83,500  | 47,779    | 12,02,239 | 3,39,820  |           |          | 9,18,070  | 2,91,060 |
| Gram and pulses   | 4,21,050  | 10,314    | 2,06,300  | 80,384    | 1,55,450  | 4,020    |           |          |
| Rice, husked  | 4,50,177  | 1,13,886  | 5,11,307  | 59,228    | 1,47,130  | 51,000   |           |          |
| Do., unhusked   | 10,405    | 3,238     | 13,065    | 1,078     | 3,140     | 1,240    |           |          |
| Other rain and spring crops   | 2,83,301  | 60,351    | 78,501    | 19,171    | 2,04,800  | 41,700   |           |          |
| Government stores   | 17,626    | 33,376    | 22,511    | 39,881    |           |          | 4,940     | 6,311    |
| Gums and resins   | 3,190     | 1,970     | 3,531     | 1,553     |           |          | 344       | 185      |
| HIDES & SKINS.  | 18,210    | 8,640     | 25,290    | 13,520    |           |          | 7,026     | 4,809    |
| Skins of sheep, goats, and small animals  | 17,153    | 9,960     | 16,633    | 8,970     | 470       | 1,430    |           |          |
| Horns   | 1,300     | 830       | 1,007     | 710       | 283       | 220      |           |          |
| LAC   |           |           |           |           |           |          |           |          |
| Do, shell   | 13,839    | 9,720     | 15,206    | 10,540    |           |          | 1,307     | 814      |
| Do, stick and other kinds   | 21,440    | 6,407     | 21,187    | 7,051     | 02        |          |           | 1,644    |
| LEATHER   | 1,893     | 3,751     | 1,422     | 9,858     | 461       | 803      |           |          |
| Do, unmanufactured  | 3,702     | 4,882     | 3,484     | 4,917     | 210       |          |           |          |
| Do, manufactured  | 13,809    | 11,092    | 12,806    | 1,098     | 073       | 204      |           | 35       |
| Liquors   | 332       | 206       | 142       | 107       | 190       | 90       |           |          |
| Metals  | 1,09,848  | 12,128    | 67,013    | 8,408     | 42,205    | 3,030    |           |          |
| MINERALS AND MANUFACTURES OF  | 38,143    | 30,317    | 36,718    | 30,290    | 1,445     | 27       |           |          |
| Brass and copper  | 81,050    | 47,030    | 79,511    | 50,610    | 2,445     |          |           | 2,680    |
| Iron  | 8,061     | 6,354     | 12,071    | 7,893     |           |          | 4,910     | 620      |
| Other metals  | 32,080    | 16,272    | 25,493    | 14,304    | 3,587     | 1,878    | 440       | 837      |
| Oils  |           |           |           |           |           |          |           |          |
| Opium   | 2,426     | 2,107     | 2,478     | 2,062     | 348       | 25       |           |          |
| Paints and colours  | 21,943    | 21,363    | 24,502    | 22,740    |           |          | 2,559     | 1,357    |
| PROVISIONS  | 4,010     | 3,961     | 4,287     | 3,320     | 323       | 41       |           |          |
| Other kinds   | 21,414    | 1,207     | 2,10,821  | 4,508     |           |          | 1,98,377  | 3,301    |
| Railway materials, Construction Account   | 31,200    | 14,590    | 50,062    | 33,194    |           |          | 19,063    | 18,808   |
| Do, ditto, Foreign  | 4,00,742  | 1,06,287  | 4,07,403  | 80,243    | 280       | 17,004   |           |          |
| SALT  | 39,218    | 15,253    | 32,849    | 13,112    | 6,369     | 2,41     |           |          |
| SALTPETRE, &C.  | 13,080    | 2,478     | 13,805    | 3,540     |           |          |           |          |
| Other saline substances   | 4,31,837  | 1,35,454  | 4,35,187  | 1,21,024  |           |          | 865       | 1,002    |
| Linseed   | 77,427    | 21,471    | 87,427    | 20,391    |           |          | 3,330     |          |
| Mustard and rape  | 4,384     | 1,254     | 1,354     | 264       |           |          | 780       | 10,000   |
| Oil-seeds   | 77,490    | 21,301    | 1,04,750  | 50,571    |           |          | 91,200    | 35,180   |
| SEEDS { OTHER SEEDS   | 15,214    | 7,108     | 21,044    | 10,458    |           |          | 6,430     | 3,350    |
| Tea seed  |           |           |           |           |           |          |           |          |
| Other kinds   | 19,831    | 7,047     | 22,031    | 8,007     |           |          | 2,180     | 1,260    |
| SILK  | 1,235     | 754       | 1,508     | 1,062     |           |          | 273       | 318      |
| Silk, raw   |           |           |           |           |           |          |           |          |
| Do., manufactured (European)  | 893       | 403       | 1,000     | 544       |           |          | 117       | 81       |
| Do., ditto (Indian)   | 7,253     | 5,614     | 5,020     | 4,055     | 1,924     | 959      |           |          |
| Spices  | 69,310    | 6,428     | 87,773    | 7,404     |           |          | 18,433    | 974      |
| Stone and marble  | 79,809    | 20,111    | 87,441    | 23,504    |           |          | 8,435     | 2,394    |
| SUGAR   | 20,690    | 6,032     | 33,031    | 6,487     |           |          | 8,041     | 455      |
| Sugar, refined  | 2,000     | 2,044     | 2,083     | 3,070     |           |          |           | 1,032    |
| Do., unrefined  | 541       | 375       | 542       | 358       |           |          | 1         |          |
| TEA   | 27,777    | 8,684     | 27,700    | 10,587    |           |          | 22        | 1,903    |
| Do., Indian   | 22,645    | 4,925     | 18,350    | 4,530     | 4,335     | 390      |           |          |
| Do., Foreign  | 10,108    | 611       | 16,251    | 914       |           |          | 6,053     | 273      |
| Timber  | 983       | 631       | 808       | 780       |           |          | 185       | 158      |
| WOOD  | 1,953     | 5,800     | 2,033     | 5,808     |           |          | 70        | 80       |
| Wool, raw   |           |           |           |           |           |          |           |          |
| Do., manufactured (European)  |           |           |           |           |           |          |           |          |
| Do., manufactured (Indian)  | 2,850     | 3,080     | 2,431     | 2,830     | 423       | 250      |           |          |
| Shawls  |           |           |           |           |           |          |           |          |
| All other articles of merchandise   | 2,20,304  | 1,54,976  | 2,13,382  | 1,37,884  | 8,012     |          |           | 2,508    |
| Total   | 63,45,391 | 18,01,452 | 65,61,106 | 20,06,809 | 11,44,083 | 2,45,901 | 18,90,398 | 4,51,258 |

*General remarks on the fluctuation of principal staples carried over the East Indian Railway during the month ended 24th September 1887.*

INCREASES.

*Coal and coke.*—There was a decrease in the upward despatches and an increase in the downward traffic, resulting in a net increase: the decrease in up traffic is due to lesser demands from foreign railways: the downward increase is attributable to the demands for brick-burning-purposes and to despatches to stations on the Eastern Bengal State Railway *via* the Jubilee bridge.

*Piece-goods, European.* The improvement in this staple followed the depression during August, and may be ascribed partly to demands for the Durga Poojah holidays.

*Jute, raw.*—This increase is due to the opening of the Jubilee bridge: the traffic is carried principally to the numerous mills in the neighbourhood of Howrah.

*Fruits, other kinds.*—This increase is principally in long lead despatches of betel-nuts from Howrah and Sealdah and in the despatches of myrabolams from Nuchehra and Sleemanabad to Bombay.

*Grain and Pulses.*—There was an upward movement in these articles in response to poor crops in the upper districts.

*Rice (husked and unhusked).*—Due to large stocks at stations on the Loop line, and to partial failure of crops and consequent high prices up-country.

*Other rain and spring crops.*—Due to despatches up-country for sowing purposes and for consumption in connection with the partial failure of crops.

*Minerals.*—This increase was due to despatches of large quantities of lime required for the Kidderpore Docks and despatches to Barrackpore.

*Salt.*—This increase was in the despatches from Howrah and Chitpore, due to a further fall in the price of imported salt.

DECREASES.

*Gunny.*—This decrease follows the stagnation in the wheat trade.

*Wheat.*—Due to absence of supplies of Indian wheat, stocks being exhausted.

*Government stores.*—This decrease was principally in the despatches from Bally and *via* Ghazisbad.

*Hides.*—The remarks made in the previous months apply in this case also.

*Railway Material Foreign.*—Due to despatches from Howrah being very limited.

*Seeds.*—The decrease was principally in poppy and castor seed: the former was due to poor crops, and the latter to the price in the Calcutta market not being favourable.

N. ST. L. CARTER, *Traffic Manager.*

TRAFFIC MANAGER'S OFFICE, JAMALPUR, the 11th November 1887.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 5th November 1887, on 1,513½ miles open.

|   | COACHING TRAFFIC.     |                         | MERCHANDISE AND MINERAL TRAFFIC. |                        | Other earnings (estimated). | Total earnings.        | TRAFFIC TRAIN-MILES RUN. |              |            |
|---|-----------------------|-------------------------|----------------------------------|------------------------|-----------------------------|------------------------|--------------------------|--------------|------------|
|   | Number of passengers. | Coaching receipts.      | Weight carried.                  | Receipts.              |                             |                        | Coaching.                | Merchandise. | Total.     |
| traffic for the week ...                                    | 250,050               | Rs. A. P. 12,73,740 4 0 | Mds. S. 22,31,406 0              | Rs. A. P. 5,47,009 4 0 | Rs. A. P. 15,803 10 0       | Rs. A. P. 8,37,180 2 0 | 63,888½                  | 85,840       | 149,728½   |
| per mile of railway ...                                     | ...                   | 140 13 5                | ...                              | 301 12 1               | 10 7 1                      | 553 0 7                | ...                      | ...          | ...        |
| previous 17 weeks of half-year ...                          | 4,115,710             | 42,87,973 7 0           | 3,65,44,383 10                   | 70,15,896 8 2          | 2,70,225 10 9               | 1,21,83,094 9 11       | 1,115,048½               | 1,374,861    | 2,490,909½ |
| Total for 18 weeks ...                                      | 4,365,760             | 45,01,718 11 0          | 3,87,76,701 10                   | 84,63,605 12 2         | 2,95,020 4 9                | 1,33,20,253 11 11      | 1,178,837½               | 1,460,801    | 2,640,638½ |
| COMPARISON.   |                       |                         |                                  |                        |                             |                        |                          |              |            |
| for corresponding week previous year ...                    | 231,820               | 3,01,174 10 10          | 22,38,668 10                     | 5,65,770 7 9           | 18,117 2 7                  | 8,85,002 5 2           | 67,234                   | 87,520       | 154,754    |
| per mile of railway corresponding week of previous year ... | ...                   | 198 13 9                | ...                              | 373 7 1                | 11 15 4                     | 584 3 2                | ...                      | ...          | ...        |
| to corresponding date of previous year ...                  | 4,202,876             | 46,80,315 8 4           | 3,92,02,017 10                   | 82,92,100 13 0         | 3,22,824 15 8               | 1,43,01,241 5 0        | 1,240,028                | 1,636,120    | 2,876,157  |

\* The decrease in coaching traffic is almost general.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 6TH NOVEMBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 5TH NOVEMBER 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                                   | Per mile worked. | Mean mileage worked. | Receipts.                                   | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Rs.                     | Rs.                     |
| Rs. 9,85,002                                | Rs. 584          | 1,513½               | Rs. 8,37,159                                | Rs. 553          | 1,516                | Rs. 2,70,81,823  | Rs. 577          | 1,518½               | Rs. 2,57,27,801  | Rs. 547          | ...                  | ...                     | 13,57,022               |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 5th November 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |                      | MERCHANDISE AND MINERAL TRAFFIC. |                     | Other earnings (estimated). | Total earnings.       | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|----------------------|----------------------------------|---------------------|-----------------------------|-----------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts.   | Weight carried.                  | Receipts.           |                             |                       | Coaching.                | Merchandise. | Total. |
| traffic for the week ...                                    | 21,863                | Rs. A. P. 11,416 2 0 | Mds. S. 25,161 0                 | Rs. A. P. 1,878 3 0 | Rs. A. P. 27 6 0            | Rs. A. P. 13,321 11 0 | 1,840                    | 554          | 2,394  |
| per mile of railway ...                                     | 382                   | 190 9 4              | 440 0                            | 32 13 4             | 0 7 8                       | 232 13 4              | ...                      | ...          | ...    |
| previous 17 weeks of half-year ...                          | 247,375               | 1,38,116 13 0        | 6,10,315 20                      | 40,037 10 0         | 645 6 0                     | 1,73,790 13 0         | 81,278½                  | 11,707½      | 43,046 |
| Total for 18 weeks ...                                      | 269,238               | 1,41,532 15 0        | 6,35,476 30                      | 41,015 13 0         | 672 12 0                    | 1,87,121 8 0          | 83,118½                  | 12,321½      | 45,440 |
| COMPARISON.   |                       |                      |                                  |                     |                             |                       |                          |              |        |
| for corresponding week previous year ...                    | 9,870                 | 4,942 15 0           | 44,315 20                        | 3,304 12 0          | 36 15 0                     | 8,284 10 9            | 1,078                    | 80½          | 2,462  |
| per mile of railway corresponding week of previous year ... | 173                   | 86 0 8               | 774 30                           | 57 12 5             | 0 10 4                      | 144 18 5              | ...                      | ...          | ...    |
| to corresponding date of previous year ...                  | 271,257               | 1,54,430 13 1        | 7,44,878 0                       | 47,021 14 0         | 600 6 3                     | 2,02,743 1 4          | 33,016                   | 14,165       | 47,181 |

\* The increase in coaching traffic is on account of Sonapur Fair.

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 6TH NOVEMBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 5TH NOVEMBER 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                                   | Per mile worked. | Mean mileage worked. | Receipts.                                   | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Rs.                     | Rs.                     |
| Rs. 8,284                                   | Rs. 145          | 57½                  | Rs. 13,322                                  | Rs. 233          | 57½                  | Rs. 3,20,431   | Rs. 166          | 57½                  | Rs. 3,00,361   | Rs. 173          | ...                  | ...                     | 23,050                  |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

*Approximate Return of Traffic for week ended 5th November 1887, on 12 miles open.*

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|  |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Traffic for the week                                   | 2,479                 | 410 4 0            | 12,500 0                         | 278 1 0    | 7 0 0                       | 685 5 0         | 384½                     | 100          | 484½   |
| of mile of railway                                     | .....                 | 34 8 0             | .....                            | 23 2 0     | 0 9 4                       | 57 15 1         | .....                    | .....        | .....  |
| previous 17 weeks of half-                             | 49,677                | 8,298 8 0          | 1,52,559 30                      | 3,306 12 0 | 167 14 0                    | 11,763 2 0      | 6,925½                   | 1,705        | 8,530½ |
| Total for 18 weeks                                     | 52,156                | 8,698 12 0         | 1,65,059 30                      | 3,644 13 0 | 174 14 0                    | 12,458 7 0      | 7,210                    | 1,814        | 9,024  |
| COMPARISON.  |                       |                    |                                  |            |                             |                 |                          |              |        |
| for corresponding week of previous year                | 2,621½                | 440 5 7            | 7,978 30                         | 194 0 0    | 14 2 3                      | 648 5 10        | 408                      | 85           | 493    |
| of mile of railway corresponding week of previous year | .....                 | 36 11 0            | .....                            | 18 2 8     | 1 2 10                      | 54 0 0          | .....                    | .....        | .....  |
| to corresponding date of previous year                 | 47,809                | 8,040 5 1          | 1,61,929 0                       | 3,444 4 0  | 157 4 3                     | 11,050 13 4     | 7,327                    | 2,029        | 9,356  |

*Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 6TH NOVEMBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 5TH NOVEMBER 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                                   | Per mile worked. | Mean mileage worked. | Receipts.                                   | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. |                         |                         |
| Rs.   | Rs.              |                      | Rs.   | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              |                      | Rs.                     | Rs.                     |
| 644   | 54               | 12                   | 695   | 58               | 12                   | 28,922   | 78               | 12                   | 27,058   | 73               | .....                | .....                   | 1,864                   |

## SINDIA STATE RAILWAY.

*Approximate Return of Traffic for week ended 5th November 1887, on 74½ miles open.*

|  | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|--|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|  | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|  |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Traffic for the week                                   | 5,041                 | 4,049 5 0          | 1,35,076 0                       | 8,046 1 0   | 79 5 0                      | 12,174 11 0     | 705                      | 1,706½       | 2,411½  |
| of mile of railway                                     | .....                 | 54 2 2             | .....                            | 107 9 1     | 1 1 0                       | 162 12 3        | .....                    | .....        | .....   |
| previous 17 weeks of half-                             | 90,682                | 66,498 3 0         | 15,00,223 20                     | 61,596 15 0 | 1,789 5 0                   | 1,29,804 7 9    | 11,899                   | 25,458½      | 37,357½ |
| Total for 18 weeks                                     | 95,723                | 70,547 8 0         | 16,35,299 20                     | 69,643 0 0  | 1,878 10 0                  | 1,42,069 2 9    | 12,604                   | 27,165       | 39,769  |
| COMPARISON.  |                       |                    |                                  |             |                             |                 |                          |              |         |
| for corresponding week of previous year                | 6,255½                | 4,740 0 11         | 1,05,930 10                      | 3,202 1 0   | 88 14 6                     | 8,031 0 5       | 769                      | 1,220        | 1,979   |
| of mile of railway corresponding week of previous year | .....                 | 63 5 11            | .....                            | 42 12 11    | 1 3 0                       | 107 5 10        | .....                    | .....        | .....   |
| to corresponding date of previous year                 | 98,390½               | 70,624 7 0         | 15,42,414 10                     | 52,249 7 9  | 1,740 8 0                   | 1,24,614 2 3    | 12,998                   | 19,883       | 32,881  |

*Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.*

| RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1886. |                  |                      | RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1887. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 6TH NOVEMBER 1886. |                  |                      | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 5TH NOVEMBER 1887. |                  |                      | Total increase in 1887. | Total decrease in 1887. |
|---|------------------|----------------------|---|------------------|----------------------|--|------------------|----------------------|--|------------------|----------------------|-------------------------|-------------------------|
| Receipts.                                   | Per mile worked. | Mean mileage worked. | Receipts.                                   | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. | Total receipts.  | Per mile worked. | Mean mileage worked. |                         |                         |
| Rs.   | Rs.              |                      | Rs.   | Rs.              |                      | Rs.  | Rs.              |                      | Rs.  | Rs.              |                      | Rs.                     | Rs.                     |
| 8,031                                       | 107              | 74½                  | 12,175                                      | 163              | 74½                  | 2,20,968   | 95               | 74½                  | 2,56,071   | 110              | 35,083               | .....                   | .....                   |

## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 5th November 1887, on 2½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 18,478                | 4,771 0 0          | 7,200 10                         | 343 12 0   | 8 3 0                       | 5,142 12 0      | 915                      | 53           | 968    |
| Or per mile of railway ...                                  | .....                 | 215 5 3            | .....                            | 15 7 2     | 0 5 11                      | 231 2 4         | .....                    | .....        | .....  |
| For previous 17 weeks of half-year ...                      | 282,708               | 72,824 12 0        | 70,533 10                        | 2,611 11 0 | 82 6 0                      | 75,518 13 0     | 16,076½                  | 841½         | 16,918 |
| Total for 18 weeks ...                                      | 301,186               | 77,615 12 0        | 77,823 20                        | 2,855 7 0  | 90 9 0                      | 80,561 12 0     | 16,991½                  | 894½         | 17,886 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 16,476                | 4,298 2 8          | 3,043 0                          | 119 2 0    | 17 6 0                      | 4,434 10 8      | 940                      | 10           | 958    |
| Per mile of railway corresponding week of previous year ... | .....                 | 193 2 10           | .....                            | 5 5 8      | 0 12 0                      | 190 5 0         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 288,235               | 71,629 0 8         | 53,026 10                        | 1,943 0 0  | 108 4 3                     | 73,680 4 11     | 17,561                   | 309          | 17,870 |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 6TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 5TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 22½   | 4,435     | 199              | 22½   | 5,143     | 231              | 22½  | 1,40,415        | 212              | 22½  | 1,67,634        | 229              | 11,219                  | .....                   |

## INDIAN MIDLAND RAILWAY.

Approximate Return of Traffic for week ended 5th November 1887, on 42 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,675                 | 1,279 12 0         | 22,670 30                        | 1,973 4 0   | 23 7 0                      | 3,276 7 0       | 250                      | 707          | 956    |
| Or per mile of railway ...                                  | .....                 | 30 7 6             | .....                            | 46 15 9     | 0 8 11                      | 78 0 2          | .....                    | .....        | .....  |
| For previous 17 weeks of half-year ...                      | 36,213                | 15,890 7 6         | 4,28,708 30                      | 24,268 12 0 | 292 5 0                     | 44,451 8 6      | 5,913                    | 5,931        | 11,844 |
| Total for 18 weeks ...                                      | 38,888                | 17,170 3 6         | 4,51,439 20                      | 30,242 0 0  | 305 12 0                    | 47,717 15 6     | 6,172                    | 6,638        | 12,810 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,350                 | 1,085 11 10        | 19,250 20                        | 432 12 0    | 24 1 0                      | 1,543 8 10      | 199                      | 580          | 588    |
| Per mile of railway corresponding week of previous year ... | .....                 | 25 13 8            | .....                            | 10 4 10     | 0 9 2                       | 36 11 8         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 45,112                | 19,445 5 8         | 2,29,092 10                      | 21,195 5 0  | 477 4 6                     | 44,117 15 2     | 5,342                    | 5,746        | 11,088 |

Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 6TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 5TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 42  | 1,543     | 37               | 42  | 3,276     | 78               | 42   | 67,230          | 52               | 42   | 66,510          | 73               | 26,280                  | .....                   |



## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS).

Approximate Return of Traffic for week ended 29th October 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|---|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |   |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.     | Rs. A. P.   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                | 183,519               | 57,040 0 0         | 9,307 1 0                        | 1,85,467 0 0  | 25,818 0 0  | 2,68,320 0 0    | 20,900                   | 88,763       | 89,653  |
| Or per mile of railway ...                                    | 288                   | 88 0 0             | 1,442 0                          | 288 0 0       | 17 0 0*   | 303 0 0         | .....                    | .....        | .....   |
| For previous 16 weeks of half-year ...                        | 1,851,859             | 8,12,142 0 0       | 1,62,05,980 0                    | 20,33,494 0 0 | 2,51,965 0 0                                      | 30,97,601 0 0   | 324,183                  | 383,423      | 707,606 |
| Total for 17 weeks ...  | 2,035,377             | 8,69,192 0 0       | 1,11,35,981 0                    | 22,14,991 0 0 | 2,77,778 0 0                                      | 33,65,021 0 0   | 845,083                  | 432,176      | 767,258 |
| COMPARISON.   |                       |                    |                                  |               |   |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 102,124               | 52,202 0 0         | 6,42,407 0                       | 1,17,777 0 0  | 14,464 0 0  | 1,64,443 0 0    | 18,150                   | 20,437       | 33,607  |
| Per mile of railway corresponding period of previous year ... | 160                   | 86 0 0             | 1,060 0                          | 194 0 0       | .....   | 290 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 1,058,471             | 8,40,910 0 0       | 87,35,591 0                      | 16,07,061 0 0 | 1,91,176 0 0                                      | 27,06,047 0 0   | 309,068                  | 350,215      | 658,283 |

\* Rs. 15,000 excluded from the calculation.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |              |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 30TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 29TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|--------------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts.    | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 606   | Rs. 1,84,443 | Rs. 304          | 645   | 2,68,320  | 416              | 606  | Rs. 45,40,488   | Rs. 250          | 645  | Rs. 51,61,544   | Rs. 287          | Rs. 6,12,056            | .....                   |

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 29th October 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 23,802                | 9,042 0 0          | 44,875 0                         | 2,778 0 0  | 30 0 0                      | 12,730 0 0      | 3,786                    | 1,834        | 5,620  |
| Or per mile of railway ...                                    | 190                   | 80 0 0             | 750 0                            | 22 0 0     | .....                       | 102 0 0         | .....                    | .....        | .....  |
| For previous 16 weeks of half-year ...                        | 374,524               | 1,25,367 0 0       | 7,19,010 0                       | 45,148 0 0 | 1,651 0 0                   | 1,72,106 0 0    | 58,100                   | 29,971       | 88,165 |
| Total for 17 weeks ...  | 398,326               | 1,35,309 0 0       | 7,63,885 0                       | 47,906 0 0 | 1,681 0 0                   | 1,84,806 0 0    | 61,980                   | 31,905       | 93,785 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 18,737                | 6,800 0 0          | 15,983 0                         | 987 0 0    | 30 0 0                      | 7,836 0 0       | 4,014                    | 2,193        | 5,210  |
| Per mile of railway corresponding period of previous year ... | 150                   | 54 0 0             | 129 0                            | 8 0 0      | .....                       | 62 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 387,307               | 1,28,374 0 0       | 3,23,631 0                       | 25,350 0 0 | 404 0 0                     | 1,54,137 0 0    | 67,478                   | 23,395       | 90,873 |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 30TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 29TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 125   | Rs. 7,836 | Rs. 63           | 125   | 12,730    | 102              | 125  | Rs. 3,20,685    | Rs. 88           | 125  | Rs. 3,40,931    | Rs. 93           | Rs. 20,236              | .....                   |

## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 29th October 1887, on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 14,029                | 5,018 0 0          | 65,168 0                         | 4,598 0 0  | 50 0 0                      | 5,666 0 0       | 2,101                    | 1,803        | 3,904  |
| per mile of railway ...                                       | 163                   | 58 0 0             | 723 0                            | 53 0 0     | 1 0 0                       | 112 0 0         | .....                    | .....        | .....  |
| for previous 16 weeks of half-year ...                        | 175,780               | 61,085 0 0         | 2,79,815 0                       | 22,802 0 0 | 2,854 0 0                   | 55,921 0 0      | 26,338                   | 16,245       | 51,573 |
| Total for 17 weeks ...  | 189,809               | 66,103 0 0         | 3,44,913 0                       | 27,333 0 0 | 2,904 0 0                   | 65,587 0 0      | 37,494                   | 18,048       | 55,542 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 9,926                 | 3,483 0 0          | 15,177 0                         | 1,347 0 0  | 208 0 0                     | 5,033 0 0       | 2,150                    | 714          | 2,870  |
| per mile of railway corresponding period of previous year ... | 115                   | 40 0 0             | 176 0                            | 16 0 0     | .....                       | 56 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 148,883               | 53,797 0 0         | 1,45,602 0                       | 16,093 0 0 | 5,261 0 0                   | 75,091 0 0      | 37,987                   | 12,406       | 40,333 |

\* Includes 20,000 maunds and Rs. 1,000 for Ballast Train.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 30TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 29TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
| Rs.   | Rs.       | Rs.              | Rs.   | Rs.       | Rs.              | Rs.  | Rs.             | Rs.              | Rs.  | Rs.             | Rs.              | Rs.                     |                         |
| 86  | 5,033     | 59               | 86  | 9,066     | 112              | 86   | 1,41,491        | 55               | 86   | 1,60,313        | 62               | 18,922                  | .....                   |

## ASSAM-BEHAR STATE RAILWAY.

(PURNEAH SECTION.)

*Approximate Return of Traffic for week ended 29th October 1887, on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,630                 | 1,011 0 0          | 6,765 0                          | 602 0 0    | 0 0 0                       | 1,619 0 0       | 728                      | 364          | 1,092  |
| per mile of railway ...                                       | 67                    | 26 0 0             | 173 0                            | 15 0 0     | .....                       | 41 0 0          | .....                    | .....        | .....  |
| for previous 16 weeks of half-year ...                        | 48,240                | 17,071 0 0         | 185,460 0                        | 13,861 0 0 | 364 0 0                     | 33,290 0 0      | 11,208                   | 6,404        | 17,612 |
| Total for 17 weeks ...  | 50,870                | 18,082 0 0         | 192,224 0                        | 14,463 0 0 | 370 0 0                     | 34,915 0 0      | 11,936                   | 6,768        | 18,704 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 30TH OCTOBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 29TH OCTOBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 30TH OCTOBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 29TH OCTOBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
| Rs.   | Rs.       | Rs.              | Rs.   | Rs.       | Rs.              | Rs.  | Rs.             | Rs.              | Rs.  | Rs.             | Rs.              | Rs.                     |                         |
| 39  | 1,619     | 41               | 39  | .....     | .....            | 39   | 76,150          | 64               | 39   | 76,150          | 64               | .....                   | .....                   |

## NALHATI STATE RAILWAY.

*Approximate Return of Traffic for the week ending 5th November 1887, on 27½ miles open.*

|   | COACHING TRAFFIC.     |                     | MERCHANDISE AND MINERAL TRAFFIC. |                   | Other earnings (estimated). | Total earnings.     | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|---------------------|----------------------------------|-------------------|-----------------------------|---------------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts.  | Weight carried.                  | Receipts.         |                             |                     | Coaching.                | Merchandise. | Total.  |
| Total traffic for the week                              | 2,763½                | Rs. A. P. 1,048 7 9 | Mds. S. 4,475 20                 | Rs. A. P. 280 3 0 | Rs. A. P. 8 14 7            | Rs. A. P. 1,328 9 4 | 500                      | 254          | 753     |
| Or per mile of railway                                  | 101                   | 38 4 0              | 164 0                            | 10 8 0            | 0 3 0                       | 48 12 0             | .....                    | .....        | .....   |
| For previous 17 weeks of half-year                      | 54,198½               | 19,114 8 3          | 1,50,014 20                      | 9,311 13 0        | 281 1 5                     | 28,707 6 8          | 8,835                    | 5,220½       | 14,055½ |
| Total for 18 weeks                                      | 56,962                | 20,157 0 0          | 1,54,490 0                       | 9,592 0 0         | 287 0 0                     | 30,036 0 0          | 9,344                    | 5,474½       | 14,818½ |
| COMPARISON.   |                       |                     |                                  |                   |                             |                     |                          |              |         |
| Total for corresponding week of previous year           | 2,408                 | 951 15 0            | 4,132 10                         | 371 5 0           | 24 4 0                      | 1,347 8 0           | 509                      | 254          | 763     |
| Per mile of railway corresponding week of previous year | 88                    | 34 15 0             | 152 0                            | 13 10 0           | 0 14 0                      | 49 7 0              | .....                    | .....        | .....   |
| Total to corresponding date of previous year            | 44,253                | 16,958 11 6         | 1,06,048 30                      | 8,213 7 0         | 262 10 6                    | 25,434 13 0         | 9,380                    | 4,790        | 14,170  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Nalhati State Railway.*

| RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 6TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 5TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         | Rs.                     |
| 27½   | 1,348     | 49               | 27½   | 1,329     | 49               | 27½  | 40,770          | 59               | 27½  | 55,524          | 66               | 5,754                   | .....                   |

## TIRHOOT STATE RAILWAY.

*Approximate Return of Traffic for week ended 5th November 1887, on 249 miles open.*

|   | COACHING TRAFFIC.     |                       | MERCHANDISE AND MINERAL TRAFFIC. |                      | Other earnings (estimated). | Total earnings.      | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|-----------------------|----------------------------------|----------------------|-----------------------------|----------------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts.    | Weight carried.                  | Receipts.            |                             |                      | Coaching.                | Merchandise. | Total.  |
| Total traffic for the week on 249 miles open                    | 86,774                | Rs. A. P. *33,098 4 9 | Mds. S. 1,38,318 10              | Rs. A. P. 11,754 4 0 | Rs. A. P. 3,252 8 10        | Rs. A. P. 18,006 1 7 | 10,204                   | 4,093        | 14,297  |
| Or per mile of railway  | 349                   | 136 8 0               | 515 0                            | 47 3 0               | 2 13 0                      | 72 0 0†              | .....                    | .....        | .....   |
| For previous 17 weeks of half-year                              | 668,180               | 2,39,319 11 3         | 19,41,360 30                     | 1,79,908 12 0        | 55,941 7 2                  | 4,75,220 14 5        | 107,028                  | 79,013       | 186,041 |
| Total for 18 weeks  | 754,954               | 2,73,306 0 0          | 20,70,179 0                      | 1,91,723 0 0         | 59,197 0 0                  | 5,24,237 0 0         | 117,232                  | 83,006       | 200,238 |
| COMPARISON.   |                       |                       |                                  |                      |                             |                      |                          |              |         |
| Total for corresponding week of previous year on 246 miles open | 30,891½               | 11,053 9 0            | 1,18,804 30                      | 11,001 7 0           | 2,002 11 7                  | 21,057 11 7          | 5,253                    | 4,643        | 9,896   |
| Per mile of railway corresponding week of previous year         | 126                   | 44 15 0               | 483 0                            | 44 12 0              | 0 11 0                      | 80 6 0†              | .....                    | .....        | .....   |
| Total to corresponding date of previous year                    | 587,486               | 1,96,394 6 1          | 20,02,521 30                     | 2,01,035 9 0         | 55,867 8 5                  | 4,59,911 8 3         | 92,419                   | 77,862       | 170,281 |

\* Increase is due to rush of passengers for Sonapur mela.

† Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

## FINANCIAL YEAR.

*Approximate Statement of Gross Receipts of the Tirhoot State Railway.*

| RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 6TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 5TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              |                         | Rs.                     |
| 249   | 24,058    | 100              | 249   | 48,996    | 197              | 249  | 9,02,038        | 118              | 249½   | 10,14,250       | 132              | 1,10,211                | .....                   |

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|  |     |     |     |     |     |     |     |           |
|--|-----|-----|-----|-----|-----|-----|-----|-----------|
| Approximate earnings for week ending 29th October 1887 | ... | ... | ... | ... | ... | ... | ... | Rs.       |
| Corresponding week last year                           | ... | ... | ... | ... | ... | ... | ... | 8,812     |
|  |     |     |     |     |     |     |     | 11,546    |
| Decrease   | ... | ... | ... | ... | ... | ... | ... | 2,734     |
| Receipts from 1st July to 29th October 1887            | ... | ... | ... | ... | ... | ... | ... | 1,64,707  |
| From 1st July to 30th October 1886                     | ... | ... | ... | ... | ... | ... | ... | 1,71,811  |
| Decrease   | ... | ... | ... | ... | ... | ... | ... | 7,104     |
|  |     |     |     |     |     |     |     | Miles.    |
| Miles open, week ending 29th October 1887              | ... | ... | ... | ... | ... | ... | ... | 51        |
| Corresponding week last year                           | ... | ... | ... | ... | ... | ... | ... | 51        |
|  |     |     |     |     |     |     |     | Rs. A. P. |
| Receipts per mile open, week ending 29th October 1887  | ... | ... | ... | ... | ... | ... | ... | 172 12 7  |
| Corresponding week last year                           | ... | ... | ... | ... | ... | ... | ... | 226 6 6   |
| Decrease   | ... | ... | ... | ... | ... | ... | ... | 53 9 11   |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 8th November 1887.

W. STEVENSON, Acting Manager.



SUPPLEMENT TO  
**The Calcutta Gazette.**

WEDNESDAY, NOVEMBER 23, 1887.

OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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**RESOLUTION ON THE REPORT ON THE ADMINISTRATION OF THE PORT OF CHITTAGONG FOR THE YEAR 1886-87.**

**MUNICIPAL DEPARTMENT—MARINE.**

*Calcutta, the 15th November 1887.*

**RESOLUTION.**

**READ—**

The Report on the Administration of the Port of Chittagong for the year 1886-87.

The trade of this port has always been principally an export one, but imports during the year under review showed a considerable increase. The rice trade of the port has shown signs of a decrease for some years. It took a sudden rise in 1885-86, but fell off again considerably during the year under review, and the quantity exported and its value were far below those of any of the previous eight years. This decline materially affected the trade of the port, but it is believed to be temporary only. The jute trade, on the other hand, has increased.

2. The number and tonnage of vessels visiting the port during the past two years is shown in the following statement :—

| 1885-86.                                     |                  | 1886-87.         |               | INCREASE. |          | DECREASE.    |          |
|--|------------------|------------------|---------------|-----------|----------|--------------|----------|
| Number.                                      | Tonnage.         | Number.          | Tonnage.      | Number.   | Tonnage. | Number.      | Tonnage. |
| European vessels trading with United Kingdom | 20<br>29,991     | 30<br>49,880     | 10<br>19,889  | .....     | .....    | .....        | .....    |
| Ditto in foreign trade                       | 83<br>26,690     | 21<br>17,773     | .....         | .....     | .....    | 12<br>8,918  | .....    |
| Ditto coasting trade                         | 10<br>10,022     | 7<br>7,695       | .....         | .....     | .....    | 3<br>2,327   | .....    |
| Chittagong vessels                           | 68<br>8,856      | 41<br>5,628      | .....         | .....     | .....    | 28<br>3,228  | .....    |
| Other native vessels                         | 13<br>1,763      | 27<br>2,576      | 14<br>813     | .....     | .....    | .....        | .....    |
| Naraingunge inland trade                     | 463<br>18,391    | 598<br>76,548    | 136<br>18,157 | .....     | .....    | .....        | .....    |
| Mail steamers                                | 108<br>59,641    | 104<br>55,981    | 1<br>.....    | .....     | .....    | .....        | 3,660    |
| Trading steamers                             | 87<br>26,275     | 33<br>20,064     | 6<br>.....    | .....     | .....    | .....        | 8,411    |
| Ballam boats                                 | 2,126<br>33,631  | 1,555<br>23,014  | .....         | .....     | .....    | 570<br>9,617 | .....    |
| Total  | 2,866<br>256,900 | 2,416<br>259,148 | 167<br>2,688  | .....     | .....    | 640<br>..... | .....    |

The advance in the number and tonnage of European vessels trading with the United Kingdom was due partly to increased importation of salt and mineral oils, but chiefly to increased exportation of jute; while the decrease under all the other heads is attributable mainly to the falling off of the rice trade. The larger exportation of jute from the port accounts also for the rise in the number and tonnage of vessels engaged in the inland trade with Narain-gunge.

3. The report under review does not furnish information regarding the quantity and value of jute exported during the year; and indeed in regard to trade generally it is extremely meagre. Jute is the most important of the exports, and the supply of statistics of the jute trade in every report was especially desired in the Resolution on the Administration Report of the port for the year 1882-83. It is hoped that future reports will deal in greater detail with the subject of trade.

4. The important article of export, besides jute, is rice. The following statement exhibits the quantity exported during the past two years and its value:—

| PARTICULARS.         | 1885-86.  |           | 1886-87.  |          |
|----------------------|-----------|-----------|-----------|----------|
|                      | Quantity. | Value.    | Quantity. | Value.   |
|                      | Tons.     | Rs.       | Tons.     | Rs.      |
| Foreign ports ... .. | 31,493    | 25,97,430 | 13,006    | 9,40,693 |
| Home " ... ..        | 32,017    | 16,18,686 | 5,343     | 2,05,621 |

It will be observed that the exportation to the foreign ports decreased by nearly 59 per cent., and to the Home ports by about 83. This heavy decline was caused by the drain of rice towards North Tipperah, where serious damage had been caused by floods, and prices had consequently risen.

5. The imports of salt, though they increased from 9,878 tons in 1885-86 to 12,884 tons in 1886-87, were still little more than half those of 1884-85. The import trade in mineral oil recovered from the fall in the previous year, but the quantity imported still fell short by 176,081 gallons of that imported in 1884-85. The following figures show the growth of this branch of commerce during the past five years:—

|             | 1882-83. | 1883-84. | 1884-85. | 1885-86. | 1886-87. |
|-------------|----------|----------|----------|----------|----------|
| Gallons ... | 197,058  | 294,444  | 903,358  | 289,253  | 727,277  |

6. The receipts of the Port and the Pilotage Funds amounted respectively to Rs. 52,032 and Rs. 13,327 against Rs. 50,090 and Rs. 16,114 in 1885-86. Port dues from vessels trading with the United Kingdom principally in jute, and with Narain-gunge solely in jute, show an increase of Rs. 5,619 over those realized from these vessels in the previous year. The decline in the rice trade accounts for the decrease in port dues from all other vessels. The net result was an excess of Rs. 1,942 compared with the income of the previous year. Pilotage collections fell off by Rs. 2,862, and this decrease is accounted for by the fact that on account of the bad rice season only 130 vessels were piloted in and out against 163 in the year before.

7. The Port Fund and Pilotage charges amounted respectively to Rs. 24,787 and Rs. 16,318. The receipts and charges on account of pilotage having for the first time been separated in the year under review, the figures representing the disbursement of those funds in 1885-86 are not available for the purpose of a comparison. The port and pilotage charges together compare as follows with those of the previous year:—

| Year.          | Amount. |
|----------------|---------|
|                | Rs.     |
| 1885-86 ... .. | 66,821  |
| 1886-87 .. ... | 41,105  |

The principal items of decrease were Dockyard and Public Works charges. The decrease under the former is nominal. An expenditure of

nearly Rs. 20,000 was incurred in the purchase of new moorings and in the repairs of the port steam-launch, but the charges were not debited during the year. In the past year there was also no expenditure under the head "Refunds."

The pilotage charges exceeded the receipts by Rs. 2,991, and swallowed up nearly three-fourths of the amount transferred from the port to that fund on the separation of the accounts.

8. As in the previous year, two vessels only were built; and the ship-building industry appears to be unable to contend against the various adverse influences which affect it. Rice shippers prefer European vessels, and competition has reduced the freights of country brigs for jute cargoes so low that construction of new vessels is discouraged.

9. The water works, started shortly before the beginning of the year under review, are evidently appreciated and have paid well. The jetty, owing to increase in the depth of water at its head, is likely to become more useful. Changes in the channel have necessitated the relaying of mooring buoys and two river buoys. The Kutubdea light-house and Norman's Point beacons were in fair order, but new lights are wanted. The putting up of a new light at Kutubdea has been decided upon. The health of the port has been remarkably good.

10. Five vessels with jute from Naraingunge were wrecked in the Megna during the year. Two French vessels grounded by going out of their course: one of them foundered, and the other had to be condemned and sold. On this subject the Commissioner should communicate with the Consul-General for France, as it is noticed that it is chiefly to French vessels that accidents happen near the Port of Chittagong.

Five slight accidents occurred to vessels under pilots. In two cases the pilots were to blame, and proper notice appears to have been taken of their fault.

11. Since the end of the year under review, a Port Trust has been constituted at Chittagong, and the Commissioners have been elected and appointed and have entered upon their functions. The remark of the Commissioner regarding the control retained by the Government of India over the working of the Port Trust Act should not have been made. The Lieutenant-Governor has no doubt that the provision of the improvements which it will be possible for the Commissioners to supply will lead to an increase in the usefulness and prosperity of the Port.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

*Secretary to the Government of Bengal.*

# RESOLUTION ON THE REPORT OF THE ADMINISTRATION OF THE STAMP DEPARTMENT FOR THE YEAR 1886-87.

## FINANCIAL DEPARTMENT—STAMPS.

*Calcutta, the 17th November 1887.*

### RESOLUTION.

READ—

The Report on the Administration of the Stamp Department for the year 1886-87.

Read also—

The Report for the year 1885-86, and the Resolution recorded upon it.

The revenue of the year was collected, as in previous years, under the Indian Stamp Act I of 1879, and the Court-fees Act VII of 1870. There were no changes during the year, either in the description of the stamps used under the two Acts, or in the system under which they are supplied to the public.

2. During the year under review, the Government of India prescribed a set of rules for the custody, supply and sale of all kinds of stamps and stamped papers, and, as desired by them, the rules were published and a declaration made that those portions of them which apply to general and court-fee stamps were adopted and issued by this Government under the authority conferred by section 55 of Act I of 1879, and section 27 of the Court-fees Act.

The Government of India also directed that, with a view to make one-anna revenue or receipt stamps as widely available to the public as possible, the Post Office, as a department, should undertake the sale of such stamps in the same way as postage stamps.

3. On the recommendation of the High Court, Madras, a proposal was submitted by the Government of Madras to the Government of India for the manufacture and issue of court-fee adhesive stamps of the values of Rs. 5 and Rs. 7. The Government of India asked the opinion of this Government regarding the proposal. It was ascertained that no inconvenience was felt in Bengal from the absence of stamps of the value of Rs. 7; but it was considered that the introduction of stamps of the value of Rs. 5 would be productive of advantage.

4. The question of the reduction of stamp duty payable on policies of insurance, other than life and marine, left pending, as stated in last year's Resolution, was taken up during the year under review. A Bill embodying the proposals of Government, which have been generally felt to be fair and equitable, is now before the Government of India.

5. The financial results of the administration of the Stamp Department during the year are shown in the following table :—

| YEAR.   | STAMPS UNDER ACT I OF 1879. |                            |              | COURT FEES UNDER ACT VII OF 1870. |                            |              | TOTAL.      |          |              |
|---------|-----------------------------|----------------------------|--------------|-----------------------------------|----------------------------|--------------|-------------|----------|--------------|
|         | Receipts.                   | Refunds and other charges. | Net revenue. | Receipts.                         | Refunds and other charges. | Net revenue. | Receipts.   | Charges. | Net revenue. |
|         | Rs.                         | Rs.                        | Rs.          | Rs.                               | Rs.                        | Rs.          | Rs.         | Rs.      | Rs.          |
| 1882-83 | 35,56,705                   | 1,88,308                   | 31,70,487    | 88,54,739                         | 8,49,251                   | 85,05,488    | 1,22,13,534 | 5,87,569 | 1,16,78,975  |
| 1883-84 | 33,47,008                   | 2,04,345                   | 31,78,713    | 91,93,816                         | 5,88,607                   | 88,07,209    | 1,25,76,014 | 8,90,993 | 1,19,85,021  |
| 1884-85 | 34,57,608                   | 2,04,520                   | 32,53,088    | 95,33,228                         | 4,07,185                   | 91,26,043    | 1,29,91,214 | 6,11,711 | 1,23,79,503  |
| 1885-86 | 35,75,275                   | 1,90,960                   | 33,75,315    | 96,82,700                         | 4,38,888                   | 92,56,392    | 1,32,59,055 | 6,30,348 | 1,26,51,707  |
| 1886-87 | 34,72,802                   | 1,89,293                   | 32,83,509    | 99,89,759                         | 6,21,010                   | 95,68,749    | 1,34,64,501 | 6,10,305 | 1,28,53,236  |

The figures for the first four years shown in the statement are based on the figures furnished by the Accountant-General in his final statements for those years, while those for the year under review are approximate only. The total revenue derived under the Indian Stamp Act during the year is smaller than that obtained in the preceding year by Rs. 1,02,473. There is also a decrease in the charges, amounting to Rs. 10,667, which reduces the decrease in the net revenue under this head to Rs. 91,806. On the other hand, the collections from judicial stamps, including the sale of plain paper used for court-fee stamps, show a large increase of Rs. 3,06,979. In charges and refunds there has been a decrease of Rs. 5,878, the general result being an increase of over



three lakhs of rupees in the net revenue of the year under the head of court-fees, or of over two lakhs in the net revenue from stamps generally.

6. The gross collections during the past two years from the sales of the different descriptions of stamps are shown in the following statement:—

| SALE OF NON-JUDICIAL STAMPS, OR STAMPS USED UNDER THE INDIAN STAMP ACT.  |                      |                             |                        |                      |                                   |                  |  |   |                               |  | SALE OF JUDICIAL STAMPS, OR STAMPS UNDER THE COURT-FEE ACT. |                        |                            | Total of both kinds of stamps. |
|--|----------------------|-----------------------------|------------------------|----------------------|-----------------------------------|------------------|--|---|-------------------------------|--|---|------------------------|----------------------------|--------------------------------|
| Impressed sheets, including Certificate of Sale, and Salt bond forms, Public Works Department contract and tender forms. | Impressed labels.    | Receipts or revenue stamps. | Share transfer stamps. | Foreign bill stamps. | Hundi or bill of exchange stamps. | Notarial stamps. | Advocate, valuer, and attorney stamps. | Impressed one-anna stamps for cheques, bills, &c. | Total of non-judicial stamps. | Adhesive and impressed court-fee stamps. | Stamps for copies.  | Total of stamps.       |                            |                                |
| Rs.  | Rs.                  | Rs.                         | Rs.                    | Rs.                  | Rs.                               | Rs.              | Rs.                                    | Rs.   | Rs.                           | Rs.                                      | Rs.   | Rs.                    |                            |                                |
| 24,45,294<br>23,71,386   | 5,07,237<br>5,85,492 | 2,08,125<br>2,32,034        | 32,115<br>17,771       | 38,074<br>39,005     | 86,862<br>86,645                  | 4,885<br>4,573   | 7,000<br>10,000                        | 58,220<br>44,616                                  | 54,74,384<br>33,92,184        | 97,44,963<br>97,08,760                   | 4,61,326<br>5,08,368  | 95,09,289<br>98,13,128 | 1,29,23,477<br>1,32,05,312 |                                |
| .....<br>73,908  | 18,255<br>.....      | 24,513<br>.....             | .....<br>4,344         | 5,991<br>.....       | .....<br>219                      | .....<br>282     | 3,000<br>.....                         | 4,790<br>.....                                    | .....<br>22,204               | 2,61,797<br>.....                        | 42,042<br>.....   | 3,03,839<br>.....      | 2,31,636<br>.....          |                                |
| .....<br>3   | 22<br>.....          | 117<br>.....                | .....<br>194           | 151<br>.....         | .....<br>02                       | .....<br>58      | 428<br>.....                           | 12<br>.....                                       | .....<br>06                   | 28<br>.....                              | 9<br>.....  | 31<br>.....            | 21<br>.....                |                                |

With the exception of impressed sheets, share transfer, hundi and notarial stamps, which show decreases of Rs. 73,908, Rs. 4,344, Rs. 219, and Rs. 282 respectively, the sales of all other kinds of stamps have generally increased. The improvement has been principally in the case of receipt or revenue stamps, adhesive and impressed court-fee stamps, and stamps for copies. The receipts from impressed sheets amounted in 1886-87 to Rs. 23,71,386 against Rs. 24,45,294 in the previous year, showing a decrease of Rs. 73,908. There was an increase in 14 districts and a falling off in 31. The decrease in many districts is attributed to the falling off in the number of all classes of documents executed during the year in consequence of good harvests.

The income from the one-anna revenue stamps shows a satisfactory result, though, as the Commissioner of Patna observes, the requirements of the law in regard to them is still largely evaded. In 42 districts an increase under this head amounted to Rs. 25,791, while in three districts, viz. 24-Pergunnahs, Burdwan, and Pubna, the decrease amounted to Rs. 1,278. The Board are requested to invite the special attention of district officers to the necessity for vigilance in regard to the use of these stamps. The revenue derived from the sale of notarial stamps amounted during the year under review to Rs. 4,573 against Rs. 4,855 in the preceding year, showing a decrease of Rs. 282. In Monghyr and Nuddoa these stamps have been introduced during the year 186-87, while in the districts of Bankoora, Beerbhoom, Burdwan, Chumparan, Gya, Howrah, Jessore and Pooree they have not yet been introduced.

The revenue derived from the sale of one-anna impressed stamps during the year under review amounted to Rs. 44,616, or Rs. 4,790 in excess of that realised in the previous year. It is reported that the increase is due partly to the vigilance of the Revenue authorities and partly to the favour with which this form of stamp is coming to be regarded by the commercial community.

Under the head Judicial stamps are included adhesive and impressed court-fees stamps (including High Court service stamps and Calcutta Small Cause Court stamps) and stamps for copies. During the year under review, the receipts from these stamps amounted to Rs. 98,13,128 against Rs. 95,09,289 in the previous year, yielding an increase of Rs. 3,03,839. This is made up of an increase of Rs. 2,61,797 under the head adhesive and impressed court-fees stamps, and of an increase of Rs. 42,042 under the head stamps for copies. In the districts of the 24-Pergunnahs, Pubna, Monghyr, Backergunge, Hooghly, Cuttack, Beerbhoom, Dacca, Chittagong, Furreedpore and Noakhally the increase was largest, while the falling off was heaviest in Jessore, and considerable in Sarun, Calcutta, Midnapore and Rungpore.

7. The following statement shows the number of cases in 1885-86 and 1886-87 in which deficient stamp duty and penalty were levied by the Civil Courts and Collectors under sections 34 and 37 of the Indian Stamp Act, and the amount realized by them :—

| YEAR.       | Number of cases in which duty and penalty were levied by |             |        | Amount of duty and penalty realized by |             |        |
|-------------|--|-------------|--------|--|-------------|--------|
|             | Civil Courts.  | Collectors. | Total. | Civil Courts.                          | Collectors. | Total. |
| 1885-86 ... | 1,586  | 2,162       | 3,748  | 12,629                                 | 21,699      | 34,328 |
| 1886-87 ... | 1,371  | 2,170       | 3,541  | 12,236                                 | 21,644      | 33,880 |

The total number of cases detected by the Civil Courts during the year under review falls short of similar cases of the previous year by 215, or 13·5 per cent; and in the amount realized there is a decrease of Rs. 393, or 3·1 per cent. In the action taken by the Revenue Officers, the number of cases shows a slight increase, *i.e.*, by ·3 per cent., while in the amount of duty and penalty realized a small decrease of Rs. 55, or ·2 per cent., is noticed.

The results of the prosecutions instituted for infringement of the provisions of the Indian Stamp Act during the year under review contrast favourably with those of 1885-86. In that year 767 cases, in which 954 persons were concerned, were instituted; but in 1886-87 the number of cases instituted was 878, and the number of persons brought to trial was 1,193, of whom 909 were convicted and 218 acquitted. The proportion of acquittals to convictions is 1 : 4, the same as in the previous year. The amount of fines imposed by the Magistrates was Rs. 7,775 against Rs. 6,361 in 1885-86.

ORDER.—Ordered that a copy of the Resolution, with a copy of the Report, be submitted to the Government of India, in the Department of Finance and Commerce, for information.

Ordered also that extract paragraph 8 of the Resolution, and paragraphs 94, 95, and 96 of the Report, be forwarded to the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,  
Secretary to the Govt. of Bengal.

# TRAINING OF NATIVE FEMALE PRACTITIONERS OF MEDICINE AT THE CAMPBELL MEDICAL SCHOOL.

GENERAL DEPARTMENT—EDUCATION.

*Calcutta, the 18th November 1887.*

## RESOLUTION.

READ—

The undermentioned papers on the subject of the proposed opening of a vernacular class for the training of female students of medicine at the Campbell Medical School:—

Letter from the Director of Public Instruction, Bengal, No. 2498, dated 6th April 1887.

Letter from the Inspector-General of Civil Hospitals, Bengal, No. 4518, dated the 30th May 1887.

Letter from Dr. R. L. Dutt, Officiating Civil Surgeon of Bungpore, No. 350, dated the 4th July 1887.

Letter from Surgeon-Major R. C. Chandra, Professor of Materia Medica, &c., Medical College, dated the 6th July 1887.

Letter from Surgeon-Major J. M. Coates, Principal, Medical College, Calcutta, No. 335, dated the 7th July 1887.

Letter from Dr. S. C. Mackenzie, Superintendent, Campbell Medical School, dated the 15th July 1887.

Letter from Surgeon-Major A. Crombie, Superintendent, Medical School, Dacca, without date.

Letter from Surgeon-Major C. J. W. Meadows, Superintendent, Patna Medical School, No. 362, dated 11th August 1887.

In order to facilitate the acquisition of a knowledge of medicine by native women who, it is hoped, may practise in the larger villages of the mofussil under the same conditions and among the same class of the people as the Hospital Assistants trained in the vernacular medical schools of Calcutta, Dacca, Patna and Cuttack, the Director of Public Instruction proposed, with the concurrence of the Superintendent of the Campbell Medical School in his letter above cited, to establish in the Campbell Medical School a vernacular class for female students. The details of the scheme are as follows:—

*Qualification for admission.*—In the rules for admission of male students, persons who have passed the Entrance examination, or in at least two subjects of that examination, are eligible for admission. In view of the backward state of female education, it is proposed that the qualifying standard of admission for female students should be reduced so as to make women eligible for admission who have passed (a) the upper primary scholarship examination, or (b) an examination to be held, at the beginning of each session, by the teachers of the school, under the presidency of the Superintendent, in the following subjects:—

- (1) Reading and explaining a Bengali book of the standard of difficulty of Raj Krishna Mookerjee's History of Bengal.
- (2) Writing from dictation from an easy Bengali book.
- (3) Arithmetic to easy fractions and simple rule-of-three.

*Age of admission.*—For male students the limits of age are 16 and 23. The age of female students to be not less than 16.

*Scholarships.*—Ten scholarships to be created for female students in each of the three years for which the course extends. The scholarships to be of the value of Rs. 7 a month each (those for boys are Rs. 5), and to carry free tuition. The ordinary entrance fee of Rs. 10 and tuition fee not to be charged to female students.

*Course of instruction.*—To extend over three years and to be the same for female as for male students in every respect.

*Lectures.*—The front row of benches to be reserved for female students, and separate lectures given, if necessary.

*Dissecting-room.*—A portion of the dissecting-room to be screened off for the special use of female students.

*Hospital attendance.*—To be the same for female students as required for male students, except that the former will be relieved from duty at night.

*Special Prizes.*—A special prize not exceeding Rs. 18 in amount, together with certificates of honour for each subject, to be awarded to the best female students in each class, as is done in the case of male students.

*Lodgings.*—Any female students coming from the mofussil who may so desire, to be lodged in the Surnamayi Hostel.

*Conveyance.*—An omnibus to be provided to bring the female students to and from school.

In communicating his scheme, Sir Alfred Croft wrote: "I am fully aware that it is by no means certain to succeed owing to the general (but I am glad to say diminishing) want of education among women in Bengal, and to the obstacles which social conditions impose. Material benefits would follow if happily it should be successful. If it fails, little or no cost is incurred and no harm done." The expenditure involved in the proposal will amount to Rs. 840 per annum in the first year on account of scholarships, Rs. 108 per annum on account of special prizes, and to this has to be added the cost of an omnibus, horses, and harness and stable expenses.

The Lieutenant-Governor has ascertained the views of the Medical Officers named in the preamble to this Resolution, and finds their opinions on the merits of the proposal to be very divided. Dr. Mackenzie, Surgeon-Major Chandra, and Surgeon-Major Coates, are in favour of trying the system suggested, while the others are to some degree opposed. It appears clear, however, that some native ladies of position desire to receive instruction in the manner indicated, that their services will be in request when they have been trained, and that their knowledge will not then be inferior to that of many of the male practitioners recognised by Government. There is thus a real and practical demand for the medical education of females, which is not sufficiently met by the facilities now offered for their instruction in the Medical College through the medium of the English language, inasmuch as native ladies seldom understand that language even when the male members of their family may be familiar with it.

On full consideration of the subject, therefore, Sir Steuart Bayley has come to the conclusion that the experiment should be tried, and he accordingly directs that the proposed class be opened. The weak point in the scheme seems to the Lieutenant-Governor to be the low qualifying standard of education required from students in the first instance. It is doubtful, in Sir Steuart Bayley's opinion if this standard is sufficiently high to ensure on the part of the students a capacity for following and assimilating the teaching they will receive. The scheme, from this point of view, will have to be carefully watched, and, if necessary, a further representation can be made hereafter with a view to having the qualifying standard reconsidered.

ORDER.—Ordered that this Resolution be published in the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

*Secretary to the Government of Bengal.*

**RESOLUTION ON THE GENERAL ADMINISTRATION REPORT OF THE CHOTA NAGPORE DIVISION FOR THE YEAR 1886-87.**

GENERAL DEPARTMENT—MISCELLANEOUS.

*Calcutta, the 19th November 1887.*

**RESOLUTION.**

**READ—**

The General Administration Report of the Chota Nagpore Division for the year 1886-87.

The Report is submitted by Mr. C. C. Stevens, who held the post of Commissioner throughout the year.

2. The Chota Nagpore Division extends over the very large area of 44,000 square miles, of which the Commissioner can obviously only see a portion in one year's

*Annual tours.*

inspection tour. In the year under review Mr. Stevens devoted the greater part of his tour of three and a half months to the Tributary States, all of which he has now visited, and he intends to make his tour in the present year chiefly in the British districts. The tours of the District and Sub-divisional Officers were generally prolonged and well planned. Among District Officers Colonel Garbett in Hazaribagh and among Sub-divisional Officers Mr. D. J. Macpherson in Giridih spent most days in camp. Mr. Macpherson's tour is especially noticed with commendation by the Commissioner as having been very useful, while in contrast it is mentioned that his predecessor, Mr. Collins, spent only one day away from head-quarters during the six and a half months of his charge.

3. The rainfall, though generally less than in 1885-86, was more than adequate everywhere, except in Singbhoom and the south-eastern parts of Manbhoom, and the Com-

*Weather and crops.*

missioner considers that, on the whole, the agricultural results of the year were fairly satisfactory. Rice appears to have been an average crop in Lohardugga and Hazaribagh, but below the average in Manbhoom and Singbhoom. The *rabi* crop was good in every district except Hazaribagh, and sugar-cane was above the average. The Commissioner has given estimates in annas of the outturn of the different harvests in each district, but these do not agree with the account of the harvests given in the body of the report, and it is clear that in this as in some other divisions the new system of computation prescribed in the orders of 1885 has not been adopted. The attention of District Officers should be called to those orders.

4. The majority of the people live by agriculture, and in a year of which the agricultural results were on the whole

*Material condition of the people.*

favourable, the general condition was that of average prosperity. The District Officers of Singbhoom and Lohardugga write that the condition of the people is good. The Deputy Commissioner of Manbhoom remarks that, if judged by the standard of Behar, the material condition of the people of his district will take a fairly high place; but if the comparison be made with Bengal Proper the estimate would be very much in favour of the latter province. The least favourable account comes from the Deputy Commissioner of Hazaribagh, Colonel Garbett, who thinks that the mass of the people of the district are very poorly off, and that the margin which separates them from actual want is dangerously narrow. Colonel Garbett ascribes the poverty of the people to high rents; but the Commissioner notes that this comparison is probably made with rents in backward districts, and not with ordinary rents prevailing in Bengal. In the mining tracts of this district, where high wages are obtainable, the people are fairly well off.

The prevailing rates for common rice were considerably lower throughout the division than those of the preceding three years; and, except in Manbhoom, the price of wheat was also below the average rate. Wages fell in Singbhoom, owing to the stoppage of the railway works, but elsewhere there was no alteration in the remuneration of skilled and unskilled labour.

Registered emigration again shows a very large decrease on account of the development of the system of free emigration to the tea districts, and because the demand of the colonies for Indian labour has fallen off. In Manbhoom seven charges of abduction were laid against recruiters and sardars, but

were all dismissed, and only one conviction of a recruiter for a criminal offence was obtained in the division.

5. In spite of the fact that more deaths were registered than in 1885-86 in three of the four districts, the year is believed to have been healthier than its predecessor, and in the greater portion of the division there was a marked absence of cholera and small-pox. Fever, however, appears to have been prevalent, and to have caused much mortality, especially in places where the rainfall was most copious. Vaccination was carried on in this division with vigour by an agency of 22 paid and 154 licensed vaccinators, who worked under a strong supervising staff. 179,969 operations were performed during the year as against 136,234 in 1885-86.

*Public health.*

6. The manufactures of the division which need mention are those of lac, tea, indigo, and tussur silk. The prospects of the lac industry are not promising on account of dull markets in Calcutta, and the outturn of indigo was only 80 maunds. The competition of several European firms had the result of doubling and in places even trebling, the price of tussur cocoons, and trade in this article was thus stimulated in a remarkable degree throughout the British districts and in the more accessible Native States. As, however, was noticed last year, the silk-weaving industry has been seriously affected by the increased exports of cocoons; weavers have been unable to compete with the large buyers of the raw material, and in consequence have taken to cloth-weaving to gain a livelihood. In the two tea-producing districts, Lohardugga and Hazaribagh, the outturn of tea amounted to 560,000lbs against 488,000lbs in the previous year.

*Manufactures.*

The coal mines in Hazaribagh and Lohardugga continue to be extensively worked during the year, and operations for the extraction of copper and mica in Giridih were also extended.

7. During the year there was a considerable falling off in the quantities of rice exported from Manbhoom and Singbhoom as compared with the exportation in 1885-86, which was exceptionally large both because of the rich harvests and because of the large demand from other districts. Hazaribagh imports much more rice than it exports, and in the year under review it received 70,000 maunds from neighbouring districts and sent away 15,000 maunds only. From Manbhoom and Singbhoom respectively 55,000 maunds and 8,000 maunds of stick lac, and from the former district 13,608 maunds of shell-lac also were exported. The trade in tussur cocoons was very brisk as above noticed, the exports in Manbhoom being estimated at 100 per cent. in advance of those of the preceding year. In last year's Resolution, the Commissioner was requested to give his special attention to a statement made in the Manbhoom report that importation of European piece-goods was beginning to decline on account of a growing preference for country cloth. Mr. Stevens reports as follows on this subject:—

*Trade and commerce.*

“In Manbhoom the imports of European piece-goods are said to have decreased during the year: the total value is estimated at Rs. 3,93,750 against Rs. 4,50,000 in the previous year. The value of European piece-goods imported into the Singbhoom district is estimated at Rs 1,77,250. From the reports of the Deputy Commissioners of Singbhoom and Hazaribagh it appears that the value of European piece-goods imported in their districts rather increased than decreased during the year, and that there is no reason for apprehending that the people of these two districts have contracted any dislike for them. Colonel Garbett writes: ‘So far as I could ascertain from enquiries made in the course of my cold-weather tour, the use of European and Bombay piece-goods is rather extending than otherwise.’ The Sub-divisional Officer of Giridih also, after making careful enquiries, writes: ‘The demand for European piece-goods is gradually increasing, and no facts that have come to my knowledge would even raise a doubt to the contrary.’ Enquiries were also made by the Deputy Commissioner of Manbhoom from which it appears that the increase in the local manufacture of country cloths in Manbhoom is due more to the fact of the silk-weavers having lost their employment in consequence of the increased competition on the part of a number of European firms for tussur cocoons than to anything else.”

The Commissioner draws attention to the vague character of the information regarding trade furnished in the Lohardugga report. Trade is not registered on any of the roads of this district, but the Lieutenant-Governor hopes that it may be found possible to make some estimate next year of the volume of the trade of the district.

8. Public feeling exists in Chota Nagpore in a degree perhaps less marked than in any other division. The Jubilee of the Queen-Empress was celebrated in the principal towns and villages with manifestations of loyalty which were especially marked in Manbhoom. The only other notable event of the year to be mentioned under this head is the rent agitation continued by certain Kola Mund and Christian converts in Lohardugga, connected chiefly with the German Lutheran Mission. With regard to this agitation the Deputy Commissioner, Colonel Lillingston, blames the zemindars for endeavouring to enhance rents, while the Commissioner also finds fault with the attitude of the ryots, who have held meetings at which aggressive measures against the land-owners were discussed. Sir Stuart Bayley awaits the special report promised by the Commissioner on this subject.

9. The number of punishments, judicial and departmental, inflicted on members of the regular police force was less than in either of the two preceding years, but was still very large, and the conduct of the force is said to have been not very satisfactory. The Commissioner reports improvement in the rural police in every district, but in Manbhoom the ghatwals are said to have rendered themselves conspicuous by disobedience and insubordination. The remarks made by the Officiating Deputy Commissioner of Manbhoom as to the commutation of the ghatwals' remuneration to a fixed money payment being the ultimate solution of the difficulty of dealing with these irregular police will be considered in the Judicial Department.

In cognizable crime there was a small decrease in three out of the four districts, and the results of Sessions trials show a slight, but general, improvement. There was, on the other hand, an increase from 2,088 to 2,474 in the number of non-cognizable cases instituted. The number of civil suits, including rent suits, advanced from 9,056 to 10,093. Under the rent law there were 525 more cases than in the previous year, and in suits for money and moveables there was also an increase.

10. The collections of land revenue, which amounted to Rs. 3,88,945 out of a current and arrears demand of Rs. 4,04,915, were satisfactory, except in the case of the collections from the ryotwari tracts in Lohardugga. The excise revenue rose from 5½ to nearly 6 lakhs—an increase due partly to advantageous settlements consequent on the good harvests and the improved condition of the people, and partly to the breaking up of a monopoly in Lohardugga. From stamps there was a small increase, which does not call for remark. Receipts under the Income-tax Act amounted to Rs. 68,970, as against Rs. 49,265 collected as license tax in the year 1885-86.

11. The Imperial and Provincial roads, with the exception of the portions of the Ranchi-Hazaribagh and Ranchi-Purulia roads in Lohardugga, for which funds were wanting, were maintained in tolerable order. District roads were kept in fair order in Hazaribagh and Manbhoom, but were not well maintained in Lohardugga and Singbhoom for want of money.

12. Compared with 1885-86 the past year shows a total increase of 157 schools and 3,609 pupils; but while "public institutions" under the cognizance of the department have increased considerably in number, it is noticed that there was a decrease under the head of "private institutions." This decrease, however, is said to be more apparent than real, and to be due to the inability of one Sub-Inspector to collect returns. The subject of returns of schools and pupils has already been commended to the Director of Public Instruction for consideration in the Government Resolution on the Chittagong Commissioner's report. An addition of 20 girls' schools and 364 pupils shows some progress in female education, but the improvement was confined to Hazaribagh alone, where credit is given to Colonel Garbett for his efforts in this direction. The results of the last Entrance examination were good in this Division, and candidates at the middle English and middle vernacular examinations were also more successful than in the preceding year; the results of the upper and lower primary examinations were, however, less satisfactory.

13. The working of the Municipal Road Cess and Education Committees in Hazaribagh was satisfactory; but in the other three districts this branch of administration was not successful. In Manbhoom it was discovered that many of the members of the Road Cess Committee were not cess-payers in the district, and that they were therefore not qualified to be members of the Committee. On this subject the Commissioner writes—

“The difficulty in regard to the formation of District Road Committees at once possessing the legal qualifications, and fit and willing to discharge the duties assigned to them, seems to be at present almost insuperable in this division. Scarcely any of the principal local gentlemen whom I have met are in any way fit to be members of such institutions, while those who are fit are generally mere temporary residents and not qualified.”

14. The number of Muhammadans in the division is very small, and of these very few are educated. The figures given show that Muhammadans hold appointments in Government service in this division even in excess of the proportion which they bear to Hindus.

15. The thanks of the Lieutenant-Governor are tendered to Mr. Stevens for his administration of the division during the year. The remarks of the Commissioner on the character of his subordinate officers will be communicated to the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

*Secretary to the Government of Bengal.*



instituted a large number of cases under the old law, the provisions of which they knew and understood. A considerable decrease in the number of documents registered, which numbered 160,042 in the year under review, against 178,837 in the preceding year, is attributed partly to the better circumstances of the agricultural classes, and partly to general unwillingness to register transfers of permanent tenures.

10. There were 14,699 reports of cognizable cases during the year against 15,916 in 1885, but non-cognizable cases increased from 16,736 to 18,167. The Lieutenant-Governor

Police and Crime. notices with satisfaction the improvement with reference to the institution of criminal proceedings against the authors of deliberately false complaints, both the number of prosecutions and the percentage of convictions comparing favourably with the results of the preceding year. The preponderance of acquittals in Sessions trials, particularly noticeable in the districts of Khoolna and Jessore, is unsatisfactory. The Commissioner expresses no opinion on the general conduct of the regular police force, but reports that the rural police worked well in all the districts of the division, and that there has been much improvement in the regular payment of their salaries.

11 The excise revenue has risen in every district except Jessore, the divisional result being a net increase of Rs 1,41,707. The realizations from the sale of non-judicial stamps show an increase of Rs. 6,488, accompanied by a decrease of Rs. 3,322 in the charges, but the collections under the Court-fees Act fell by Rs. 51,294 as compared with the figures for 1885-86 (when an exceptionally heavy probate duty was paid on account of a single estate), and the charges at the same time rose by Rs 2,911. The income-tax brought in a revenue of Rs. 1,89,060 in the five districts and of Rs. 16,39,044 in the Town of Calcutta, including the Suburbs and Howrah; in the preceding year the collections of license-tax amounted to Rs. 1,23,901 in the districts including the Suburbs, and Rs. 4,17,365 in Calcutta.

12. The total collections of land revenue amounted to Rs. 50,42,828, or a percentage of 95.07 on the gross demand, and remissions amounted to Rs. 19,961 as compared with Rs. 7,324 in 1885-86. Direct management shows improved results, but the collections from Government estates were still below 90 per cent. in every district except Khoolna. There was an increase in the demand under both the road cess and public works cess, due to revaluations and the valuation of rent-free holdings. The net revenue from the tolls levied under the Canals Act, 1864, on the Nuddea Rivers rose from Rs. 1,07,375 to Rs. 1,43,423, apparently because all the three rivers, viz, the Bhagirathi, the Jellinghi and the Matubhanga were open, during the year.

13. The table of average attendance at the meetings of the District Committees given by the Commissioner shows that a fair amount of interest was taken by the members in the business which came before them; 22 meetings of District Road Cess Committees and 68 meetings of Branch Committees were held in the cess year 18-5-88. Sir Stuart Bayley is glad to learn that the members of the newly constituted District and Local Boards manifest a praiseworthy desire to perform their new duties faithfully. On the working of municipalities, the Commissioner makes the following remarks:—

“The elective system in municipalities has now passed a second year of its existence. It may be said to be working fairly well in the mofussil districts, but as regards the 24-Pergunnahs the experience of the past year has not in all respects been so favourable to the eventual success of the scheme as was that of the first year of the experiment. The past 12 months have brought more prominently to notice the existence of a very serious inherent danger which we can only hope will in time work its own cure. Mr Forbes regrets that in two-thirds of the municipalities in his district private disputes or party discussions have arisen among the Commissioners of such a nature as to have required the intervention of the higher authorities. The cause of this state of things is not, he says, far to seek in a society composed of various castes and discordant elements, and naturally prone to litigation; but whatever be the cause, the tendency certainly is to create a friction which cannot but prove detrimental to the interests of the rate-payers. He can only hope that a proper sense of their responsibilities will teach the Commissioners to lay aside all personal feelings, and subordinate private to public interests, and especially that the rate-payers will come to see that the public good will best be served by their selecting men of temperate views as their

representatives. As regards the part which falls to district officers, Mr. Forbes observes that, although in one sense it may be said that they have been relieved of the duty of working out the details of a portion of their district management, yet their time and discretionary powers are highly taxed by the creation of new anxieties for the smooth working of a scheme for the success of which they feel that they will be considered in a great measure responsible, but over which they can exercise only a partial and very indirect control. It may be hoped that the difficulties pointed out in these remarks, which were not altogether unforeseen, will be reduced as time and experience make Commissioners and rate-payers familiar with the duties and requirements of the system."

"It is worthy of notice that the Mahomedan community cannot, under the present system, generally secure anything like its proper share of representation on the Municipal Boards. For instance, in the 24-Pergunnahs the Mahomedan municipal population numbers between 160,000 and 170,000, or one-third of the whole, but only five out of 160 elected members in the district belong to that section. This is much to be regretted both in the interest of the Mahomedans themselves, and especially in regard to the maintenance of moderate counsels and sound and temperate views."

14. The roads of the division have suffered severely in the last two years from floods. The want of funds has also prevented their being maintained in an efficient state. For the latter reason it is said that both the provincial and the district roads have deteriorated in the 24-Pergunnahs. It is suggested that either the rate of the cess should be increased (it is levied at the highest rate permitted by the existing law) or that new sources of income should be made available. This important subject will be considered in the Municipal Department. After execution of necessary repairs very little money has remained for the construction of new roads in any district of the division.

15. The steady expansion of education in the Presidency Division is testified to by the increase during the year in the number of public institutions under every head, and in the number of pupils attending them, with the exception only of middle English schools, the number of which remained stationary. Five thousand nine hundred and twenty-six schools with 194,449 pupils were under the cognizance of the Education Department at the end of the year in this division. Very satisfactory features in the portion of report which deals with education are the increase in the number of primary schools and pupils attending them in spite of the continuance of the rule which excludes schools with less than 10 pupils from the returns, the increase in the number of schools of technical instruction, the increase in the number of girls' schools and pupils attending them, and the increased number of Muhammadan pupils in all classes of public institutions.

16. The Commissioner writes that, excepting in occasional cases, the relations between landlords and tenants were satisfactory. Favourable mention is made of the conduct of Maharajah Norendro Krishna, Babu Joykissen Mukerjea, the Hon'ble Raja Peary Mohun Mukerjea, c.s.i., and Babu Prosaud Dass Dutt, Babu Radha Madhub Bose, and Babu Girija Prasanna Mukharji, zemindars of the 24-Pergunnahs, of Babu Ram Chunder Mukharji, a zemindar of Nuddea, of the Nawab Bahadur of Moorshedabad, and of Maharani Sarnamayi of Cossim Bazar, and of Babu Girijanath Ray Chowdhry in Khulna.

17. The Lieutenant-Governor's acknowledgments are due to Mr. Smith for his successful administration of this important and laborious division.

18. The remarks on the character of officers will be communicated to the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

*Secretary to the Government of Bengal.*

RESOLUTION ON THE GENERAL ADMINISTRATION REPORT OF THE  
PRESIDENCY DIVISION FOR THE YEAR 1886-87.

GENERAL DEPARTMENT—MISCELLANEOUS.

Calcutta, the 21st November 1887.

RESOLUTION.

READ—

General Administration Report of the Presidency Division for 1886-87.

THE office of Commissioner was held throughout the year by Mr. A. Smith, who submits the General Administration Report.

2. The Commissioner was on tour for 59 days, during which he visited each of the districts of the division and disposed of a number of matters of importance after personal

Annual tours.

enquiry and discussion. The tours of the district and sub-divisional officers were, except in the case of the Satkhira sub-division, complete and useful; and the Commissioner's summaries of the work done by officers on tour show that their time was very fully occupied.

3. The rainfall of the year under review was in excess of the average of the five preceding years in every district of the division, except Khulna. It appears also to

Weather and crops.

have been well distributed, and the agricultural results were in consequence excellent. Full *amun* and *aus* harvests were reaped throughout the division, and the outturn of the *rabi* crops was also generally good. In the Bongong sub-division the *amun* rice was partly destroyed by excessive floods, but the *aus* crop, which is the most important crop, was a bumper one.

Material condition of the people and prices of food and labour.

4. With regard to the material condition of the people, the Commissioner writes as follows:—

“The condition of the people during the past year was generally prosperous owing to the exceptionally fine rice crops and to the fall in the prices of food-grains in consequence. There was a great demand for labour, but the rate of wages remained high to the great benefit of the labouring classes. That the agricultural classes fared well is evinced by the falling off in the number of suits for arrears of rent on the one hand, and of the deeds of sale and mortgage of petty tenures on the other hand. I think there is no doubt that the condition of the masses of the people is steadily improving. They are better housed, better fed, and better clothed. They use shoes and umbrellas, and can hardly be distinguished from the *bhadro lok* so far as raiment is concerned. They spend more money in marriages and other ceremonies, and sometimes indulge in luxuries, but there is great want of thrift and economy. The lot of persons with small fixed incomes is, notwithstanding the fall in the price of food-grains, still very hard. They are obliged to deny themselves the small luxuries which their neighbours can afford, or to run into debt. The income tax tells hardly on them.”

Mr. Forbes makes the following remarks with regard to the condition of the people of the 24-Pergunnahs:—

“To a visitor from Behar, with its dense and under-fed population, the contrast presented by the agriculturists of this district is very striking. Rents on the whole are extremely low and very difficult of enhancement, for the Bengali ryot knows his rights and clings pertinaciously to them. The soil is fairly good, its cultivation simple and inexpensive, and markets for the sale of the produce within easy reach. The result is that, leaving aside an occasional year of exceptionally unfavourable rainfall, the Bengal ryot has little to complain of, and we find him indulging in luxuries, such as an umbrella, a good pair of shoes, several changes of raiment, rides by railway, fish every day for dinner, and small articles of domestic comfort that his up-country brother never dreams of. Indeed, so marked is the difference, that in the one province a hundred coolies can easily be had at two annas a day at an hour's notice: in the other, labour often cannot be found at all at double the rate, but has to be imported. One reason for this no doubt is that the class of landless labourers, so numerous in Behar, is almost unknown here; but another and principal reason is that the Bengal ryot is so well off that he will not take labourer's work.”

The Collectors' reports of the condition of the agricultural classes in the other districts of the division are as satisfactory as that from the 24-Pergunnahs. The price of common rice fell throughout the division, and sold in Moorshedabad, where it was cheapest, at 21 seers for a rupee on an average, and in the 24-Pergunnahs, where it was dearest, at 15½ seers. The wages of labour maintained a high rate, and difficulty in obtaining labour is reported both in the 24-Pergunnahs and in Nuddea.

5. The mortuary returns show that, taking the division as a whole, the year was healthier than either of the two immediately preceding it. Registration of deaths is still imperfect in this Division as in other Divisions, but it is making progress and an improvement in public health may be inferred from a decline in the recorded death-rate. As usual, fever, though not as prevalent as in 1885-86, caused the largest number of deaths; Nuddea and Jessore especially suffered from this disease. Cholera was unusually prevalent in the 24-Pergunnahs, and also caused more deaths than in the preceding year in Jessore and Nuddea, but was less fatal in Khoolna and Moorsheebad. Deaths from small-pox were very few in this Division, and the success of vaccination operations is satisfactory.

## Public health.

6. In the 24-Pergunnahs 45 mills, giving employment to over 40,000 hands, were at work during the year. The depression in the jute and cotton industries continued to be felt, though less severely than in the previous year. There was some improvement in the gunny market and the number of working days in the jute mills was raised from four a week to nine a fortnight. About 76,800 tons of jute were worked up during the year against 46,662 in the preceding year. In the cotton industry the main features of the year are stated to have been a steady fall in prices all round, a fair demand at the decline in prices for yarn, and an increased production, with a gradual transference of spindles to manufacture of lower counts of yarn on account of the competition of Bombay in production of the finer yarns; 8,330 tons of cotton were worked up in the mills during the year, against 5,933 tons in the preceding year.

## Manufactures.

In the rural parts of the Division the principal manufactures are sugar, indigo, and silk. The outturn of sugar in the Jessore district is estimated at 4,00,000 maunds, as against 3,36,000 maunds estimated for 1885-86; no estimate of outturn has been attempted for the other districts. The number of indigo factories and the outturn of indigo increased during the year, and in Moorsheebad the silk industry was extended.

7. Statistics of trade are given by the Commissioner for the 24-Pergunnahs and Nuddea districts only, and no estimate of the volume of exports and imports is made for the other three districts. There has been a steady progress in the trade of the 24-Pergunnahs, and the trade registered on the Nuddea rivers has also increased. Under this head the increased cultivation of wheat as an article of export is noticed, and it is satisfactory to learn that the quality of the grain exported has improved.

## Trade and Commerce.

8. In the Presidency Division public feeling may be expected to be more developed than elsewhere in the Lower Provinces, and the Commissioner's remarks show that this is the case. The formation of Boards under the Local Self-Government Act, the deliberations of the Public Service Commission, the Parliamentary candidature of natives of India, and the meeting of delegates in Calcutta at what was termed the National Congress, all appear to have evoked a certain amount of interest and expectation among the educated classes. Public feeling was also excited in connection with the widespread rumour of the adulteration of ghee, but this excitement ceased with the passing of Act III (B.C.) of 1886. The income-tax, which the Commissioner considers to be unsuited to the circumstances of the country, has continued to cause much dissatisfaction, and is said to have reflected unpopularity on the Burmese campaign, to which the necessity for its imposition was, it appears, generally attributed. The most important manifestation of public feeling during the year was the outburst of genuine loyalty and attachment to the Sovereign which throughout all parts of the division accompanied the celebration of Her Majesty's Jubilee.

## Public feeling.

9. The total number of civil suits instituted fell to 95,123 from 97,033 in 1885; the decrease was only under the head of rent suits, title suits and suits for money and moveables having increased in every district, except Nuddea. As regards the falling off in every district in the number of rent suits, there appears to be a twofold explanation. In the first place, as in the case of other divisions, it is reported that considerable uncertainty is felt as to the effect of the changes in the law, and, secondly, it is noticed that in the preceding year landlords

## Civil Justice and Registration.

As if by instinct, all the officials in all the districts, as soon as they felt that the idea had taken, withdrew from the lead, and let themselves be guided by the native community; the result was most satisfactory, as reports already submitted have shown. It is instructive to note that this is the kind of thing which does call out public feeling. Next, apparently comes the cadastral survey in Mozufferpore. It was confined to part of one district, and came to an untimely end; but still, while it lasted, crowds of people were excited about it; at first they did not quite know what to make of it; they were a little afraid, and finally recognized it as a fine thing of which they were in need, and there was much sorrow when it stopped."

Mr. Quinn, Collector of Patna, remarks, with reference to the Jubilee, that —

"Among the various acts of grace, none was, I think, more appreciated than the release of prisoners, which, however open to criticism according to Western ideas, was quite in accordance with the sentiments of the native community."

9. The tabulated statement given by the Commissioner shows that in Behar Muhammadans have obtained employment under Government fully proportionate to their numbers and education according to the last census. In the whole population of the Division, Hindus are to Musulmans in the proportion of 8·75 to 1, and educated Hindus as 10·45 to 1; among gazetted officers, however, the proportion is 2·65 to 1, and among ministerial officers in superior and inferior service, the figures are 3·67 to 1 and 2·81 to 1.

10. The figures for the last two years show a continuous decrease in cognizable crime, which is attributed to greater vigilance on the part of the police, whose conduct is said to have been on the whole good, as well as to the prosperous condition of the people. The local officers are to be congratulated on the continued success of the scheme for the reclamation of the Mughya Domes in Sarun and Chumparun.

11. There was a slight decrease in the number of civil suits instituted, as shown by the following figures:—

Civil Justice.

|     |                              |     |     | 1885.  | 1886.  |
|-----|------------------------------|-----|-----|--------|--------|
| (1) | Suits for money or moveables | ... | ... | 12,341 | 12,707 |
| (2) | Rent suits                   | ... | ... | 14,594 | 14,170 |
| (3) | Title and other suits        | ... | ... | 4,016  | 3,441  |
|     | Total                        | ..  | ..  | 30,951 | 30,318 |

The falling off in the number of rent suits is remarkable, as contrary to the expectation formed at the time of the passing of the Bengal Tenancy Act. It would have been greater had not another cause worked in the opposite direction, producing an actual increase of such suits in Shahabad district from 4,498 in 1885 to 5,548 in 1886. The Collector of that district writes:—

"The majority of these suits,' it is said, 'were simple suits for arrears of rent, and were it not for the Full Bench ruling of the Calcutta High Court (I. L. R. II, Calcutta, 170) invalidating recovery of abwabs or unauthorized cesses, though levied for years together with rent, most of them probably would not have been instituted. The invariable contest in them has been the recovery or otherwise of abwabs ordinarily designated *sarak* or road charge, *bhatta* or conversion value of Muhammadan coins into Queen's coins, *neg* or putwari wages, and *khurach* or village expenses, and occasionally *dak-behri* or postal charge."

The Commissioner's remarks regarding the establishment of Munsifs in the Nawada, Jehanabad and Bhabua sub-divisions will be considered in the Judicial Department.

12. The Officiating Commissioner reports that the relations of landlords and tenants, with occasional exceptions, have been on the whole satisfactory. The most unfavourable report upon the subject comes from the late Collector of Durbhunga, but it is not altogether confirmed by the present Collector. The situation in this district is evidently such as to require the Commissioner's close attention. In Gya, where it is said that the tension caused by the long consideration of the Bengal Tenancy Act has passed away, strict supervision is needed in the matter of the working of the novel provisions of that enactment on the subject of the appraisement of crops. It seems that the procedure provided by the Act for valuing crops to be divided between landlord and tenant under the bhaoli system is being worked for the purpose of invoking the

intervention of revenue officers where there is no real difference as to the value of the produce, but a decision is desired on some other question. On this subject the Commissioner will be requested to submit a special report.

13. The most important event of the year has been the union of the Tirhoot State and Bengal and North-Western Railways by the completion of the Gunduck Bridge at Hajipore and Sonapore. The question of the effect of canals on the health of the people and the fertility of the soil is considered by the Commissioner to be an open one, and the Lieutenant-Governor will be prepared to consider definite proposals with regard to the enquiry which is suggested as to the epidemic of malarious fever in Shahabad having been caused by or intensified by the canal system. There have been very serious complaints on the subject of the assessment and collection of water-rates in this district, and the matter forms the subject of a special enquiry recently commenced.

14. The total numbers of schools and pupils show a slight increase, which is, however, nominal, being due to the exclusion during the previous year of schools with less than ten pupils. The number of pupils returned as receiving primary education is still much less than in 1884-85, and this important branch of education seems to need special attention in the Patna Division. The rise in the number of girls' schools from 99 to 116, chiefly by additions in Sarun, is viewed with satisfaction: and Sir Steuart Bayley trusts that the improvement may become general throughout the division.

15. Under this head must be noted the opening of a new dispensary at Daudnugger in Gya, and of the Gya Pilgrim Hospital, described by the Commissioner as a most useful and important institution. The foundation and endowment by the Maharajah of Durbhunga of a female hospital and dispensary in connection with the Countess of Dufferin's Fund also call for special mention. The number of vaccine operations performed during the year was 35,545, against 39,106 in 1885-86. The Commissioner reports that there appears to be a deeply-rooted prejudice against vaccine in a greater or less degree in every district.

16. In Mozufferpore and Sarun good work appears to have been done by the District Road Cess Committees, but in the other districts of the division no great interest in business was taken by members. More interest is apparently taken in municipal matters, and all the chief municipalities were managed efficiently. The Lieutenant-Governor's thanks are due to Honorary Magistrates for the useful services which they continue to render.

17. The general conduct of zemindars has been commented on above. Among good deeds done by the great landlords, Mr. Boxwell specially mentions the help which has been given to the Dome settlements by the Maharajah of Bettiah by gifts of land. The efforts in the direction of improvement in the system of agriculture, in which the Maharajah of Doomraon has taken so active a part, also deserve acknowledgment on the part of Sir Steuart Bayley. The demonstration farm, which is now in regular working order at Doomraon, and the successful agricultural exhibition held last February, prove that real and substantial progress has been made. Among other zemindars well spoken of by the Commissioner for their generosity are the Maharajah of Hutwa, Baboo Raj Rajeswari Parsad Singh of Surajpura, Messrs. Burrows, Thomson and Mylne.

18. In conclusion, the Lieutenant-Governor wishes to record his sense of the high character of the services rendered to Government by Mr. Halliday during the lengthened period of his administration in this important division, and to thank Mr. Boxwell for his very interesting and suggestive report. The remarks as to the merits of officers will be communicated to the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

*Secretary to the Government of Bengal.*

RESOLUTION ON THE GENERAL ADMINISTRATION REPORT OF THE  
PATNA DIVISION FOR THE YEAR 1886-87.

GENERAL DEPARTMENT—MISCELLANEOUS.

Calcutta, the 22nd November 1887.

RESOLUTION.

READ—

General Administration Report of the Patna Division for the year 1886-87.

The Report has been submitted by Mr. Boxwell, who officiated as Commissioner from the 28th July to the 25th October, and again from the 8th March. For the remaining portion of the year Mr. Halliday was in charge of the Division.

2. The Commissioner appears to have conducted his tour in an efficient manner; the Collectors, with a single exception, and most of the Sub-divisional Officers, spent the prescribed number of days in the interior of their districts, making thorough inspections. The deficiency in the district of Gya is in part accounted for by the frequent changes of officers who held the appointment of Collector during the year. No mention is made of camping on the part of Joint and Assistant Magistrates attached to head-quarters, and the attention of the Commissioner is drawn to the importance of making arrangements to allow junior Civilians opportunities for gaining experience outside the Sudder station.

3. The rainfall of the year was excessive over the whole of Behar, and produced high floods on the low lands north and south of the Ganges. Much injury was done to crops, especially the *bhadoi*, on the lands where there was long-continued inundation, but throughout the greater part of the division fair *aghani* and excellent *rabi* crops were obtained; and, on the whole, the outturn was good. Sarun and Mozufferpore appear to have had the best harvests, and Durbhunga the worst, in this abnormal year.

4. In Shahabad and Gya the year is reported to have been very unhealthy, but elsewhere the public health was good, or at least fair.

5. The harvests were good in six districts out of the seven into which the division is divided, grain was comparatively cheap, and there seems to have been no want of employment. The material condition of the people appears, therefore, to have been good by comparison with former years. As to whether the cultivating and labouring classes are much worse off in Behar than elsewhere in these Provinces there has been from time to time much discussion, and a difference of opinion seems still to prevail. Mr. Worsley, the very experienced Collector of Chumparun, is quoted as reporting that the general state of the mass of the people in that district is satisfactory, and that the cultivators enjoy both low rents and security of tenure; that though their standard of living makes them content with poor clothes and inferior dwellings, they possess large herds of cattle, and that new granaries are to be seen in every village. The Officiating Commissioner states that the general impression left by the other accounts is that the people of Behar are very poor, though they have had somewhat better times for the last two years. He quotes with approval the following extract from the report of the Collector of Patna:—

"The year was a favourable one from an agricultural point of view. The rainfall was abundant and the harvest good, but there has been no indication of any permanent change in the condition of the people, which, as far as the masses are concerned, is one of poverty and indebtedness. Agricultural labourers had no difficulty in obtaining employment, and so far benefited by the general prosperity; but being ordinarily paid in kind, they did not derive any advantage from the low prices of food staples. Mr. Walsh deplores the large amount squandered on liquor by the poorer classes, especially in *tari* drinking; but after all the rate per head is not high, and *tari* is generally considered to be nutritious as well as stimulating. I do not think that there is any deterioration due to this cause. On the whole, the general condition of the people, if changed at all, has, I think, changed for the better rather than the worse."

The district of Gya has long been known as being in a backward state as regards the prosperity of the labouring classes. The Officiating Collector, Mr. Grierson, writes:—

"The system of prædial servitude, known as the *kamiya* system, is extensively prevalent all over the district, and is strongly upheld by the landed classes. There can be no doubt,



and indeed it is admitted, that a *kamiya* does not get the market price of his labours. No matter what that may be, his wages never vary, and are only sufficient to keep body and soul together. In *butwara* cases the main quarrel is often over the *basti* division, and an aggrieved party often openly complains that the Deputy Collector has not given him his share of *kamiyas*, as if they were liable to division like the other 'fixtures' of the land. When asked why he wants the *kamiyas*, he replies that, if he does not get them, he will have to go outside his share for labourers, and pay a higher or, in other words, the market price. It is needless to say that I never listen to pleas such as this, but I find that Deputy Collectors frequently devote much labour and misplaced ingenuity to giving each shareholder his fair share of serfs. It is satisfactory to learn that in Aurungabad some of these *kamiyas* are beginning to learn their rights, and practically show by desertion that they won't work if they do not get what they consider to be fair wages."

The subject of the condition of the people is one to which special attention should be paid during the current year, with a view not merely to the expression of opinions, of which the number on record is by no means deficient, but still more to the accumulation of relevant facts, as to the wages of labour in different places, the extent to which all members of the family of the working man find employment, the quality of the food consumed by the poorer classes and its cost, their other expenses, and their general physical state. The Lieutenant-Governor notices with satisfaction that Mr. Grierson's attention has been drawn to the practice of employing labourers to work for their landlords at less than the market rate. Such customs can be maintained only by the occasional use of compulsion in some form; and wherever compulsion is resorted to, a vigilant Magistrate has the opportunity for beneficial interference.

6. The outturn of indigo was larger than in the preceding year, but the prices realized were lower on account, it is said, of the competition of the Java dye. A proposal was recently made by the Behar Indigo Planters' Association to investigate the improved system of manufacture which has been introduced in Java, and the late Lieutenant-Governor expressed his willingness to assist such an enquiry, but it is understood that the project has been abandoned. Mr. Boxwell observed that the project has been abandoned.

The manufacture of saltpetre is a flourishing industry in Shahabad and part of Durbhunga, and is reported to be reviving in Sowah, where the Behea mills are entirely superseding the country-made article. As regards saltpetre, which is manufactured chiefly in Mozufferpore and Durbhunga, the year was a very bad one in the former district and only fairly good in the latter, the rains having no doubt largely interfered with the industry. The manufacture of paper and cloth-weaving appear both to be steadily declining, nor could these be expected to stand their ground against the outturn of mills and machinery.

7. The railway returns show that Behar trade was brisk during 1886-87, an increase of 18.92 per cent. having been registered over the trade of the preceding year. The increase was chiefly due to larger despatches of food-grains, especially wheat, to Calcutta for export by sea. The consignments of wheat by rail advanced from 5,72,205 maunds in 1885-86 to 40,49,014 maunds in 1886-87, by boat from 2,62,701 to 4,17,508 maunds, and in the latter year also 3,60,889 maunds of wheat were carried from Behar to Calcutta by steamer. How much of this increase is due to increased importation into Behar by river cannot be accurately ascertained, but by rail the total imports into Behar from the North-Western Provinces rose from 1,44,127 to 1,79,966 maunds. The Collector of Patna estimates that about 10 lakhs of maunds were brought to Patna by boat from the North Western-Provinces and Oudh and from North Behar.

8. The subjects which called forth most popular interest in the year were the Jubilee of the Queen-Empress, the survey and record-of-rights in Mozufferpore, the Income-tax, the Tenancy Act, Local Self-Government, the Chowkidari Act, and water-rates in Shahabad. On the first two topics the Officiating Commissioner writes as follows:—

"The Jubilee stands out from all as a thing understood, and about which it is not nonsense to talk of public feeling at all. There was public feeling shown of a hearty kind.



RESOLUTION ON THE ANNUAL REPORT OF THE PORT OFFICER,  
CALCUTTA, FOR THE YEAR 1886-87.

MUNICIPAL DEPARTMENT—MARINE.

Calcutta, the 22nd November 1887.

RESOLUTION.

Read—

The Annual Report of the Port Officer, Calcutta, for the year 1886-87.

The report is submitted by Captain Stiffe, who was Port Officer throughout the year, with the exception of one month, during which time Lieutenant Petley officiated for him.

2. The tendency of the shipping visiting the Port has been in the same direction as in previous years. There has been an increase in the total tonnage of vessels visiting the Port, and in the average tonnage of both sailing vessels and steamers. The gross tonnage, 4,157,859 tons, was the largest on record, and the total number of arrivals and departures of steamers and sailing vessels was 2,082 as against 2,000 in the previous year. The increase in the size and draught of vessels visiting the Port continues to exhibit itself. There were 780 clearances inwards and outwards of vessels drawing over 21 feet as against 672 in 1885-86. The result of this tendency has been to increase the earnings of the senior pilots at the expense of those in the junior grades, and the measures to be taken to mitigate this hardship are under consideration. The number of groundings was 52 compared with 37 in the previous year. Only one, however, resulted in serious damage. Sixteen were returned as accidental or due to no fault of the pilot, and 10 as due to deterioration or alteration in the channel. The number of collisions, on the other hand, was only 11 as against 16 in 1885-86 and 17 in 1884-85. There can be no doubt that the great increase in the size of the vessels to be piloted up and down the river has thrown greater difficulty and responsibility on the pilots, and the way in which they have performed their duties as a body has been very satisfactory.

3. The report gives, as usual, an account of the condition of the channels leading to the Port. The depth of the Moyapore bar has varied much during the year. At the end of the year, however, it was much above the average. The Nynan tracks were very shoal during the year, and although the obstruction disappeared before the end of the year, the channel remains very narrow.

4. The *Undaunted* performed 21 trips to the Sandheads and the Orissa and Chittagong Ports. On one occasion she towed up the *Ensemere* to town on the special application of the Master of that vessel. The *Undaunted* was not authorized to tow vessels inwards, and her services were used in this manner without authority owing to a misapprehension. The Port Officer was requested to see that the vessel is not employed in towing vessels inwards. The three pilot brigs—*Cassandra*, *Coleroon*, and *Sarsuti*—are in fair condition. The designs of the new composite pilot brig, which is intended to be built at the Bombay Dockyard to replace the *Cassandra*, are under consideration.

5. The number of candidates for certificates of competency as sea-going officers of various grades fell from 133 in 1885-86 to 118 in 1886-87. The Colonial Certificates granted composed 6 Masters, 12 First Mates, 1 Mate, 15 Second Mates, 3 First class Engineers, 6 Second class Engineers, and the Local Certificates, 1 First Mate, 3 Second Mates, 20 Engine-drivers, and 2 First class Engineers of inland vessels. Two candidates obtained licenses as steam-tug pilots of the Hooghly. Out of nine candidates who applied for examination for certificates as commanders of inland vessels, eight passed. Two candidates obtained certificates as ship surveyors under section 68 of Act VI of 1850. None of the licenses to native pilots were renewed during the year. Fourteen new permits were granted to native coasters between 100 and 200 tons and 7 were renewed. Three vessels were registered under the Merchant Shipping Act of 1854, and the registry of four was cancelled. There was a decrease both in the number of A and in the number of B Certificates granted under the Native Passenger Ships Act VIII of 1876 during the year.

6. Captain Stiffe's management of his department during the year was entirely satisfactory.

ORDER.—Ordered that copies of the Report and of the Resolution on it be forwarded to the Government of India, in the Department of Finance and Commerce, and to the Military (Marine) Department, the Port Officer, Calcutta, the Bengal Chamber of Commerce, the Commissioners for making Improvements in the Port of Calcutta, and the Director of Indian Marine, Bombay, for information.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

*Secy. to the Govt. of Bengal.*

**RESOLUTION ON THE REPORT FROM THE BOARD OF REVENUE  
ON THE WORKING OF THE CALCUTTA SHIPPING OFFICE AND  
OF THE SHIPPING OFFICES AT THE SEVERAL OUTPOSTS  
DURING THE YEAR 1886-87.**

MUNICIPAL DEPARTMENT—MARINE.

*Calcutta, the 23rd November 1887.*

**RESOLUTION.**

**READ—**

A report from the Board of Revenue, No. 527B, dated the 9th July 1887, on the working of the Calcutta Shipping Office and of the Shipping Offices at the several outposts during the year 1886-87.

Letter No. 611Q, dated 17th August, from the Board of Revenue, in continuation of paragraph 21 of the report, forwarding a copy of a letter from the Shipping Master of Calcutta, furnishing additional information in connection with the decrease in seamen's money-orders.

Captain A. W. Stiffe performed the duties of Shipping Master of Calcutta during the year, with the exception of one month, during which time Lieutenant Petley acted for him. Messrs. J. C. Hunton and W. G. Hannay held, respectively, the posts of Deputy Shipping Master and of Assistant Shipping Master. Both these officers have been favourably reported on.

2. The various shipping offices worked smoothly throughout the year, and there is little of importance that calls for remark. In the receipts of the Calcutta Shipping Office there is an increase of Rs. 1,074-7. This is due to the realization of fees under the "Continuous discharge system." This system has been so far successful, inasmuch as no native seamen have objected to be engaged under the rules sanctioned for its working, and the Shipping Master thinks that it is growing in popularity. As, however, it has been in force for only three months, it is not yet possible to criticise its working, or to say whether it will be effective in preventing false personations, or will render the seamen independent of the services of the licensed broker and the ghât serang. The increase of Rs. 16,141-15 under the head "Deposit money of British seamen," is attributed to dullness of trade, inasmuch as, when it is difficult for seamen to find re-employment, the Shipping Master refuses his sanction to their discharge, unless a deposit of wages is made. No statistics showing the dullness of trade are given in the report itself, but in the report of the Health Officer for the Port of Calcutta for 1886 it is stated that, while the number of European seamen who entered the Port in that year rose from 21,449 in 1885 to 23,696 in 1886, the daily average number present in the Port rose from 1,693 to 2,326. It would appear that the vessels stayed a longer time in harbour, and this, in the opinion of the Health Officer and the Sanitary Commissioner was due to the lowness of freight.

3. There has been a considerable falling off in the amount remitted by seamen's money-orders. The amount remitted fell from Rs. 7,069 in 1883-84 to Rs. 1,318 in 1885-86 and to Rs. 600 in 1886-87. The falling off is attributed to the fact that the Banks give a more favourable rate of exchange and charge no commission; and a list is given showing the Bank rates and the Government rates charged. This appears to be a

sufficient explanation, though possibly the fact that the seamen stayed longer in Port may have contributed to this result. The Shipping Master suggests that Government should grant remittances at a somewhat better rate than at present. A copy of his remarks will be forwarded to the Postmaster-General, Bengal. The Lieutenant-Governor is pleased to observe the improvement in disposing of the estates of deceased native seamen, which is said to be due to the exertion of the Deputy Shipping Master.

4. There has been a falling off in the receipts of the Chittagong Shipping Office, which is said to be due to the orders of Government that seamen discharged on grounds of mutual consent should not be sent in search of employment to Calcutta, the effect of which has been to restrict the discharge of seamen at the Port of Chittagong. The only point that seems to call for notice is that raised regarding the compulsory employment by masters of vessels of qualified medical practitioners. This question has been disposed of since the close of the year. The Lieutenant-Governor has been advised that there is no law imposing on masters of vessels in the Port of Chittagong the obligation of engaging any particular class of medical practitioners to attend their crew; and it has been pointed out to the Commissioner that it rests with the Port Commissioners either to move the Government of Bengal to issue notifications, under sections 59 and 60 of Act XII of 1875, imposing hospital port dues at the Port of Chittagong, or to apply for sanction, under section 3 of the amending Act V of 1885, to devote a sum from the Port Fund for the purposes mentioned in section 60 of the Act.

5. It is reported that the Port Officer at False Point, in excess of the powers conferred on him, discharged the master of the vessel *Calleron*. He explained that he had not seen the Government order No. 275, dated 1st March 1882, which authorizes him to discharge and ship only seamen under Act I of 1853. As, however, another master, who was specially sent out from England by the owners of the *Calleron* to take charge of the vessel was shipped in his place, no further action is called for.

ORDER—Ordered that copies of the Report and of the Resolution on it be submitted to the Government of India, in the Department of Finance and Commerce, for information.

Ordered that a copy of the Resolution be forwarded to the Board of Revenue for information and for communication to the Shipping Masters at Calcutta, Chittagong, and the Orissa Ports.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

Secretary to the Government of Bengal.

# REPORT ON THE STATE OF THE SALT MARKET\* FOR THE SECOND QUARTER OF 1887-88.

No. 867B, dated Calcutta, the 10th November 1887.

From—K. G. GUPTA, Esq., Offg. Secretary to the Board of Revenue, L. P.,

To—The Secretary to the Government of Bengal, Financial Department.

I AM directed to submit the following report on the state of the salt market for the second quarter of 1887-88, comprising the months of July, August, and September 1887.

SALT.

F. M. HALLIDAY, Esq.

2. The quantity of salt of every description cleared during the quarter under report amounted to 24,04,508 maunds 23 seers 4 chittacks, against 25,84,676 maunds 8 seers 12 chittacks in the previous quarter, and 28,63,095 maunds 19 seers 13 chittacks in the corresponding quarter of the previous year; and the net amount of duty levied thereon was Rs. 45,13,822-8 against Rs. 49,02,270 in the previous quarter, and Rs. 53,54,315 in the corresponding quarter of the previous year.

3. The quantity of excise salt sold in the districts of Cuttack, Pooree and Balasore during the quarter under review from the stock of the different seasons' manufacture, and the quantities which remained in store at the close of the quarter, are shown in Table I:—

TABLE I.

|   | CUTTACK.        |            |             |            | POOREE.         |             |              |            |             |  |
|---|-----------------|------------|-------------|------------|-----------------|-------------|--------------|------------|-------------|--|
|   | Manufacture of— |            |             |            | Manufacture of— |             |              |            |             |  |
|   | 1884-85.        | 1885-86.   | 1886-87.    | 1880-81.   | 1882-83.        | 1883-84.    | 1884-85.     | 1885-86.   | 1886-87.    |  |
|   | Mds. s. c.      | Mds. s. c. | Mds. s. c.  | Mds. s. c. | Mds. s. c.      | Mds. s. c.  | Mds. s. c.   | Mds. s. c. | Mds. s. c.  |  |
| Balance at close of the last quarter.     | 3,984 5 0       | 10,882 0 0 | 11,661 22 0 | 321 0 0    | 8,973 10 0      | *3,794 6 10 | *41,853 35 0 | 1,710 0 0  | 78,428 32 0 |  |
| Manufactured or added during the quarter. | .....           | .....      | 977 84 0    | .....      | .....           | .....       | .....        | .....      | 9,691 28 0  |  |
| Total                                     | 3,984 5 0       | 10,882 0 0 | 12,639 16 0 | 321 0 0    | 8,973 10 0      | 3,794 6 10  | 41,853 35 0  | 1,710 0 0  | 88,120 20 0 |  |
| Sales during the quarter                  | 1,750 0 0       | 6,760 0 0  | .....       | .....      | †2,152 0 0      | 172 0 0     | 8,208 6 0    | 1,200 0 0  | 4,845 0 0   |  |
| Wastage                                   | .....           | .....      | .....       | .....      | 1,035 32 0      | 611 17 0    | 1,272 0 0    | .....      | .....       |  |
| Total                                     | 1,750 0 0       | 6,760 0 0  | .....       | .....      | 3,187 32 0      | 783 17 0    | 9,480 6 0    | 1,200 0 0  | 4,845 0 0   |  |
| Balance at close of the quarter           | 2,234 5 0       | 4,122 0 0  | 12,639 16 0 | 321 0 0    | 5,135 18 0      | 3,010 20 10 | 32,373 35 0  | 510 0 0    | 83,275 20 0 |  |

|   | BALASORE.       |            |             |            |            |             |            |
|---|-----------------|------------|-------------|------------|------------|-------------|------------|
|   | Manufacture of— |            |             |            |            |             |            |
|   | 1879-80.        | 1880-81.   | 1881-82.    | 1883-84.   | 1884-85.   | 1885-86.    | 1886-87.   |
|   | Mds. s. c.      | Mds. s. c. | Mds. s. c.  | Mds. s. c. | Mds. s. c. | Mds. s. c.  | Mds. s. c. |
| Balance at close of the last quarter.     | 623 25 0        | 2,909 10 8 | 3,671 17 11 | 3,761 24 0 | 6,035 27 0 | 18,293 15 0 | 464 15 0   |
| Manufactured or added during the quarter. | .....           | .....      | .....       | .....      | .....      | .....       | .....      |
| Total                                     | 623 25 0        | 2,909 10 8 | 3,671 17 11 | 3,761 24 0 | 6,035 27 0 | 18,293 15 0 | 464 15 0   |
| Sales during the quarter                  | .....           | .....      | 840 0 0     | .....      | 400 0 0    | 3,783 0 0   | .....      |
| Wastage                                   | .....           | .....      | .....       | 147 21 0   | 1,655 37 0 | .....       | .....      |
| Total                                     | .....           | .....      | 840 0 0     | 147 21 0   | 2,055 37 0 | 3,783 0 0   | .....      |
| Balance at close of the year              | 623 25 0        | 2,909 10 8 | 3,831 17 11 | 3,614 3 0  | 3,979 30 0 | 14,516 15 0 | 464 15 0   |

\* The difference between these figures and the corresponding figures in the statement submitted with the report for the previous quarter is due to revised figures since received from the Collectors.

† Inclusive of 22 maunds of condensed salt sold.

4. The above statement shows that the total sale of excise salt during the quarter under review amounted to 30,118 maunds against 54,509 maunds 10 seers in the previous quarter, and 46,326 maunds in the corresponding quarter of the previous year.

5. The subjoined table shows in comparison the importations into the port of Calcutta and the total clearances of sea-imported salt during the quarter under review and the corresponding quarters of the previous two years:—

TABLE II.

|                         | 1885-86.        |           | 1886-87.        |           | 1887-88.        |           |
|-------------------------|-----------------|-----------|-----------------|-----------|-----------------|-----------|
|                         | Second quarter. |           | Second quarter. |           | Second quarter. |           |
|                         | Imported.       | Cleared.  | Imported.       | Cleared.  | Imported.       | Cleared.  |
|                         | Mds.            | Mds.      | Mds.            | Mds.      | Mds.            | Mds.      |
| Liverpool pungah ... .. | 18,22,617       | 20,30,393 | 14,86,253       | 20,36,806 | 18,72,619       | 17,84,625 |
| Foreign kurkutch ... .. | 6,76,102        | 4,22,795  | 4,88,632        | 5,29,817  | 5,13,567        | 3,89,213  |
| Indian ditto ... ..     | 2,77,497        | 2,69,117  | 1,98,181        | 1,63,324  | 1,45,623        | 1,26,970  |
| Total ...               | 27,76,216       | 26,62,305 | 21,73,066       | 27,29,947 | 25,31,209       | 23,00,808 |

6. The following are the details of the Indian kurkutch salt shown in the above table:—

TABLE III.

|               | 1885-86.        |          | 1886-87.        |          | 1887-88.        |          |
|---------------|-----------------|----------|-----------------|----------|-----------------|----------|
|               | Second quarter. |          | Second quarter. |          | Second quarter. |          |
|               | Imported.       | Cleared. | Imported.       | Cleared. | Imported.       | Cleared. |
|               | Mds.            | Mds.     | Mds.            | Mds.     | Mds.            | Mds.     |
| Bombay ... .. | 2,77,497        | 2,69,117 | 1,98,061        | 1,63,324 | 1,45,623        | 1,26,970 |
| Madras ... .. | .....           | .....    | 100             | .....    | .....           | .....    |
| Total ...     | 2,77,497        | 2,69,117 | 1,98,181        | 1,63,324 | 1,45,623        | 1,26,970 |

7. Table IV shows the quantity of sea-imported salt remaining in the warehouses at the close of the quarter as compared with the results of the previous four quarters:—

TABLE IV.

| WHERE STORED.                    |  | Second quarter of 1886-87. | Third quarter of 1886-87. | Fourth quarter of 1886-87. | First quarter of 1887-88. | Second quarter of 1887-88. |
|----------------------------------|--|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|
|                                  |  | Mds.                       | Mds.                      | Mds.                       | Mds.                      | Mds.                       |
| Sulkea Government godowns ... .. |  | 8,89,363                   | 10,53,923                 | 8,07,682                   | 8,07,700                  | 7,86,071                   |
| Chittagong do. do. ... ..        |  | 84,743                     | 79,800                    | 93,180                     | 63,223                    | 1,22,105                   |
| Total ...                        |  | 9,84,106                   | 11,33,223                 | 9,00,862                   | 8,70,923                  | 9,08,176                   |

8. The despatches of salt from Calcutta by water and the three railways passing the several salt-pass stations into the interior of the country, both east and west of the river Hooghly, during the quarter under review and the corresponding quarters of the previous two years, are shown in Table V:—

TABLE V.

| PERIOD.                       | Via Balikhali. | Via Sankrail. | Via Gewakhally. | Via Kidderpore. | Via Ballinghatta. | Via Rudhtollah Ghat. | By the East Indian Railway. | By the East and South-Eastern Railways or via Chitpore. |
|-------------------------------|----------------|---------------|-----------------|-----------------|-------------------|----------------------|-----------------------------|---|
|                               | Mds.           | Mds.          | Mds.            | Mds.            | Mds.              | Mds.                 | Mds.                        | Mds.  |
| Second quarter of 1885-86 ... | 6,13,748       | 1,55,338      | 46,041          | 1,10,105        | 3,36,002          | 1,27,284             | 8,51,079                    | 1,10,060  |
| Ditto of 1886-87 ...          | 5,43,804       | 1,80,368      | 53,605          | 1,03,766        | 3,73,044          | 1,46,032             | 8,16,439                    | 1,91,938  |
| Ditto of 1887-88 ...          | 4,98,495       | 1,64,132      | 56,114          | 1,02,605        | 3,60,863          | 16,610               | 8,07,513                    | 2,96,014  |

|   |               |  |
|---|---------------|--|
| 9. The quantity of salt despatched by the East Indian Railway to stations beyond Buxar during the quarter under review amounted to 32,368 maunds 36 seers as noted in the margin, against 50,524 maunds 20 seers in the previous quarter, and 51,803 maunds 20 seers in the corresponding quarter of the previous year. |               |  |
|   | Mds. s.       |  |
| July  | ... 8,314 20  |  |
| August  | ... 2,454 10  |  |
| September   | ... 21,600 0  |  |
| Total   | ... 32,368 30 |  |

10. The shipments of Liverpool salt for the port of Calcutta according to published market reports were as follows:—

|           |     |     |     |     |     |        |
|-----------|-----|-----|-----|-----|-----|--------|
|           |     |     |     |     |     | Tons.  |
| July      | ... | ... | ... | ... | ... | 9,600  |
| August    | ... | ... | ... | ... | ... | 43,040 |
| September | ... | ... | ... | ... | ... | 20,380 |
|           |     |     |     |     |     | 73,020 |

No shipments were reported during the quarter under review for the port of Chittagong.

11. Table VI shows the market price per 100 maunds of Liverpool salt and other descriptions of salt at the close of each fortnight during the quarter as compared with those obtaining during the same period last year:—

TABLE VI.

| DESCRIPTION OF SALT. | Prices on the 15th July |       | Prices on the 31st July |       | Prices on the 15th August |       | Prices on the 31st August |       | Prices on the 15th September. |       | Prices on the 30th September. |       |
|----------------------|-------------------------|-------|-------------------------|-------|---------------------------|-------|---------------------------|-------|-------------------------------|-------|-------------------------------|-------|
|                      | 1886.                   | 1887. | 1886.                   | 1887. | 1886.                     | 1887. | 1886.                     | 1887. | 1886.                         | 1887. | 1886.                         | 1887. |
|                      | Rs.                     | Rs.   | Rs.                     | Rs.   | Rs.                       | Rs.   | Rs.                       | Rs.   | Rs.                           | Rs.   | Rs.                           | Rs.   |
| Liverpool punnah     | 62                      | 61    | 63                      | 62    | 63                        | 58    | 65                        | 59    | 78                            | 63    | 80                            | 64    |
| French kurkutch      | 52                      | 53    | 52                      | 59    | 59                        | 55    | 44                        | 50    | 48                            | 50    | 48                            | 50    |
| Jedda ditto          | 60                      | 57    | 60                      | 61    | 60                        | 55    | 55                        | 47    | 50                            | 41    | 48                            | 49    |
| Bombay ditto         | 65                      | 55    | 65                      | 53    | 60                        | 52    | 55                        | 53    | 44                            | 53    | 38                            | 53    |
| Italian ditto        | 52                      | 58    | 52                      | 59    | 50                        | 55    | 44                        | 50    | 42                            | 50    | 46                            | 50    |
| Muscat ditto         | 63                      | 57    | 63                      | 57    | 66                        | 50    | 66                        | 47    | 55                            | 44    | 51                            | 44    |
| Rock                 | 75                      | 90    | 75                      | 90    | 90                        | 90    | 80                        | 90    | 85                            | 65    | 150                           | 90    |

12. The following table shows the quantity of sea-imported salt admitted into bond and cleared from bond and shipboard at Chittagong and Narain-gunge during the quarter under review and the corresponding quarter of 1886-87:—

TABLE VII.

| PORT.       | DESCRIPTION OF SALT. | ADMITTED INTO BOND.        |                            | CLEARED.                   |                            |
|-------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|             |                      | Second quarter of 1886-87. | Second quarter of 1887-88. | Second quarter of 1886-87. | Second quarter of 1887-88. |
|             |                      | Mds. s. c.                 | Mds. s. c.                 | Mds. s. c.                 | Mds. s. c.                 |
| Chittagong  | Liverpool punnah     | 39,594 0 0                 | 75,554 0 0                 | 81,871 20 0                | 59,080 28 0                |
|             | Hamburg kurkutch     | .....                      | .....                      | .....                      | 6,490 0 0                  |
|             | Burmah punnah        | .....                      | .....                      | 0 27 0                     | 0 5 0                      |
|             | Madras kurkutch      | .....                      | .....                      | 0 16 0                     | 1 17 0                     |
| Naraingunge | Liverpool punnah     | .....                      | .....                      | 4,980 0 0                  | 7,485 0 0                  |
|             | Total                | 39,594 0 0                 | 75,554 0 0                 | 86,852 23 0                | 73,577 17 0                |

No transactions in sea-imported salt have been reported for the quarter from the ports of Cuttack, Pooree, and Balasore.

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 19th November 1887.

| No.                       | District and date of return. | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|---------------------------|------------------------------|---------------------------------------|---|
| <b>BENGAL.</b>            |                              |                                       |   |
| <i>Western Districts.</i> |                              |                                       |   |
| BURDWAN DIV.              | 1 Burdwan, Nov. 19, '87      | Nil                                   | Weather—hot and damp for the season. The rice harvest will be only three-fourths of an average crop or less. Prospects of winter crops fair. Common rice about 21 seers per rupee. Fever very prevalent.  |
|                           | 2 Bankoora „ 19, '87         | Nil                                   | Weather—seasonable. <i>Amun</i> paddy in ear. <i>Rabbi</i> crops coming on well. Prices stationary. Public health good.   |
|                           | 3 Beerbhoom „ 19, '87        | Nil                                   | Weather—warm during the day. Prospect of <i>amun</i> paddy fair. Sowing of winter cereals still continues. Fever has not yet abated. Price of rice has fallen a little.   |
|                           | 4 Midnapur „ 19, '87         | Nil                                   | Weather—seasonable. State and prospects of crops good.  |
|                           | 5 Hooghly „ 19, '87          | Nil                                   | Weather—hot. Winter rice crop will be below the average in the district. Other crops doing well. Public health good.  |
|                           | Howrah „ 19, '87             | Nil                                   | Ordinary cold weather. Temperature somewhat high. Slight progress with <i>amun</i> rice harvest. <i>Rabbi</i> sowings in progress. All prospects good.  |
| <i>Central Districts.</i> |                              |                                       |   |
| PRESIDENCY DIV.           | 6 24-Pergha, Nov. 19, '87    | Nil                                   | Weather—warm and occasionally cloudy. Prospects of <i>amun</i> crop generally good; outturn expected to be 12 annas on the average. Public health generally good.   |
|                           | 7 Nuddea „ 19, '87           | Nil                                   | Weather—bright, but unusually hot. Prospects of <i>amun</i> unfavourable in the south, but fair in the north of the district. Rain is required to start <i>rabbi</i> sowings. Fever is bad in Meherpur and Chuadanga; in other parts of the district public health improving. |
|                           | 8 Khoolna „ 19, '87          | Nil                                   | Weather—rather warm for the season. Harvesting of <i>amun</i> has begun. Prospects continue fair. Outturn of <i>amun</i> estimated at 12 annas.   |
|                           | 9 Jessore „ 19, '87          | Nil                                   | Weather—seasonable. Harvesting of <i>amun</i> continues. Sowing of winter crops nearly completed. Prospects satisfactory. Cases of fever still reported from Bongong and Narail sub-divisions.  |
|                           | 10 Moorshedabad „ 19, '87    | Nil                                   | Weather—cool. <i>Amun</i> paddy is flowering; its prospect is good. <i>Kalai</i> and <i>moong</i> are being harvested. <i>Til</i> and <i>rahar</i> are progressing.   |
| RAJSHAHY DIV.             | 11 Dinagepur „ 19, '87       | Nil                                   | Weather—seasonable. State and prospect of <i>kaimanti</i> paddy good. Price of rice 21 seers per rupee.   |
|                           | 12 Rajshahye „ 19, '87       | Nil                                   | Weather—seasonable. State and prospects of crops excellent. Some fever about.   |
|                           | 13 Rungpur „ 19, '87         | Nil                                   | Prospects of standing crops good. Sowing of mustard still continues.  |
|                           | 14 Bogra „ 19, '87           | Nil                                   | Weather—seasonable. State and prospects of crops continue very satisfactory. Public health fair.  |
|                           | 15 Pubna „ 19, '87           | Nil                                   | Weather—seasonable. State and prospects of crops good. Public health good.  |
|                           | 16 Darjeeling „ 19, '87      | Nil                                   | Weather—fine. Prospects of crops fair.  |
|                           | 17 Julpigoree „ 19, '87      | Nil                                   | Weather—days warm for the season of the year. Reaping of <i>kaimanti</i> rice commenced in places. Prospects of winter crops good. Cattle-disease prevails in Rajgunge and Mynagoree.   |
| <i>Eastern Districts.</i> |                              |                                       |   |
| DACCA DIVISION.           | 18 Dacca, Nov. 19, '87       | Nil                                   | Weather—fine and cool. Harvesting of <i>amun</i> paddy going on; outturn good. Winter crops being sown. Some damage to crops on high lands anticipated for insufficient rain. Fever prevailing in parts of the district; otherwise public health continues good.              |
|                           | 19 Furreedpur „ 19, '87      | Nil                                   | Weather—seasonable. Harvesting of <i>amun</i> continues. Sowing of winter crops progressing. Public health generally good.  |
|                           | 20 Backergunge „ 18, '87     | Nil                                   | Weather—seasonable. Prospects of crops very good. Slight damage reported by insects. General health fair, but fever prevails in some localities.  |
|                           | 21 Mymensingh „ 18, '87      | Nil                                   | Weather—seasonable. <i>Amun</i> crop is being harvested. Winter crops are being sown. Prospects of crops and public health good.  |

| No.                                | District and date of return.        | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|------------------------------------|-------------------------------------|---------------------------------------|---|
| <b>BENGAL—contd.</b>               |                                     |                                       |   |
| <i>Eastern Districts—contd.</i>    |                                     |                                       |   |
| <b>CHITTAGONG DIV.</b>             | 23 Chittagong Nov. 22, '87          | Nil                                   | Weather—seasonable. Prospects of <i>amun</i> , sugarcane and other crops good. Lands being prepared for <i>rubbi</i> crops. Prices stationary. Cholera reported; public health otherwise good.  |
|                                    | 23 Noakholly „ 18, '87              | Nil                                   | Weather—warm; cloudy occasionally. Late <i>amun</i> is still being reaped. <i>Amun</i> crop thriving. General health good.  |
|                                    | 24 Tipperah „ 17, '87               | Nil                                   | Weather—dry and seasonable. Reaping of <i>amun</i> has commenced with every prospect of a good outturn.   |
|                                    | 25 Chittagong Hill Tracts „ 15, '87 | Nil                                   | Weather—seasonable, with foggy mornings throughout the week. Harvesting of cotton continues. Late rice crop is in flower. Lands are being ploughed for mustard and other cold-weather crops.  |
|                                    | Hill Tipperah „ 16, '87             | Nil                                   | Weather—getting colder gradually. <i>Amun</i> paddy doing well. Cotton and <i>sil</i> being reaped. Prospects of sugarcane fair. Public health good.  |
| <b>BEHAR.</b>                      |                                     |                                       |   |
| <b>PAZLA DIV.</b>                  | 26 Patna „ 19, '87                  | Nil                                   | Weather—cool. <i>Rubbi</i> and poppy sowings still going on in some places. Paddy on high lands has suffered for want of timely rain; in other places it is promising. Cutting of sugarcane is going on. Public health good.  |
|                                    | 27 Gya „ 19, '87                    | Nil                                   | Weather—cold. Paddy is being harvested. <i>Rubbi</i> coming on well. Poppy being sown. Cholera reported from a few thanas and fever from almost all parts of the district.  |
|                                    | 28 Shahabad „ 19, '87               | Nil                                   | Weather—bright and clear; mornings and evenings cool. Harvesting of paddy has commenced. <i>Rubbi</i> is still being sown. Prospects continue good. Poppy sowing is in progress; in the early part of the week the young plants suffered on account of high temperature; latterly prospects have improved owing to change of weather. Public health good.                           |
|                                    | 29 Darbhunga „ 19, '87              | Nil                                   | Weather getting cool. Prospects of <i>aghani</i> rice continue favourable. Harvesting has commenced. <i>Rubbi</i> sowings not yet over. Prices stationary. Public health generally good.  |
|                                    | 30 Mozufferpur „ 19, '87            | Nil                                   | Weather—close and cloudy for the time of year. Rice coming into ear generally. <i>Rubbi</i> and poppy coming on well. Public health fair.   |
|                                    | 31 Saran „ 19, '87                  | Nil                                   | Weather—clear and bright with occasional fleeting clouds. <i>Aghani</i> paddy ripe for the sickle. <i>Rubbi</i> and poppy crops coming on well. Prospects fair. Public health good.   |
|                                    | 32 Chumparun „ 19, '87              | Nil                                   | Weather—days still warm for the season; nights cool at the latest hours. <i>Rubbi</i> crops are coming above the ground, but the sowing is not yet completed throughout the district. Poppy sowings very nearly completed, and the young plant looks healthy. Paddy has begun to ripen in places, with prospects as favourable as before. Public health good. Prices almost steady. |
|                                    | 33 Mounghy „ 19, '87                | Nil                                   | Weather—fair and seasonable. Prospects of crops continue favourable. Winter rice coming in ear. <i>Rubbi</i> crops look well. Public health generally good. Prices stationary.  |
| <b>BRAGULORE DIV.</b>              | 34 Bhagulpur „ 19, '87              | Nil                                   | Weather—fair. Late rice doing well. <i>Rubbi</i> sowing still in progress in places. <i>Kurthi</i> expected to give a fair yield. There is still a good deal of fever in the north.   |
|                                    | 35 Purneah „ 19, '87                | Nil                                   | Weather—rather hot for the time of year. Cloudy at times. All crops doing well.   |
|                                    | 36 Maldah „ 19, '87                 | Nil                                   | Weather—fair; rather hot for the time of year. Prospects of winter rice and of cold-weather crops, (wheat, mustard, &c.) continue good. <i>Kalas</i> is thriving and promises an average outturn. Fever is still very prevalent in Ratna, English Bazar, Maldah, and in some parts of Gazole and Khurba thanas. Common rice selling at an average of 23 seers per rupee.            |
|                                    | 37 Sonthal Pergah „ 19, '87         | Nil                                   | Weather—warm and sultry. Rice harvest has begun. In the east and north prospects of rice crop good; in Deoghur and Jamtara there will be an 8-anna crop, and in Doonka a 10-anna crop. <i>Rubbi</i> crops doing well. Public health good.   |
| <b>ORISSA.</b>                     |                                     |                                       |   |
| <b>ORISSA DIV.</b>                 | 38 Cuttack „ 18, '87                | Nil                                   | Weather—cold and cloudy. Reaping of <i>laghu sarad</i> continues. Late <i>sarad</i> in ear and in some places ripening. Prospect of <i>rubbi</i> crops fair. Common rice 18½ seers per rupee in town. Ordinary fever prevails in many places; otherwise public health good.   |
|                                    | 39 Pooree „ 17, '87                 | Nil                                   | Weather—seasonable. <i>Laghu sarad</i> is being harvested. Late <i>sarad</i> is in ear. Common rice 23 seers per rupee in the Sudder sub-division and 20 seers 4 chittacks in the Khoorda sub-division. Cases of cholera reported.  |
|                                    | 40 Balasore „ 18, '87               | Nil                                   | Weather—seasonable. Cloudy to-day (18th), and it is raining at head-quarters in light showers. Harvesting of rice crop is going on. <i>Rubbi</i> crop is growing well. A few cases of sporadic cholera reported; otherwise public health good.  |
| <b>CHOTA NAGPORE.</b>              |                                     |                                       |   |
| <i>South-West Frontier Agency.</i> |                                     |                                       |   |
| <b>CHOTA NAGPORE DIV.</b>          | 41 Hazaribagh, Nov. 13, '87         | Nil                                   | Weather—seasonable. Cloudy to-day (18th). Harvesting of paddy continues. Average outturn expected to be 10½ annas. Rain much wanted for <i>rubbi</i> . Public health good. Cattle-disease reported from certain thanas.   |
|                                    | 42 Lohardugga „ 19, '87             | Nil                                   | Weather—seasonable. Rain urgently wanted for winter paddy and <i>rubbi</i> crops. Prices steady. Public health good.  |
|                                    | 43 Singbhoom „ 18, '87              | Nil                                   | Reaping of winter rice continues. Other crops reported on favourably. General health good, except in one village in the Kolhan, where a few cases of cholera reported.  |
|                                    | 44 Manbhoom „ 19, '87               | Nil                                   | Weather—cool; clouds gathering. Paddy being harvested; probable outturn 10 annas. <i>Rubbi</i> crops doing well. Public health good.  |

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Secy. to the Govt. of Bengal.



**PRICES-CURRENT (RETAIL) OF FOOD-GRAINS, FIREWOOD AND SALT IN THE  
DISTRICTS OF BENGAL DURING THE FORTNIGHT ENDING THE  
15TH NOVEMBER 1887.**

**PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the**

| Number.            | DISTRICTS.    | QUANTITIES PER RUPEE IN |                        |                                       |                 |                        |                                       |                  |                        |                                       |                 |                        |                                       |                                       |                        |                                       |  |  |  |
|--------------------|---------------|-------------------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|------------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|---------------------------------------|------------------------|---------------------------------------|--|--|--|
|                    |               | WHEAT.                  |                        |                                       | BARLEY.         |                        |                                       | RICE, BEST SORT. |                        |                                       | RICE, COMMON.   |                        |                                       | JOWAR OR CHOLUR<br>(Sorghum Polygare. |                        |                                       |  |  |  |
|                    |               | Present return.<br>%    | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return.  | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return.                       | Next preceding return. | Corresponding return<br>of last year. |  |  |  |
| BENGAL.            |               |                         |                        |                                       |                 |                        |                                       |                  |                        |                                       |                 |                        |                                       |                                       |                        |                                       |  |  |  |
| Western Districts. |               |                         |                        |                                       |                 |                        |                                       |                  |                        |                                       |                 |                        |                                       |                                       |                        |                                       |  |  |  |
| 1                  | Burdwan       | 16 0                    | 16 0                   | 15 0                                  | No sale         |                        |                                       | 15 0             | 15 0                   | 16 8                                  | 23 4            | 21 0                   | 22 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 2                  | Bankura       | 15 8                    | 16 8                   | 18 0                                  | 20 0            | 30 0                   | 24 0                                  | 17 0             | 17 0                   | 22 8                                  | 19 14           | 20 5½                  | 26 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 3                  | Beerbhoom     | 16 8                    | 16 8                   | 20 0                                  | ...             | ...                    | ...                                   | 16 8             | 16 8                   | 18 0                                  | 22 8            | 22 8                   | 22 8                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 4                  | Midnapore     | 15 0                    | 16 0                   | 17 0                                  | ...             | ...                    | ...                                   | 18 0             | 18 0                   | 16 0                                  | 23 0            | 24 0                   | 24 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 5                  | Hooghly       | 14 0                    | 14 0                   | 16 0                                  | ...             | ...                    | ...                                   | 10 0             | 10 0                   | 10 0                                  | 16 0            | 16 0                   | 16 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
|                    | Howrah        | 15 0                    | 15 0                   | 16 4                                  | ...             | ...                    | ...                                   | 13 4             | 13 2                   | 12 8                                  | 18 0            | 18 8                   | 16 8                                  | ...                                   | ...                    | ...                                   |  |  |  |
| Central Districts. |               |                         |                        |                                       |                 |                        |                                       |                  |                        |                                       |                 |                        |                                       |                                       |                        |                                       |  |  |  |
|                    | Calcutta      | 14 2                    | 14 4                   | 16 4                                  | 20 4            | 30 0                   | 31 6                                  | 8 13             | 8 12                   | 9 8                                   | 16 8            | 20 0                   | 16 9                                  | No sale.                              | 15 0                   | 13 4                                  |  |  |  |
| 6                  | 24-Pergunnahs | 14 0                    | 13 4                   | 14 8                                  | 27 0            | 26 8                   | 30 0                                  | 8 0              | 8 0                    | 8 0                                   | 17 4            | 16 13                  | 15 4                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 7                  | Nudda         | 16 6                    | 16 6                   | 16 0                                  | 36 0            | 36 0                   | 26 5½                                 | 14 10            | 14 10                  | 14 12                                 | 18 12           | 18 5½                  | 17 4                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 8                  | Khoolna       | ...                     | ...                    | ...                                   | ...             | ...                    | ...                                   | 18 0             | 18 0                   | 16 0                                  | 21 0            | 21 0                   | 20 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 9                  | Jessore       | 11 7                    | 11 6                   | 16 0                                  | ...             | ...                    | ...                                   | 16 0             | 16 0                   | 14 0                                  | 24 0            | 23 0                   | 21 4                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 10                 | Moorshedabad  | 16 12                   | 16 12                  | 17 12                                 | ...             | ...                    | ...                                   | 13 4             | 13 4                   | 16 0                                  | 22 0            | 22 0                   | 22 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 11                 | Dinapore      | 16 4                    | 16 0                   | 12 0                                  | 24 0            | 23 0                   | 20 0                                  | 18 4             | 18 0                   | 19 3                                  | 25 8            | 28 0                   | 25 8                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 12                 | Rajahshye     | 18 0                    | 18 0                   | 21 0                                  | 45 0            | 45 0                   | 40 0                                  | 16 14            | 16 8                   | 16 8                                  | 24 0            | 20 10                  | 21 12                                 | ...                                   | ...                    | ...                                   |  |  |  |
| 13                 | Rangpore      | 17 12                   | 17 12                  | 18 0                                  | ...             | ...                    | ...                                   | 14 4             | 14 4                   | 15 0                                  | 20 0            | 20 0                   | 17 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 14                 | Bogra         | 15 0                    | 12 0                   | 18 0                                  | ...             | ...                    | ...                                   | 15 12            | 18 0                   | 16 8                                  | 25 8            | 24 0                   | 22 8                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 15                 | Prinna        | 17 8                    | 18 0                   | 20 0                                  | ...             | ...                    | ...                                   | 8 0              | 8 0                    | 8 4                                   | 21 0            | 22 8                   | 24 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 16                 | Darjeeling    | 10 0                    | 9 0                    | 10 0                                  | 13 0            | 13 0                   | 10 0                                  | 6 0              | 6 0                    | 5 0                                   | 13 0            | 14 0                   | 12 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 17                 | Julpigoree    | 12 0                    | 12 0                   | 13 0                                  | 16 0            | 16 0                   | 20 0                                  | 13 0             | 13 0                   | 13 0                                  | 20 0            | 20 0                   | 23 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| Eastern Districts. |               |                         |                        |                                       |                 |                        |                                       |                  |                        |                                       |                 |                        |                                       |                                       |                        |                                       |  |  |  |
| 18                 | Dacca         | 16 0                    | 16 0                   | 15 8                                  | 26 0            | 26 0                   | 26 0                                  | 17 0             | 17 0                   | 14 0                                  | 20 0            | 20 0                   | 16 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 19                 | Farradpore    | 20 0                    | 14 0                   | 20 0                                  | 40 0            | 24 0                   | 26 0                                  | 18 0             | 18 0                   | 16 0                                  | 20 0            | 24 0                   | 20 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 20                 | Backergunge   | ...                     | ...                    | ...                                   | ...             | ...                    | ...                                   | 17 0             | 17 0                   | 13 0                                  | 20 0            | 20 0                   | 16 0                                  | ...                                   | ...                    | ...                                   |  |  |  |
| 21                 | Mymensingh    | 12 0                    | 13 4                   | 12 0                                  | ...             | ...                    | ...                                   | 12 0             | 13 0                   | 11 4                                  | 18 8            | 20 0                   | 16 0                                  | ...                                   | ...                    | ...                                   |  |  |  |

A In sub-divisions retail prices of salt per rupee were:—Cuttack 12 seers, and Cutwa and Raneesungoo 13 seers.

B At Rampore Hat retail price of salt 13 seers per rupee.

C In sub-divisions retail prices of salt per rupee were:—Tumlock 11 seers, Contal 12½ seers.

D At Johannabad retail price of salt 13 seers per rupee.

DI In sub-divisions retail prices of salt per rupee were:—Barraset and Dum-Dum 12 seers, Bussirhat 13 seers, Diamond Harbour (Kulphat) 10½ seers, and Barrackpore 12½ seers.

E In sub-divisions retail prices of salt per rupee were:—Kooatoo 13½ seers, Meherpore and Choodanga 13 seers and Ranagha 10½ seers.

F In Sakkhira and Bagirhat sub-divisions retail price of salt was 11 seers per rupee.

G In sub-divisions retail prices of salt per rupee were:—Jhaukiah and Aaral 13 seers, Magurah 10½ seers, and Bengong 13 seers.



## PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

| Number. | DISTRICTS. | QUANTITIES PER RUPEE IN |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |   |                        |                                    |
|---------|------------|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|---|------------------------|------------------------------------|
|         |            | WHEAT.                  |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLUR.<br>( <i>Sorghum Vulgare</i> .) |                        |                                    |
|         |            | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                                 | Next preceding return. | Corresponding return of last year. |

## Eastern Districts—concluded.

|    |                         | N. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. |
|----|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 22 | Chittagong ...          | 14 0   | 14 0   | 16 0   | ...    | ...    | ...    | 14 0   | 14 8   | 10 0   | 21 0   | 22 0   | 16 0   | ...    | ...    | ...    | ...    |
| 23 | Noakhally* ...          | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    |
| 24 | Tipperah ...            | 14 4   | 13 5   | 13 5   | ...    | ...    | ...    | 13 8   | 15 8   | 14 9   | 23 10  | 26 3   | 17 3   | ...    | ...    | ...    | ...    |
| 25 | Chittagong Hill Tracts. | ...    | ...    | ...    | ...    | ...    | ...    | 14 0   | 13 13  | 9 6    | 15 0   | 14 8   | 10 10  | ...    | ...    | ...    | ...    |
|    | Hill Tipperah ...       | 12 0   | 12 0   | 12 0   | ...    | ...    | ...    | 13 0   | 12 0   | 11 0   | 20 0   | 20 0   | 14 0   | ...    | ...    | ...    | ...    |

## BEHAR.

|    |                  |      |      |       |      |      |      |       |      |       |       |      |       |      |      |      |     |
|----|------------------|------|------|-------|------|------|------|-------|------|-------|-------|------|-------|------|------|------|-----|
| 26 | Patna ...        | 20 0 | 22 0 | 21 0  | 31 0 | 31 8 | 34 0 | 12 0  | 11 8 | 11 8  | 22 0  | 23 0 | 31 8  | 24 0 | 26 0 | 26 0 | ... |
| 27 | Gya ...          | 16 0 | 16 0 | 19 0  | 30 0 | 29 0 | 25 0 | 10 0  | 10 0 | 10 0  | 17 0  | 17 0 | 22 0  | ...  | ...  | ...  | ... |
| 28 | Shahabad ...     | 16 0 | 16 0 | 18 0  | 20 0 | 20 0 | 32 0 | 9 0   | 9 0  | 9 0   | 16 0  | 16 0 | 19 0  | ...  | 27 0 | ...  | ... |
| 29 | Darbhanga ...    | 18 0 | 19 0 | 18 0  | 35 0 | 38 0 | 25 0 | 14 0  | 14 0 | 13 0  | 16 0  | 17 0 | 20 0  | ...  | ...  | ...  | ... |
| 30 | Mounierpore ...  | 22 0 | 22 0 | 20 0  | 30 0 | 35 0 | 30 0 | 12 0  | 13 0 | 11 0  | 22 0  | 22 0 | 22 8  | ...  | ...  | ...  | ... |
| 31 | Saran ...        | 15 8 | 17 0 | 18 0  | 29 0 | 29 0 | 30 0 | 9 0   | 9 0  | 8 0   | 21 0  | 21 0 | 20 0  | ...  | ...  | ...  | ... |
| 32 | Chumpran ...     | 19 0 | 18 0 | 22 0  | 34 0 | 39 0 | 32 0 | 8 0   | 8 0  | 7 8   | 18 0  | 18 0 | 15 0  | ...  | ...  | ...  | ... |
| 33 | Monghyr ...      | 21 0 | 21 0 | 21 0  | 33 9 | 42 0 | 37 4 | 13 14 | 14 2 | 14 12 | 16 12 | 17 4 | 18 12 | ...  | ...  | ...  | ... |
| 34 | Bhagulpore ...   | 16 6 | 19 4 | 17 10 | 30 5 | 31 9 | 35 5 | 15 2  | 16 6 | 16 6  | 17 10 | 21 7 | 21 7  | ...  | ...  | ...  | ... |
| 35 | Purneah ...      | 20 0 | 22 0 | 18 0  | 28 0 | ...  | ...  | 13 0  | 14 0 | 20 0  | 18 0  | 20 0 | 21 0  | ...  | ...  | ...  | ... |
| 36 | Maldah ...       | 20 0 | 20 0 | 16 0  | ...  | ...  | ...  | 14 0  | 14 0 | 16 0  | 24 0  | 26 0 | 24 0  | ...  | ...  | ...  | ... |
| 37 | Sonthal Pergahs. | 16 0 | 14 0 | 16 0  | ...  | ...  | ...  | 16 0  | 16 0 | 16 0  | 22 0  | 22 0 | 24 0  | ...  | ...  | ...  | ... |

## ORISSA.

|    |              |       |       |      |      |      |      |       |       |      |      |      |      |     |     |     |     |
|----|--------------|-------|-------|------|------|------|------|-------|-------|------|------|------|------|-----|-----|-----|-----|
| 38 | Cuttack ...  | 15 12 | 15 12 | 14 7 | ...  | ...  | ...  | 10 8  | 10 8  | 10 8 | 18 6 | 18 6 | 18 6 | ... | ... | ... | ... |
| 39 | Pooree ...   | 11 13 | 11 13 | 13 2 | ...  | ...  | ...  | 11 13 | 11 13 | 14 7 | 18 6 | 18 6 | 18 6 | ... | ... | ... | ... |
| 40 | Balasore ... | 13 0  | 12 8  | 14 0 | 13 0 | 13 0 | 13 0 | 14 0  | 14 0  | 13 0 | 27 0 | 27 0 | 24 0 | ... | ... | ... | ... |

CHOTA NAGPORE  
South-Western Frontier Agency.

|    |                |      |      |      |      |      |      |      |      |      |      |      |      |                 |  |  |  |
|----|----------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------|--|--|--|
| 41 | Hamarabagh ... | 19 0 | 18 0 | 20 0 | 21 0 | 23 0 | 20 0 | 9 0  | 10 0 | 12 0 | 19 0 | 19 0 | 21 0 | Not procurable. |  |  |  |
| 42 | Lehardugga ... | 20 0 | 22 0 | 24 0 | 21 0 | 21 0 | 18 0 | 16 0 | 16 0 | 20 0 | 22 0 | 20 0 | 28 0 | ...             |  |  |  |
| 43 | Singbhoom ...  | 20 0 | 20 0 | 24 0 | 32 0 | 32 0 | 24 0 | 20 0 | 18 0 | 28 0 | 24 0 | 20 0 | 32 0 | ...             |  |  |  |
| 44 | Manbhoom ...   | 16 0 | 16 0 | 17 0 | ...  | ...  | ...  | 16 0 | 16 0 | 14 0 | 26 0 | 22 0 | 24 8 | ...             |  |  |  |

\* Return not received.

S At Cox's Bazar retail price of salt 11 seers per rupee.

T At Chandpore retail price of salt 11½ seers per rupee.

U In sub-divisions retail prices of salt per rupee were:—Sassaram 12 seers, Buxar 12½ seers, and Bhadrach 11 seers.

W In sub-divisions retail prices of salt per rupee were:—Machubani 11 seers and Tajpore 12 seers.

X At Hajipore retail price of salt 12½ seers per rupee.

Y In sub-divisions retail prices of salt per rupee were:—Sowan 12 seers and Gopalgunge 12½ seers.

Z At Bettiah retail price of salt 11½ seers per rupee.

Published for general information.

CALCUTTA.

The 22nd November 1887.

*to Fortnight ending 15th November 1887—(concluded.)*

**MEERS OF 20 TOLANS.**

| BAJRA OR CUMBU.<br>( <i>Fimbristemma typho-</i><br><i>idicum</i> .) |                                       | MARVA OR BAJ I.<br>( <i>Blountia Corcoran</i> s. |                                       |
|---|---------------------------------------|--|---------------------------------------|
| Present return.   | Next preceding return.                | Present return.                                  | Next preceding return.                |
|   | Corresponding return<br>of last year. |  | Corresponding return<br>of last year. |

|                                       |  |       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEKRS. |  |  |
|---------------------------------------|--|-------|---|--|--|
| FIREWOOD.                             |  | SALT. | SALT.   |  |  |
| Present return.                       |  |       | Present return.                               |  |  |
| Next preceding return.                |  |       | Next preceding return.                        |  |  |
| Corresponding return<br>of last year. |  |       | Corresponding return<br>of last year.         |  |  |

DISTRICTS.

***Eastern Districts--concluded.***

| P. Ch. | 4. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | 9. Ch | Rs. A. P. | Rs. A. P. | Rs. A. P.               |  |
|--------|--------|--------|--------|--------|--------|-------|-----------|-----------|-------------------------|--|
| 80     | 75 0   | 75 0   | 1 0    | 11 0   | 12 0   | 3 4 0 | 3 4 0     | 3 2 0     | Chittagong.             |  |
| ...    | ...    | ...    | ...    | ...    | ...    | ...   | ...       | ...       | Noakholly.              |  |
| ...    | ...    | ...    | 12 0   | 13 0   | 11 8   | 3 3 0 | 3 3 0     | 3 8 0     | Tipperah.               |  |
| 320    | 0 3 0  | 0 30 0 | 8 0    | 8 0    | 8 0    | 4 8 0 | 4 8 0     | 4 8 0     | Chittagong Hill Tracts. |  |
| ...    | ...    | ...    | 11 0   | 11 0   | 11 0   | 3 4 0 | 3 4 0     | 3 4 0     | Hill Tipperah.          |  |

**BEHAR.**

|     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|---|-------|----|---|---|----|--------------|------------------|
| 120 | 0   | 120 | 0   | 110 | 0   | 3  | 0  | 11 | 12 | 11 | 8  | 3  | 0  | 0  | 3 | 1     | 6  | 3 | 1 | 6  | Patna.       |                  |
| 150 | 0   | 30  | 0   | 120 | 0   | 11 | 0  | 11 | 0  | 11 | 0  | 3  | 5  | 0  | 3 | 5     | 0  | 3 | 5 | 0  | Gya.         |                  |
|     |     |     |     |     |     | U  |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
| 120 | 0   | 120 | 0   | 160 | 0   | 12 | 8  | 12 | 8  | 13 | 0  | 3  | 3  | 0  | 3 | 3     | 0  | 3 | 5 | 0  | Shahabad.    |                  |
|     |     |     |     |     |     | W  |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
| 160 | 0   | 175 | 0   | 100 | 0   | 13 | 8  | 12 | 0  | 11 | 8  | 2  | 15 | 0  | 3 | 0     | 0  | 3 | 4 | 0  | Darbhanga.   |                  |
|     |     |     |     |     |     | X  |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
| 10  | 0   | 112 | 0   | 140 | 0   | 12 | 0  | 13 | 0  | 12 | 0  | 3  | 4  | 0  | 3 | 4     | 0  | 3 | 4 | 0  | Monsiehpore. |                  |
|     |     |     |     |     |     | Y  |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
| 160 | 0   | 16  | 0   | 140 | 0   | 12 | 0  | 12 | 0  | 11 | 8  | 3  | 2  | 0  | 3 | 2     | 0  | 3 | 5 | 0  | Saran.       |                  |
|     |     |     |     |     |     | Z  |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
| 0   | ... | ... | ... | ... | ... | 12 | 0  | 12 | 0  | 12 | 0  | 3  | 4  | 0  | 3 | 4     | 0  | 3 | 5 | 0  | Chumparna.   |                  |
|     |     |     |     |     |     | Z1 |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
| 0   | 126 | 0   | 26  | 0   | 126 | 0  | 12 | 9  | 13 | 9  | 12 | 1  | 2  | 14 | 6 | 2     | 14 | 6 | 3 | 4  | 0            | Monghyr.         |
|     |     |     |     |     |     | Z2 |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
| 8   | 164 | 0   | 64  | 0   | 164 | 0  | 13 | 10 | 12 | 10 | 12 | 10 | 2  | 15 | 6 | 3     | 3  | 6 | 3 | 1  | 0            | Bhagalpore       |
|     |     |     |     |     |     | Z3 |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
| 0   | 160 | 0   | 160 | 0   | 128 | 0  | 11 | 0  | 11 | 0  | 10 | 8  | 3  | 7  | 6 | ..... |    |   | 3 | 10 | 0            | Purnea h.        |
|     |     |     |     |     |     | Z4 |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
| 120 | 0   | 120 | 0   | 180 | 0   | 12 | 0  | 12 | 0  | 10 | 8  | 3  | 4  | 0  | 3 | 4     | 0  | 3 | 8 | 0  | Malda.       |                  |
|     |     |     |     |     |     | Z5 |    |    |    |    |    |    |    |    |   |       |    |   |   |    |              |                  |
| 0   | 200 | 0   | 200 | 0   | 200 | 0  | 11 | 8  | 11 | 8  | 12 | 0  | 3  | 4  | 6 | 3     | 4  | 6 | 3 | 8  | 0            | Sonthal Pergana. |

**ORISSA.**

|   |     |   |     |   |     |   |    |   |    |   |    |   |   |    |   |   |    |   |   |    |   |           |
|---|-----|---|-----|---|-----|---|----|---|----|---|----|---|---|----|---|---|----|---|---|----|---|-----------|
|   | 80  | 0 | 80  | 0 | 80  | 0 | 14 | 0 | 14 | 0 | 14 | 0 | 2 | 12 | 0 | 2 | 12 | 0 | 2 | 12 | 0 | Cuttack.  |
|   |     |   |     |   |     |   | Z5 |   |    |   |    |   |   |    |   |   |    |   |   |    |   |           |
| 1 | 70  | 0 | 70  | 0 | 80  | 0 | 13 | 2 | 13 | 2 | 14 | 7 | 2 | 12 | 0 | 2 | 12 | 0 | 2 | 10 | 0 | Pooree.   |
|   |     |   |     |   |     |   | Z8 |   |    |   |    |   |   |    |   |   |    |   |   |    |   |           |
| 0 | 160 | 0 | 160 | 0 | 120 | 0 | 10 | 8 | 10 | 8 | 10 | 0 | 3 | 4  | 0 | 3 | 4  | 0 | 3 | 12 | 0 | Balasore. |

CHOTA NAGPORE.

**South-Western Frontier Agency.**

| 27  |     |     |     |   |     |    |    |    |    |   |   |   |   |   |   |   |    |   |   |   |   |             |
|-----|-----|-----|-----|---|-----|----|----|----|----|---|---|---|---|---|---|---|----|---|---|---|---|-------------|
| 0   | 320 | 0   | 320 | 0 | 220 | 0  | 10 | 0  | 10 | 0 | 9 | 0 | 3 | 9 | 0 | 3 | 9  | 0 | 4 | 4 | 0 | Hasarobaga. |
| 0   | 120 | 0   | 120 | 0 | 120 | 0  | 10 | 8  | 10 | 0 | 9 | 0 | 3 | 8 | 0 | 3 | 12 | 0 | 4 | 4 | 0 | Lohardaga.  |
| 0   | 32  | 0   | 320 | 0 | 320 | 0  | 9  | 0  | 9  | 0 | 9 | 0 | 4 | 0 | 0 | 4 | 0  | 0 | 4 | 0 | 0 | Singbhoom.  |
| 28  |     |     |     |   |     |    |    |    |    |   |   |   |   |   |   |   |    |   |   |   |   |             |
| ... | ... | ... | 340 | 0 | 10  | 10 | 10 | 10 | 8  | 3 | 6 | 0 | 3 | 6 | 0 | 3 | 10 | 0 |   |   |   | Manbhoom.   |

salt per rupee were:—Bagnasari 11 seers and Jamui 1½ seers.  
 salt per rupee were:—Banka 12 seers and Mithapoonah and So pole 11 seers.  
 salt per rupee were:—Kishengunge 10 seers and Arroah (at Rangunge) 10 seers,  
 salt per rupee were:—Godda 11 seers, Pakour 12 seers, Rajmahal 12 seers.  
 It 14 seers per rupee.

11 1/2 mile for super.  
at 4 miles west of main

27 At Kharagda in the Union sub division retail price of salt 12 seers per rupee.  
28 At Goyindpur retail price of salt 12 seers per rupee.

P. NOLAN,  
Secy. to the Govt. of Bengal.

**PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt in the**

| Number. | MARKTS.         | WHEAT.          |                        |                                    | BARLEY.                |                        |                                    | RICE, BEST SORT.       |                        |                                    | RICE, COMMON.          |                        |                                    |
|---------|-----------------|-----------------|------------------------|------------------------------------|------------------------|------------------------|------------------------------------|------------------------|------------------------|------------------------------------|------------------------|------------------------|------------------------------------|
|         |                 | Present return. |                        |                                    | Next preceding return. |                        |                                    | Next preceding return. |                        |                                    | Next preceding return. |                        |                                    |
|         |                 | Present return. | Next preceding return. | Corresponding return of last year. | Present return.        | Next preceding return. | Corresponding return of last year. | Present return.        | Next preceding return. | Corresponding return of last year. | Present return.        | Next preceding return. | Corresponding return of last year. |
|         |                 | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.               | R. A. P.               | R. A. P.                           | R. A. P.               | R. A. P.               | R. A. P.                           | R. A. P.               | R. A. P.               | R. A. P.                           |
| 1       | Calcutta ...    | 2 11 3          | 2 10 3                 | 2 7 9                              | 1 11 0                 | 1 11 6                 | 1 10 3                             | 3 12 6                 | 3 13 0                 | 3 5 0                              | 1 15 9                 | 1 11 1                 | 2 1 0                              |
| 2       | Seragunge ...   | 1 10 0          | 1 12 0                 | 2 2 0                              | ...                    | ...                    | ...                                | 3 0 0                  | 3 0 0                  | 3 4 0                              | 1 10 0                 | 1 10 0                 | 1 13 0                             |
| 3       | Dacca ...       | 2 6 0           | 2 6 0                  | 2 6 0                              | 1 8 0                  | 1 8 0                  | 1 8 0                              | 2 6 0                  | 2 6 0                  | 2 13 0                             | 1 15 0                 | 1 15 0                 | 2 7 0                              |
| 4       | Narsingunge ... | ...             | ...                    | ...                                | ...                    | ...                    | ...                                | 2 4 0                  | 2 4 0                  | ...                                | 2 0 0                  | 2 0 0                  | ...                                |
| 5       | Chittagong ...  | 2 13 0          | 2 13 0                 | 2 6 0                              | ...                    | ...                    | ...                                | 2 12 0                 | 2 13 0                 | 3 13 0                             | 1 14 0                 | 1 10 0                 | 2 6 0                              |
| 6       | Patna ...       | 1 16 0          | 1 12 0                 | 1 12 0                             | 1 4 0                  | 1 3 0                  | 1 2 6                              | 2 14 6                 | 3 0 0                  | 3 0 0                              | 1 12 0                 | 1 10 0                 | 1 13 0                             |
| 7       | Balassore ...   | 3 0 0           | 3 4 0                  | 2 8 0                              | 3 0 0                  | 3 0 0                  | 3 0 0                              | 2 12 0                 | 2 13 0                 | 3 0 0                              | 1 6 0                  | 1 6 0                  | 1 10 0                             |
| 8       | Pooree ...      | ...             | ...                    | ...                                | ...                    | ...                    | ...                                | ...                    | ...                    | ...                                | 2 0 6                  | 2 0 6                  | 2 0 6                              |
| 9       | Cuttack ...     | 2 5 0           | 2 5 0                  | 2 10 0                             | ...                    | ...                    | ...                                | 3 10 0                 | 3 10 0                 | 3 10 0                             | 2 2 0                  | 2 2 0                  | 2 2 0                              |

Calcutta,  
The 22nd November 1887.

Legal during the fortnight ending 15th November 1887.

PRICES PER MAUND

| RICE OR CHOLU.<br>( <i>Oryza Vulgaris</i> .) |                                    |                 | RAJRA OR CUMBU<br>( <i>Pennisetum typhodes</i> .) |                                    |                 |
|--|------------------------------------|-----------------|---|------------------------------------|-----------------|
| Next preceding return.                       | Corresponding return of last year. | Present return. | Next preceding return.                            | Corresponding return of last year. | Present return. |
| R. A. P.                                     | R. A. P.                           | R. A. P.        | R. A. P.  | R. A. P.                           | R. A. P.        |
| 2 8 0  | 2 12 0                             | 3 4 0           | 0 0 0   | 0 0 0                              | 0 0 0           |
| ...  | ...                                | ...             | ...   | ...                                | ...             |
| ...  | ...                                | ...             | ...   | ...                                | ...             |
| ...  | ...                                | ...             | ...   | ...                                | ...             |
| ...  | ...                                | ...             | ...   | ...                                | ...             |
| 6 1 6  | 0 1 6                              | 0 1 7           | 0 0 1   | 0 0 1                              | 0 0 0           |
| ...  | ...                                | ...             | ...   | ...                                | ...             |
| ...  | ...                                | ...             | ...   | ...                                | ...             |
| ...  | ...                                | ...             | ...   | ...                                | ...             |

2146a

| MAHAR.                             |                 | ARHAR OR TURU<br>( <i>Arhar Pura</i><br>( <i>Cajanus indicus</i> )) |                                    | FIRWOOD         |                        |                                    | SALT            |                        |                                    | MAHAR.       |
|------------------------------------|-----------------|---|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--------------|
| Corresponding return of last year. | Present return. | Next preceding return.  | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |              |
| R. A. P.                           | R. A. P.        | R. A. P.  | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |              |
| 1 5 0                              | 2 3 0           | 2 2 0   | 1 15 6                             | 0 6 9           | 0 6 9                  | 0 6 9                              | 2 12 0          | 2 12 0                 | 0 3 0                              | Calcutta.    |
| ...                                | ...             | ...   | ...                                | ...             | ...                    | ...                                | 3 0 0           | 3 0 0                  | 0 3 2                              | Herajunga.   |
| ...                                | 2 0 0           | 2 0 0   | ...                                | 0 6 0           | 0 5 0                  | 0 5 0                              | 3 3 0           | 3 3 0                  | 3 3 0                              | Dacca.       |
| ...                                | 2 4 0           | 2 12 0  | ...                                | 0 8 0           | 0 8 0                  | ...                                | 2 14 0          | 2 14 0                 | ...                                | Narayanunga. |
| ...                                | 4 8 0           | 3 8 0   | 4 2 0                              | ...             | ...                    | ...                                | 3 4 0           | 3 4 0                  | 3 2 0                              | Chittagong.  |
| 1 3 6                              | 1 9 6           | 1 7 0   | 1 6 0                              | 0 5 0           | 0 5 0                  | 0 5 0                              | 3 0 0           | 3 1 6                  | 3 1 6                              | Patna.       |
| ...                                | 3 0 0           | 3 0 0   | 3 0 0                              | 0 4 6           | 0 4 6                  | 0 6 0                              | 3 4 0           | 3 4 0                  | 3 12 0                             | Balnore.     |
| ...                                | ...             | ...   | ...                                | ...             | ...                    | ...                                | 2 12 0          | 2 12 0                 | 2 10 0                             | Pooras.      |
| ...                                | 2 2 0           | 2 2 0   | ...                                | 0 8 0           | 0 8 0                  | 0 8 0                              | 2 12 0          | 2 12 0                 | 2 12 0                             | Cuttack.     |

Published for general information.

P. NOLAN,  
Secy. to the Govt. of Bengal.

## Meteorological Report of the Province of Bengal.

| METEOROLOGICAL DIVISION. | DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|--------------------------|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------|-------------------------|---------------------|-------------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|--------------|
|                          |                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.         |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          |                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week. | Date.                   | Lowest during week. | Date.                   | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean 10 A.M. |
| ORISSA.                  | Pooree                 | Gopalpore               | 29.978                          | 30.028                     | +0.03                | NNW                   | 147.0               | 86.2                 | 18th Nov.               | 61.9                | 15th Nov.               | 83.3                      | 68.0                              | 75.7                            | +1.0                                | 7            |
|                          | False Point            |                         | 30.016                          | 30.035                     | -0.027               | N                     | 147.0               | 86.4                 | 12th                    | 53.0                | 14th                    | 82.0                      | 61.8                              | 72.3                            | -1.3                                | 7            |
|                          | Cuttack                | Cuttack                 | 29.955                          | 30.038                     | -0.05                | ESE & calm            | 21.0                | 90.3                 | 12th                    | 57.8                | 16th                    | 86.9                      | 63.6                              | 75.3                            | +0.1                                | 7            |
|                          | Balasore               | Balasore                | 29.979                          | 30.046                     | -0.024               | NNW                   | 65.6                | 85.4                 | 18th & 18th Nov.        | 52.5                | 15th-16th Nov.          | 83.6                      | 57.1                              | 70.5                            | -1.3                                | 7            |
|                          | South-West Midnapore   | Saugor Island           | 30.011                          | 30.038                     | -0.020               | NNW                   | 105.0               | 83.7                 | 12th                    | 69.4                | 16th                    | 81.7                      | 63.1                              | 73.1                            | -1.0                                | 7            |
|                          | South 24-Pargunnah     |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          | Midnapore              | Midnapore               | 29.903                          | 30.037                     | 0                    | N                     | 68.1                | 86.3                 | 18th                    | 53.2                | 14th-15th Nov.          | 84.0                      | 59.8                              | 71.7                            | +0.5                                | 7            |
|                          | 24-Pargunnah           |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          | Howrah                 | Calcutta                | 30.008                          | 30.030                     | -0.017               | NNW                   | 72.0                | 82.5                 | 17th & 18th Nov.        | 60.0                | 15th                    | 81.1                      | 62.4                              | 71.8                            | -0.8                                | 7            |
|                          | Hooghly                |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
| MIDDLE INDIA.            | Burdwan                | Burdwan                 | 29.935                          | 30.038                     | -0.027               | NNW                   | 41.9                | 85.5                 | 18th                    | 58.4                | 14th                    | 83.3                      | 61.4                              | 72.5                            | -1.0                                | 7            |
|                          | Bankura                | Bankura                 | 29.716                          |                            |                      | Calm                  | 2.0                 | 86.1                 | 12th                    | 54.8                | 14th                    | 84.5                      | 59.1                              | 71.8                            |                                     | 7            |
|                          | Beerbhoom              | Raneegunge              | 29.705                          | 30.020                     | -0.008               | WNW                   | 75.8                | 86.1                 | 12th                    | 54.4                | 14th                    | 81.7                      | 57.7                              | 71.2                            | -0.3                                | 7            |
|                          | West Burdwan           |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          | Meorshedabad           | Berhampore              | 29.975                          | 30.043                     | -0.006               | NW                    | 23.8                | 84.6                 | 18th                    | 60.2                | 12th                    | 82.6                      | 63.8                              | 73.1                            | -0.3                                | 7            |
|                          | Nudda                  | Krishnaghar             | 29.962                          | 3.039                      |                      | WNW                   | 40.3                | 84.7                 | 17th & 18th Nov.        | 51.0                | 12th                    | 83.5                      | 60.2                              | 71.8                            |                                     | 7            |
|                          | Jessore                | Jessore                 | 29.996                          | 30.036                     | -0.01                | NNW                   | 37.7                | 86.2                 | 17th & 18th Nov.        | 61.0                | 12th                    | 85.0                      | 64.0                              | 74.5                            | +1.0                                | 7            |
|                          | Khoolna                |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          | Chittagong             | Chittagong              | 29.916                          | 30.001                     | -0.020               | NE                    | 27.0                | 87.1                 | 18th                    | 63.5                | 14th                    | 81.4                      | 64.9                              | 75.7                            | +1.0                                | 7            |
|                          | Chittagong Hill Tracts | Dumagiri                |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
| SOUTH INDIA.             | Backergunge            | Barisal                 | 29.984                          | 30.036                     | -0.020               | N                     | 43.6                | 84.3                 | 18th                    | 61.6                | 12th                    | 82.8                      | 64.1                              | 73.8                            | +0.0                                | 7            |
|                          | Noakholly              | Noakholly               | 29.977                          | 30.021                     |                      | Calm                  | ?                   | 85.6                 | 18th                    | 62.0                | 12th                    | 83.0                      | 64.8                              | 74.4                            | +0.3                                | 7            |
|                          | Furreedpore            | Furreedpore             | 29.968                          | 30.023                     | +0.00                | N                     | 37.0                | 83.1                 | 12th                    | 61.0                | 12th                    | 83.4                      | 63.2                              | 73.8                            | +0.7                                | 7            |
|                          | Dacca                  | Dacca                   | 29.990                          | 30.013                     | -0.007               | Variable              | 44.0                | 85.1                 | 17th & 18th Nov.        | 65.5                | 12, 14, 16, & 17th Nov. | 84.2                      | 65.0                              | 75.1                            | +0.6                                | 7            |
|                          | Commillah              | Commillah               | 29.973                          | 30.009                     | -0.001               | NW                    | 29.5                | 86.4                 | 13th & 17th Nov.        | 61.0                | 11th & 15th Nov.        | 85.5                      | 64.0                              | 74.8                            | +1.1                                | 7            |
|                          | Mymensingh             | Mymensingh              | 29.972                          | 30.031                     | +0.01                | NN                    | 40.0                | 84.4                 | 13th & 14th Nov.        | 63.1                | 12th & 16th Nov.        | 83.8                      | 64.2                              | 74.2                            | +0.2                                | 7            |
|                          | Bogra                  | Bogra                   | 29.950                          | 2.991                      |                      | Calm                  | 31.5                | 83.8                 | 12th                    | 60.0                | 12th                    | 83.1                      | 63.2                              | 73.1                            |                                     | 7            |
|                          | Pubna                  | Serajunge               | 29.971                          | 30.017                     | -0.017               | Variable              | 19.1                | 84.3                 | 18th                    | 61.6                | 12th                    | 84.0                      | 63.3                              | 73.7                            | +1.8                                | 7            |
|                          | Rajahmundry            | Rampore Beach           | 29.950                          | 30.030                     | +0.003               | N                     | 49.7                | 84.2                 | 18th                    | 57.7                | 14th                    | 82.6                      | 60.1                              | 71.8                            | +1.8                                | 7            |
|                          | Maldah                 | Maldah                  | 29.967                          |                            |                      | NW                    | ?                   | 84.5                 | 17th                    | 56.9                | 12th                    | 82.7                      | 60.4                              | 71.6                            |                                     | 7            |
| SOUTH INDIA.             | Dinapore               | Dinapore                | 29.990                          | 30.013                     | +0.001               | WNW                   | 55.0                | 84.1                 | 18th                    | 61.2                | 14th                    | 83.3                      | 63.0                              | 73.1                            | +2.0                                | 7            |
|                          | Rungpore               | Rungpore                | 29.985                          | 30.023                     | -0.022               | NE                    | 17.0                | 84.3                 | 12th & 17th Nov.        | 61.6                | 13th                    | 83.7                      | 61.1                              | 73.4                            | +3.1                                | 7            |
|                          | Jalpigoree             | Jalpigoree              | 29.736                          | 30.023                     | 0                    | SE                    | 283.2               | 83.0                 | 13, 14, 15, 16, 17 Nov. | 62.8                | 11th                    | 82.8                      | 64.0                              | 73.5                            | +2.8                                | 7            |
|                          | Cooch Behar            |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          | Darjeeling Hill Tracts | Darjeeling              | 29.977                          |                            | -0.015               | Calm                  | 31.9                | 67.1                 | 13th                    | 42.7                | 18th                    | 53.2                      | 43.7                              | 49.5                            | +3.3                                | 61.1         |
|                          | Purneah                | Purneah                 | 29.929                          | 30.059                     | +0.030               | Calm                  | 5.1                 | 82.2                 | 17th & 18th Nov.        | 56.7                | 13th                    | 81.1                      | 61.0                              | 71.1                            | -0.3                                | 7            |
|                          | North Bhagulpore       |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          | Mozufferpore           | Mozufferpore            |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          | Durbhunga              | Durbhunga               | 29.980                          | 30.053                     | +0.013               | SW                    | 50.4                | 82.9                 | 17th                    | 59.1                | 13th                    | 81.3                      | 68.0                              | 72.0                            | +0.7                                | 7            |
|                          | Chumpanun              | Mothari                 | 29.772                          | 30.065                     | -0.8                 | W                     | 89.8                | 83.7                 | 16th & 18th Nov.        | 53.9                | 12th, 15th & 16th Nov.  | 83.5                      | 56.2                              | 69.4                            | +1.7                                | 80.1         |
| SOUTH INDIA.             | Barua                  | Chupra                  | 29.841                          | 30.023                     | -0.007               | WNW                   | ?                   | 83.0                 | 18th                    | 56.0                | 15th & 16th Nov.        | 81.3                      | 57.9                              | 69.6                            | -0.4                                | 7            |
|                          | Shahabad               | Dehra                   | 29.901                          | 30.059                     | -0.012               | SSW                   | 137.4               | 82.0                 | 17th                    | 54.9                | 14th                    | 84.9                      | 57.2                              | 67.7                            | -3.1                                | 7            |
|                          | Buxar                  |                         | 814                             | 081                        | +0.01                | W                     | 83.4                | 84.4                 | 18th                    | 53.9                | 15th                    | 82.0                      | 53.3                              | 68.7                            | -1.8                                | 7            |
|                          | Arrah                  |                         | 832                             | 030                        | -0.014               | Variable              | 31.1                | 82.3                 | 12th & 18th Nov.        | 53.9                | 14th                    | 81.6                      | 53.4                              | 67.6                            | -1.9                                | 7            |
|                          | Gya                    | Gya                     | 646                             | 032                        | -0.048               | Calm                  | 49.2                | 81.9                 | 18th                    | 53.0                | 14th                    | 83.2                      | 50.3                              | 69.8                            | -1.8                                | 7            |
|                          | Patna                  | Bankipore               | 29.877                          | 30.036                     | -0.012               | SW                    | 5.1                 | 83.7                 | 18th                    | 53.9                | 14th                    | 81.6                      | 57.2                              | 69.4                            | -1.0                                | 7            |
|                          | South Bhagulpore       |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          | Monghyr                | Bhagulpore              | 29.872                          | 30.038                     | -0.016               | W & NW                | 41.0                | 83.4                 | 18th                    | 53.5                | 14th                    | 80.9                      | 57.7                              | 69.3                            | -0.4                                | 7            |
|                          | South Pargunnah        | Dumka                   | 29.818                          |                            | -0.017               | NW                    | 25.6                | 85.1                 | 18th                    | 52.6                | 14th                    | 83.7                      | 57.5                              | 70.1                            | +0.4                                | 7            |
|                          | Hazaribagh             | Hazaribagh              | 28.908                          | 30.057                     | -0.009               | Variable              | 171.2               | 80.4                 | 18th                    | 51.8                | 14th                    | 77.0                      | 55.5                              | 63.3                            | -1.0                                | 7            |
| SOUTH INDIA.             | Lehardnaga             |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          | Manbhoom               | Kancher                 | 27.872                          | 30.016                     | -0.20                | NW                    | 123.4               | 79.4                 | 12th                    | 47.9                | 15th                    | 78.2                      | 53.3                              | 65.5                            | -0.5                                | 7            |
|                          | Singbhoom              | Chyphama                | 29.255                          |                            | -0.010               | Variable              | 23.2                | 86.6                 | 12th                    | 51.3                | 14th                    | 84.0                      | 55.1                              | 69.6                            | -1.4                                | 7            |
|                          |                        | Bilagar                 |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          | Assam                  | Dhubri                  | 29.916                          | 30.051                     |                      | ENE                   | 108.7               | 84.4                 | 14th                    | 65.8                | 18th                    | 82.8                      | 66.6                              | 74.7                            |                                     | 7            |
|                          |                        | Nilobar                 |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          |                        |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          |                        |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          |                        |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |
|                          |                        |                         |                                 |                            |                      |                       |                     |                      |                         |                     |                         |                           |                                   |                                 |                                     |              |

Summary. — The normal means of air pressure and temperature are the arithmetical average or means of the readings during the same period for the past 10 years of the same place as expressed in percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 100. The normal means of average of the rainfall in each district ascertained from the returns sent in by the sub-divisional stations for the same period for the past 10 years is denoted by the number of stations. A mean day is denoted by the number of days in the month.



for the week ending Friday, the 18th November 1887.

| DISTRICT OBSERVATIONS.      |   |  |                    |              |                     |              |            |                    |              |            |                              |     |                               | Representative station. | DISTRICT.              |         |
|-----------------------------|---|--|--------------------|--------------|---------------------|--------------|------------|--------------------|--------------|------------|------------------------------|-----|-------------------------------|-------------------------|------------------------|---------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | OF WEEK.           |              | RAINFALL.           |              |            |                    |              |            |                              |     | Average number of rainy days. |                         |                        |         |
|                             |   |  | Mean for district. | Normal mean. | Since 1st of month. |              |            | Since May 15th.    |              |            | Normal number of rainy days. |     |                               |                         |                        |         |
|                             |   |  |                    |              | Mean for district.  | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. |                              |     |                               |                         |                        |         |
| 55                          | 10  | —                                      | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                            | —   | —                             | Gopalpore               | Poores                 |         |
| 56                          | 13  | Nil                                    | 0.01               | 0.05         | 1.88                | 1.51         | +0.37      | 43.97              | 54.76        | -10.79     | 0.3                          | 0.1 | 0.1                           | False Point             |                        |         |
| 54                          | 26  | Nil                                    | Nil                | 0.01         | 0.54                | 0.58         | -0.04      | 44.35              | 51.24        | -6.89      | 0.0                          | 0.1 | 0.1                           | Outtack                 |                        | Outtack |
| 53                          | 0   | Nil                                    | 0.04               | Nil          | 0.14                | 0.67         | -0.53      | 41.30              | 53.19        | -11.89     | 0.2                          | 0.0 | 0.0                           | Balasore                | Balasore               |         |
| 72                          | 20  | Nil                                    | Nil                | Nil          | 1.35                | 0.50         | +0.85      | 58.28              | 61.43        | -3.15      | 0.0                          | 0.0 | 0.0                           | Raugor Island           | South-West Midnapore   |         |
| 44                          | 1.0                                       | Nil                                    | Nil                | Nil          | 0.05                | 0.19         | -0.14      | 50.40              | 50.76        | -0.36      | 0.0                          | 0.0 | 0.0                           | Midnapore               | South 24-Pargunnahs    |         |
| 60                          | 0.7                                       | Nil                                    | Nil                | Nil          | 0.04                | 0.28         | -0.24      | 40.50              | 51.48        | -10.98     | 0.0                          | 0.0 | 0.0                           | Calcutta                | Midnapore              |         |
| 50                          | 0.4                                       | Nil                                    | Nil                | Nil          | 0.33                | 0.29         | +0.04      | 45.04              | 46.13        | -1.11      | 0.0                          | 0.0 | 0.0                           | Burdwan                 | 24-Pargunnahs          |         |
| 54                          | 0.5                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.32         | -0.32      | 49.34              | 51.08        | -2.34      | 0.0                          | 0.0 | 0.0                           | Bankoora                | Howrah                 |         |
| 41                          | 0.7                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.14         | -0.14      | 47.71              | 51.85        | -4.14      | 0.0                          | 0.0 | 0.0                           | Raneegunge              | Hooghly                |         |
| 37                          | 0.3                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.25         | -0.25      | 58.85              | 49.18        | +9.67      | 0.0                          | 0.0 | 0.0                           | Berhampore              | Beerbhoom              |         |
| 37                          | 1.9                                       | Nil                                    | Nil                | Nil          | 0.01                | 0.30         | -0.29      | 42.76              | 48.94        | -6.18      | 0.0                          | 0.0 | 0.0                           | Krishnaghar             | West Burdwan           |         |
| 38                          | 1.1                                       | Nil                                    | Nil                | 0.01         | 0.42                | 0.30         | +0.12      | 41.30              | 53.11        | -11.81     | 0.0                          | 0.1 | 0.1                           | Jessore                 | Moorshedabad           |         |
| 72                          | 2.3                                       | Nil                                    | Nil                | 0.00         | 8.76                | 1.08         | +7.70      | 36.03              | 112.88       | -16.85     | 0.0                          | 0.1 | 0.1                           | Chittagong              | Nuddas                 |         |
| 78                          | 0.4                                       | Nil                                    | Nil                | 0.01         | 3.98                | 1.34         | +2.64      | 61.50              | 30.81        | -19.11     | 0.0                          | 0.1 | 0.1                           | Domagiri                | Jessore                |         |
| 36                          | 2.0                                       | Nil                                    | Nil                | 0.01         | 4.60                | 0.90         | +3.70      | 50.32              | 77.00        | -17.68     | 0.0                          | 0.1 | 0.1                           | Barrisal                | Khoolna                |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 4.82                | 1.75         | +3.07      | 72.67              | 107.09       | -35.02     | 0.0                          | 0.1 | 0.1                           | Noakholly               | Chittagong             |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.41                | 0.23         | +0.18      | 35.91              | 55.72        | -19.81     | 0.0                          | 0.0 | 0.0                           | Furzedpore              | Chittagong Hill Tracts |         |
| 36                          | 0.9                                       | Nil                                    | Nil                | Nil          | 1.08                | 0.40         | +0.68      | 40.29              | 60.37        | -20.08     | 0.0                          | 0.0 | 0.0                           | Dacca                   | Backergunge            |         |
| 37                          | 1.0                                       | Nil                                    | Nil                | 0.03         | 1.12                | 0.56         | +0.56      | 42.01              | 70.28        | -28.27     | 0.0                          | 0.1 | 0.1                           | Commillah               | Noakholly              |         |
| 37                          | 2.7                                       | Nil                                    | Nil                | 0.01         | 0.18                | 0.22         | -0.10      | 60.21              | 67.03        | -6.82      | 0.0                          | 0.1 | 0.1                           | Mymensingh              | Noakholly              |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.34                | -0.34        | 60.43      | 56.54              | +3.89        | 0.0        | 0.0                          | 0.0 | Bogra                         | Furzedpore              |                        |         |
| 36                          | 0.9                                       | Nil                                    | Nil                | Nil          | 0.06                | 0.25         | -0.20      | 43.99              | 53.36        | -9.37      | 0.0                          | 0.0 | 0.0                           | Sonagunge               | Dacca                  |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.16                | 0.30         | -0.03      | 49.57              | 53.79        | -4.22      | 0.0                          | 0.0 | 0.0                           | Rampore Beaulah         | Pubna                  |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.17                | -0.17        | 46.61      | 54.35              | -7.74        | 0.0        | 0.0                          | 0.0 | Maldah                        | Rajshahye               |                        |         |
| 36                          | 0.4                                       | Nil                                    | Nil                | Nil          | 0.04                | -0.04        | 69.06      | 55.51              | +13.55       | 0.0        | 0.0                          | 0.0 | Dinagore                      | Maldah                  |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.03                | -0.03        | 30.61      | 73.74              | +7.37        | 0.0        | 0.0                          | 0.0 | Rangpore                      | Dinagore                |                        |         |
| 36                          | 0.1                                       | Nil                                    | Nil                | 0.01         | Nil                 | 0.04         | -0.04      | 117.42             | 109.94       | +7.48      | 0.0                          | 0.1 | 0.1                           | Jalpigoree              | Rangpore               |         |
| 36                          | 5.1                                       | Nil                                    | 0.02               | 0.16         | 0.07                | 0.21         | -0.14      | 117.17             | 119.78       | -2.61      | 0.3                          | 0.3 | 0.3                           | Darjeeling              | Jalpigoree             |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.03                | -0.03        | 65.04      | 57.39              | +7.65        | 0.0        | 0.0                          | 0.0 | Purneah                       | Cooch Behar             |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.04                | -0.04        | 46.91      | 42.48              | +4.43        | 0.0        | 0.0                          | 0.0 | Mozufferpore                  | Darjeeling Hill Tracts  |                        |         |
| 36                          | 1.0                                       | Nil                                    | Nil                | Nil          | 0.01                | -0.01        | 40.62      | 43.50              | +2.88        | 0.0        | 0.0                          | 0.0 | Durbhunga                     | Purneah                 |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.04                | -0.04        | 39.55      | 43.19              | -3.64        | 0.0        | 0.0                          | 0.0 | Motihari                      | North Bhagulpore        |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.13                | -0.13        | 37.55      | 39.25              | -1.70        | 0.0        | 0.0                          | 0.0 | Chupra                        | Mozufferpore            |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.13                | -0.13        | 37.55      | 39.25              | -1.70        | 0.0        | 0.0                          | 0.0 | Buxar                         | Durbhunga               |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.14                | -0.14        | 38.00      | 40.71              | -2.71        | 0.0        | 0.0                          | 0.0 | Gya                           | Chumpran                |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.10                | -0.10        | 36.94      | 40.73              | -3.79        | 0.0        | 0.0                          | 0.0 | Bankipore                     | Saran                   |                        |         |
| 36                          | 0.1                                       | Nil                                    | Nil                | Nil          | 0.12                | -0.12        | 42.93      | 42.44              | +0.49        | 0.0        | 0.0                          | 0.0 | Bhagulpore                    | Shahabad                |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.13                | -0.13        | 32.49      | 50.22              | +17.73       | 0.0        | 0.0                          | 0.0 | Doomka                        | Arrah                   |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.23                | -0.23        | 46.45      | 49.74              | -3.29        | 0.0        | 0.0                          | 0.0 | Hazaribagh                    | Gya                     |                        |         |
| 36                          | 0   | Nil                                    | Nil                | 0.01         | Nil                 | 0.24         | -0.24      | 44.34              | 46.52        | -2.18      | 0.0                          | 0.1 | 0.1                           | Ranchhee                | Panna                  |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.23                | -0.23        | 49.63      | 50.46              | -0.83        | 0.0        | 0.0                          | 0.0 | Chyebassa                     | South Bhagulpore        |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.23                | -0.23        | 49.63      | 50.46              | -0.83        | 0.0        | 0.0                          | 0.0 | Sibsagar                      | Sontal Pargunnahs       |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.23                | -0.23        | 49.63      | 50.46              | -0.83        | 0.0        | 0.0                          | 0.0 | Dhubri                        | Hazaribagh              |                        |         |
| 36                          | 0   | Nil                                    | Nil                | Nil          | 0.23                | -0.23        | 49.63      | 50.46              | -0.83        | 0.0        | 0.0                          | 0.0 | Silchar                       | Loharungga              |                        |         |

The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater. The number in parentheses represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means for the month of the district are the numerical averages of the rainfall returns received in the district, i.e., from the total rainfall at the sub-divisional stations.







# SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 18TH OF NOVEMBER 1887.

At the close of the previous week, ordinary cold-weather conditions obtained in Bengal. Light north-westerly winds were generally blowing at the western stations, and north-easterly winds at the eastern stations; temperature was fairly low for the time of year, while pressure was high. For the first four or five days of the week these conditions continued almost unaltered, and temperature and humidity decreased, while pressure generally increased. At the commencement of the week indeed the decrease of temperature was rapid, amounting in some cases to  $3^{\circ}$  and  $4^{\circ}$  in a day. On Wednesday, the 16th, however, conditions began to change; winds became lighter and more variable in direction, and temperature and humidity increased rapidly in South Bengal and Orissa. This reversal of the previous conditions was brought about by the formation of a feeble disturbance off the South Pegu Coast, and on the 15th decidedly strong winds were blowing at Diamond Island, and it was evident a barometric depression was in process of formation. The feeble depression, however, never developed to any considerable extent, and merely gave squally weather in the centre of the Bay. After its formation on the 16th, it drifted gradually towards the west coast of the Bay and appeared off the Madras coast on Friday, the 18th. During the existence of the feeble storm, however, conditions changed materially in South Bengal and Orissa; there was a steady and rather rapid increase in the amount of cloud; temperature and humidity also increased, and finally, on the 18th, a few showers fell in Orissa at such stations as False Point, Gopalpore, Balasore, and Jellasore. A slight shower also fell at Kalimpong on the 16th, but with these exceptions the province has been rainless for the whole week. For the first half of the present week, therefore, normal cold-weather conditions continued over the whole province, but for the second half, though cold, dry weather still obtained in the interior of Bengal and Behar, in South Bengal and Orissa conditions were reversed to a great extent, and moist rather warm weather was reported.

**Pressure.**—The variations of pressure during the week have been of no practical importance; pressure has oscillated slightly from day to day, but it has never varied very largely from the normal. Taking into consideration only those stations which have submitted observations for a considerable series of years, and which therefore yield reliable averages, it is found that the mean pressure of the whole province for the week has been 0.011 inch in defect of the normal. Almost the whole of the province shows a defective pressure except North Behar, where there has been a distinct excess, and the extreme variations from normal pressure throughout the province are from a defect of 0.027 inch at False Point to an excess of 0.030 inch at Purneah.

**Temperature.**—Variations during the week, as explained previously, have been rather of an opposite nature, and while one-half of the province shows a mean temperature in excess of the normal, the other half shows a defect. South Behar, Chutia Nagpur, Orissa and South-West Bengal record mean temperatures which vary from  $1.1^{\circ}$  down to  $0.2^{\circ}$  in defect of the normal, while North Behar, East Bengal and North Bengal show excess temperatures varying from  $0.5^{\circ}$  up to  $2.3^{\circ}$  in North Bengal. The mean temperature for the whole of Bengal for the week has therefore not varied largely from the normal, and it has been in defect by an amount of only between one and two-tenths of a degree, which is practically a normal temperature.

The following table contains the mean maximum and minimum temperatures for the week at nine typical stations in different districts of the province compared with the normal for the period, and thus it gives a good general idea of the distribution of temperature during the week. It will be seen that in the majority of stations the minimum or night temperatures have been rather more largely in defect than the maximum or day temperatures, but on the whole the differences have not been large.

*Table showing the excess or defect of the actual temperature from the normal for the week ending the 18th November 1887.*

|                        | Normal<br>mean maxi-<br>mum tem-<br>perature for<br>the week<br>ending 18th<br>November. | Actual<br>mean maxi-<br>mum tem-<br>perature for<br>the week<br>ending 18th<br>November<br>1887. | Excess or<br>defect from<br>the normal<br>mean. | Normal<br>mean mini-<br>mum tem-<br>perature for<br>the week<br>ending 18th<br>November. | Actual<br>mean mini-<br>mum tem-<br>perature for<br>the week<br>ending 18th<br>November<br>1887. | Excess or<br>defect from<br>the normal<br>mean. | Normal<br>mean daily<br>tempera-<br>ture for<br>the week<br>ending the<br>18th Nov-<br>ember. | Actual<br>mean daily<br>tempera-<br>ture for the<br>week end-<br>ing 18th<br>November<br>1887. | Excess or<br>defect from<br>the normal<br>mean. |
|------------------------|--|--|---|--|--|---|---|--|---|
| Cuttack ...            | 85.8   | 86.9   | +1.1  | 64.5   | 63.6   | -.9   | 75.2  | 75.3   | +0.1  |
| Calcutta (Alipore) ... | 81.7   | 81.1   | -.6   | 63.5   | 62.4   | -.1   | 72.6  | 71.8   | -.8   |
| Dacca ...              | 81.1   | 84.2   | +3.1  | 64.8   | 65.9   | +1.1  | 71.5  | 75.1   | +3.6  |
| Burdwan ...            | 83.8   | 83.5   | -.3   | 62.8   | 61.4   | -1.4  | 73.5  | 72.5   | -1.0  |
| Patna (Bankipore) ...  | 82.6   | 81.6   | -1.0  | 58.2   | 57.2   | -1.0  | 70.4  | 69.4   | -1.0  |
| Gya ...                | 83.5   | 83.2   | -.3   | 58.4   | 56.3   | -2.1  | 71.0  | 69.8   | -1.2  |
| Purneah ...            | 81.6   | 81.1   | -.5   | 58.9   | 61.0   | +2.1  | 71.3  | 71.1   | -.2   |
| Basaribagh ...         | 77.5   | 77.0   | -.5   | 57.1   | 55.5   | -1.6  | 67.3  | 66.3   | -1.0  |
| Darjeeling ...         | 54.4   | 55.2   | +0.8  | 40.0   | 43.7   | +3.7  | 47.2  | 49.5   | +2.3  |

**Rainfall.**—Except for the few showers brought up to Orissa by the disturbed conditions in the Bay, and for a slight shower at Kalimpong, the whole province has been rainless throughout the week.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 18th of November 1887:—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |           | RAINFALL.       |            |                         |                                |            |                     |                 |                      |                 |  |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|--|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | 4th week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 15th May 1887. |                 |  |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average.  | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. | Average.             | Normal average. |  |
|                              |                               |                              |                         |                        |                       |  |           |                 |            |                         |                                |            |                     |                 |                      |                 |  |
|                              |                               |                              |                         |                        |                       |  |           |                 |            |                         |                                |            |                     |                 |                      |                 |  |
| Orissa                       | 90°3                          | 52°0                         | 84°2                    | 62°6                   | 73°4                  | —0°3   | 0°02      | 0°02            | 0          | 0°2                     | 0°1                            | +0°1       | 0°75                | 0°87            | 43°04                | 52°06           |  |
| South-West Bengal            | 86°3                          | 54°4                         | 83°5                    | 61°4                   | 72°4                  | —0°2   | Nil       | Nil             | Nil        | 0°0                     | 0°0                            | 0          | 0°20                | 0°28            | 46°56                | 51°53           |  |
| East Bengal                  | 87°1                          | 61°9                         | 83°9                    | 65°1                   | 74°5                  | +0°7   | Nil       | 0°03            | —0°03      | 0°0                     | 0°1                            | —0°1       | 3°46                | 0°08            | 35°40                | 73°47           |  |
| North Bengal                 | 84°8                          | 56°9                         | 83°1                    | 62°4                   | 73°8                  | +2°3   | 0°01      | Nil             | +0°01      | 0°0                     | 0°0                            | 0          | 0°03                | 0°14            | 73°60                | 69°41           |  |
| North Behar                  | 83°7                          | 53°9                         | 81°6                    | 59°4                   | 70°5                  | +0°5   | Nil       | Nil             | Nil        | 0°0                     | 0°0                            | 0          | Nil                 | 0°03            | 51°99                | 47°09           |  |
| South Behar                  | 84°9                          | 60°9                         | 81°5                    | 58°4                   | 68°9                  | —1°1   | Nil       | Nil             | Nil        | 0°0                     | 0°0                            | 0          | Nil                 | 0°12            | 41°85                | 43°25           |  |
| Orissa Nagpur                | 80°4*                         | 47°0*                        | 77°0*                   | 53°0*                  | 65°8*                 | —0°8*  | Nil       | Nil             | Nil        | 0°0                     | 0°0                            | 0          | Nil                 | 0°22            | 44°56                | 48°53           |  |
| Assam                        |                               |                              |                         |                        |                       |  |           |                 |            |                         |                                |            |                     |                 |                      |                 |  |

\* Chyabassa not included.

METEOROLOGICAL OFFICE, BENGAL;

A. PEDLER,

The 22nd November 1887.

Offg. Meteorological Reporter to the Govt. of Bengal.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 13th to 19th November 1887.

| MONTH.   | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|----------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|          |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.    |       | °            | °        |        | °        | °              | Inches.         | °          | °         | Inches. |
| November | 13th  | 70.5         | 82.9     | 22.5   | 60.4     | 63.8           | 504             | 59.2       | 67        | Nil.    |
| "        | 14th  | 69.6         | 81.9     | 22.5   | 59.4     | 62.7           | 479             | 57.7       | 66        | "       |
| "        | 15th  | 71.8         | 82.9     | 22.2   | 60.7     | 65.2           | 535             | 60.9       | 69        | "       |
| "        | 16th  | 73.1         | 84.9     | 22.2   | 62.7     | 67.8           | 610             | 64.6       | 75        | "       |
| "        | 17th  | 74.5         | 84.7     | 19.8   | 64.9     | 69.7           | 663             | 67.0       | 78        | "       |
| "        | 18th  | 75.7         | 85.9     | 19.2   | 66.7     | 71.4           | 712             | 69.1       | 80        | "       |
| "        | 19th  | 77.1         | 85.9     | 16.1   | 69.8     | 70.7           | 665             | 67.1       | 71        | "       |

The mean temperature of the seven days ... .. 73.2  
The extreme variation of temperature ... .. 26.5  
The maximum temperature ... .. 85.9  
The mean relative humidity ... .. 72

The total fall of rain from 13th to 19th November 1887 ... .. Nil

The mean temperature and humidity are obtained by applying to the mean of the 10a, 10p, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,

JOHN ELIOT,

The 21st November 1887.

Offg. Meteorological Reporter to the Govt. of India.

## Results of the Meteorological Observations taken at the Alipore Observatory from 13th to 19th November 1887.

| M     | D.   | Maximum in sun | Number of hours of bright sunshine. | Mean pressure barometer at 59 Fohr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | Prevailing direction. | Miles recorded. | RAIN.   | WEATHER.                                |
|-------|------|----------------|-------------------------------------|-------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|-----------------|---------|---|
|       |      |                |                                     |                                     | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. |                       |                 |         |   |
| 1887. |      | O              |                                     | Inches.                             | O            | O        | O      | O        | O              | Inches.         | O          | %         |                       |                 | Inches. |   |
| Nov.  | 13th | 135.2          | 10.4                                | 29.943                              | 69.7         | 80.1     | 19.7   | 60.4     | 63.0           | 0.488           | 58.2       | 69        | NW and WNW ...        | 90              | Nil     | Clear, $\Delta$ .                       |
| "     | 14th | 133.0          | 10.2                                | .920                                | 70.3         | 79.7     | 18.2   | 61.5     | 62.4           | .461            | 56.6       | 62        | NNW and WSW ...       | 103             | "       | Clear, $\Delta$ .                       |
| "     | 15th | 131.4          | 10.1                                | .934                                | 70.4         | 80.8     | 20.6   | 60.2     | 64.7           | .540            | 61.1       | 73        | NNW and N by W        | 43              | "       | Chiefly clear, $\Delta$ .               |
| "     | 16th | 133.4          | 10.0                                | .936                                | 71.4         | 82.5     | 20.5   | 62.0     | 66.4           | .586            | 63.4       | 77        | N by W and NNW        | 62              | "       | Chiefly clear, $\Delta$ .               |
| "     | 17th | 132.1          | 9.7                                 | .933                                | 72.9         | 82.7     | 18.1   | 64.6     | 68.2           | .629            | 65.5       | 79        | NNW and NW by W       | 44              | "       | Chiefly clear, $\Delta$ .               |
| "     | 18th | 142.0          | 7.6                                 | .980                                | 74.4         | 83.0     | 15.8   | 67.2     | 70.3           | .680            | 68.2       | 82        | NW by W and ESE       | 70              | "       | Partially cloudy, $\Delta$ , $\Delta$ . |
|       | 19th | 138.7          | 6.5                                 | 30.042                              | 75.4         | 83.5     | 13.3   | 70.2     | 69             | .623            | 65.2       | 71        | ESE, NNW and N...     | 54              | "       | Partially cloudy, o. g.                 |

The mean pressure of the seven days

The average pressure of the corresponding period for 24 years, S. G.'s Office

Inches.  
29.955  
29.979

The total number of hours of bright sunshine

The maximum possible number of hours of sunshine

Hours  
64.5  
77.0

The mean temperature of the seven days

The average temperature of the corresponding period for 24 years, S. G.'s Office

The extreme variation of temperature

The maximum temperature

°  
72.1  
75.0  
23.3  
83.5

The highest velocity of the wind in one hour

The highest pressure of wind on one square foot

Miles.  
9  
lbs.  
Not measureable.

The mean relative humidity

The average relative humidity of the corresponding period for 24 years, S. G.'s Office

°/  
73  
71

The total fall of rain from 13th to 19th November 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

The total fall from 1st January to 19th November 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

Inches.  
Nil  
0.04  
58.07  
65.14

The mean pressure, temperature, &amp;c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's observations or August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, g gloomy,  $\Delta$  fog,  $\Delta$  due

JOHN ELIOT,

Off. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA :  
Calcutta, the 21st November 1887.

## MEMORANDUM.

DURING the week ending 29th October 1887, the returns of the principal Municipalities in Bengal presented the following results:—

1. That the ratios per *mille* of births and deaths for the period above referred to stand at—for births 23·5 and for deaths at 27·6 the records of the preceding week ending 22nd October presenting nearly the same proportions, viz., 22·9 and 28·0 respectively.

2. That in the following Municipalities births and deaths were recorded at the highest rates:—

| <i>Births.</i> |     |     |                            | <i>Deaths.</i>      |     |     |                            |
|----------------|-----|-----|----------------------------|---------------------|-----|-----|----------------------------|
|                |     |     | Ratio per<br><i>mille.</i> |                     |     |     | Ratio per<br><i>mille.</i> |
| Durbhanga      | ... | ... | 52·7                       | Serampore           | ... | ... | 49·1                       |
| Narainanj      | ... | ... | 47·5                       | Utterpara           | ... | ... | 47·3                       |
| Serampore      | ... | ... | 43·2                       | Suburbs of Calcutta | ... | ... | 45·3                       |
| Monghyr        | ... | ... | 40·7                       | Durbhanga           | ... | ... | 44·8                       |
| Bhagulpore     | ... | ... | 38·0                       | Gya                 | ... | ... | 40·3                       |
| Utterpara      | ... | ... | 37·7                       | Beaulcah            | ... | ... | 39·4                       |
| Gya            | ... | ... | 37·6                       | Purneah             | ... | ... | 38·1                       |
|                |     |     |                            | Bhagulpore          | ... | ... | 37·1                       |
|                |     |     |                            | Narainanj           | ... | ... | 33·1                       |
|                |     |     |                            | Monghyr             | ... | ... | 32·5                       |
|                |     |     |                            | Ranaghat            | ... | ... | 29·9                       |
|                |     |     |                            | Puri                | ... | ... | 29·4                       |

3. That the mean rates at which the principal diseases proved fatal exhibit no marked variations in comparison with the preceding week, thus—

|                  | Ratio per <i>mille</i> during the weeks ending— |                 |
|------------------|---|-----------------|
|                  | 29th Oct. 1887.                                 | 22nd Oct. 1887. |
| Cholera          | 1·7   | 2·3             |
| Small-pox        | ...   | ·03             |
| Fever            | 13·4  | 13·2            |
| Bowel-complaints | 4·6   | 4·5             |
| Injury           | ·1  | ·1              |
| Other causes     | 7·7   | 7·9             |

4. That eliminating small pox, from which no death was reported, bowel-complaints, which proved noticeably severe only in the Serampore town, viz., at the rate of 11·8 per 1,000 of population, and injury, the casualties from which were nowhere above normal, cholera, fever and the maladies coming under the head of "Other causes" proved most fatal in the following Municipalities:—

| <i>Cholera.</i>     |                            | <i>Fever.</i>       |                            | <i>Other causes.</i> |                            |
|---------------------|----------------------------|---------------------|----------------------------|----------------------|----------------------------|
|                     | Ratio per<br><i>mille.</i> |                     | Ratio per<br><i>mille.</i> |                      | Ratio per<br><i>mille.</i> |
| Durbhanga           | 7·9                        | Beaulcah            | 31·5                       | Narainanj            | 16·5                       |
| Monghyr             | 7·2                        | Purneah             | 31·1                       | Gya                  | 14·3                       |
| Suburbs of Calcutta | 3·3                        | Ranaghat            | 29·9                       | Serampore            | 13·7                       |
|                     |                            | Durbhanga           | 23·6                       | Bhagulpore           | 13·6                       |
|                     |                            | Suburbs of Calcutta | 21·3                       | Suburbs of Calcutta  | 12·8                       |
|                     |                            | Kishnaghur          | 20·8                       | Puri                 | 12·6                       |
|                     |                            |                     |                            | Dacca                | 10·4                       |

5. That the mortality in relation to *Sex*, *Class* and *Age*, stood as follows:—

| <i>According to Sex.</i>                           |                            | <i>According to Class.</i> |                            | <i>According to Age.</i> |                            |
|--|----------------------------|----------------------------|----------------------------|--------------------------|----------------------------|
|  | Ratio per<br><i>mille.</i> |                            | Ratio per<br><i>mille.</i> |                          | Ratio per<br><i>mille.</i> |
| Males  | 27·2                       | Christians                 | 13·0                       | Under 1 year             | 224·                       |
| Females  | 28·0                       | Hindus                     | 28·1                       | 1 and under 5 years      | 45·0                       |
| Ratio of male deaths to<br>every 100 female deaths | 110                        | Mahomedans                 | 27·1                       | 5 " 10 "                 | 18·3                       |
|  |                            |                            |                            | 10 " 15 "                | 12·7                       |
|  |                            |                            |                            | 15 " 20 "                | 17·8                       |
|  |                            |                            |                            | 20 " 30 "                | 17·1                       |
|  |                            |                            |                            | 30 " 40 "                | 18·2                       |
|  |                            |                            |                            | 40 " 50 "                | 21·4                       |
|  |                            |                            |                            | 50 " 60 "                | 21·8                       |
|  |                            |                            |                            | 60 years and upwards     | 58·8                       |

R. LIDDESDALE, M.D., *Deputy Surgeon-General,*  
*Sanitary Commissioner for Bengal.*

The 16th November 1887.



[illegible]

<sup>a</sup> A complete census of the Manupopo in the Hariluzle Municipality was recently taken, as the censuses of this section of the community, taken in February 1981, was not reliable owing to the European being at a minimum in that month. The number of the additive species was estimated by extrapolating from the census of the Manupopo in the Hariluzle Municipality taken in February 1981.



## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statements showing quantities of Goods carried during the month of September 1887.

## ORISSA CIRCLE.

## TALDUNDH CANAL SYSTEM.

LENGTH OF CANAL OPEN { Taldundah Canal ... 27 miles.  
Māchgong „ ... 4 „

| Number of<br>boats or<br>rafts.            | DESCRIPTION.                            | TOTAL GOVERNMENT AND PRIVATE. |         |            |  | PRIVATE.  |           | REMARKS. |
|--|---|-------------------------------|---------|------------|--|-----------|-----------|----------|
|  |   | Quantity—Tons.                |         |            | Value.   | Quantity. | Value.    |          |
|  |   | Up.                           | Down.   | Total.     | Rupees.  | Tons.     | Rupees.   |          |
| 1  | 1. Grain . . .                          | .....                         | 7       | 7          | 645  | 7         | 645       |          |
| .....                                      | 2. Cotton . . .                         | .....                         | .....   | .....      | .....  | .....     | .....     |          |
| 2  | 3. Oilseeds . . .                       | .....                         | 23      | 23         | 1,881  | 23        | 1,881     |          |
| .....                                      | 4. Salt . . .                           | .....                         | .....   | .....      | .....  | .....     | .....     |          |
| .....                                      | 5. Piece-goods . . .                    | .....                         | .....   | .....      | .....  | .....     | .....     |          |
| 5  | 6. Metal . . .                          | .....                         | 66      | 66         | 62   | 66        | 62        |          |
| 31   | 7. Building materials . . .             | .....                         | 560     | 560        | 581  | .....     | .....     |          |
| 3  | 8. Miscellaneous . . .                  | .....                         | 21      | 21         | 1,885  | 21        | 1,885     |          |
| 1  | 9. Fuel . . .                           | .....                         | 16      | 16         | 50   | 16        | 50        |          |
| .....                                      | 10. Timber . . .                        | .....                         | .....   | .....      | .....  | .....     | .....     |          |
| .....                                      | 11. Bamboos . . .                       | .....                         | .....   | .....      | .....  | .....     | .....     |          |
| 43   | 12. Total . . .                         | .....                         | 693     | 693        | 5,104  | 133       | 4,523     |          |
| 2  | 13. Total of same month last year . . . | .....                         | 14      | 14         | 848  | 14        | 848       |          |
|  |   | Up.                           | Down.   | Total.     |  |           | Rs. A. P. |          |
| Total number of boats plying cargo No.     |   | .....                         | 43      | 43         | Total tollage of month—<br>24+25+26              |           | 245 7 0   |          |
| Total number of boats plying passenger No. |   | 10                            | 1       | 11         | Total tollage of same month last year            |           | 9 9 0     |          |
| Ditto empty boats „                        |   | 36                            | 11      | 47         |  |           |           |          |
| Total registered tonnage, cargo            |   | 389                           | 1,137   | 1,526      | Memorandum of Tollage.                           |           |           |          |
| Total registered tonnage, passenger        |   | 286                           | 257     | 543        |  |           |           |          |
| Ton mileage                                |   | 6,304                         | 17,460  | 23,764     |  |           |           |          |
| Estimated value of cargo Rs.               |   | .....                         | 5,104   | 5,104      | 1. Balance not recovered on the 1st of the month |           | 19 3 0    |          |
| Number of passengers                       |   | 467                           | 4       | 471        | 2. Tollage per month                             |           | 245 7 0   |          |
| Rafts, bamboos ... c. ft.                  |   | .....                         | .....   | .....      |  |           |           |          |
| Do., bullahs „                             |   | .....                         | .....   | .....      |  |           |           |          |
| Estimated value of rafts Rs.               |   | .....                         | .....   | .....      |  |           |           |          |
| Tollage on boats „                         |   | 66 4 0                        | 179 3 0 | 245--0     | 3. Total   |           | 264 10 0  |          |
| Compounded tollage on boats ... Rs.        |   | .....                         | .....   | .....      | 4. Amount credited in the accounts of the month  |           | 224 5 0   |          |
| Tollage on rafts „                         |   | .....                         | .....   | .....      |  |           |           |          |
| Total tollage on boats per ton-mile        |   | .....                         | .....   | 1.98 Pies. |  |           |           |          |
| Ditto on rafts per 100 cubic feet          |   | .....                         | .....   | .....      | 5. Balance due at the end of the month           |           | 40 5 0    |          |

## KENDRAPARA CANAL SYSTEM.

LENGTH OF CANAL OPEN, 75 MILES.

| Number of boats or rafts. | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |                  |                   |            | PRIVATE.          |            | REMARKS. |
|---------------------------|---------------------------------------|-------------------------------|------------------|-------------------|------------|-------------------|------------|----------|
|                           |                                       | Quantity—Tons.                |                  |                   | Value.     | Quantity.         | Value.     |          |
|                           |                                       | Up.                           | Down.            | Total.            | Rupees.    | Tons.             | Rupees.    |          |
| 70                        | 1. Grain ...                          | 199                           | 506              | 705               | 48,750     | 705               | 48,750     |          |
| .....                     | 2. Cotton ...                         | .....                         | .....            | .....             | .....      | .....             | .....      |          |
| 10                        | 3. Oilseeds ...                       | 5                             | 119              | 124               | 12,230     | 124               | 12,230     |          |
| 16                        | 4. Salt ...                           | 122                           | 32               | 154               | 12,710     | 154               | 12,710     |          |
| .....                     | 5. Piece-goods ...                    | .....                         | .....            | .....             | .....      | .....             | .....      |          |
| .....                     | 6. Metal ...                          | .....                         | .....            | .....             | .....      | .....             | .....      |          |
| 27                        | 7. Building materials ...             | 41                            | 321              | 364               | 4,890      | 273               | 4,730      |          |
| 115                       | 8. Miscellaneous ...                  | 794                           | 258              | 1,052             | 2,16,290   | 1,052             | 2,16,290   |          |
| 8                         | 9. Fuel ...                           | 53                            | 2                | 55                | 190        | 55                | 190        |          |
| 2 rafts                   | 10. Timber ...                        | .....                         | 48 No.           | 48 No.            | 125        | 48 No.            | 125        |          |
| 1 raft                    | 11. Bamboos ...                       | 150 No.                       | .....            | 150 No.           | 5          | 150 No.           | 5          |          |
| 46 & rafts }              | 12. Total ...                         | { 1,216 & 150 No.             | { 1,238 & 48 No. | { 2,454 & 198 No. | { 2,95,190 | { 2,363 & 198 No. | { 2,95,030 |          |
| 464                       | 13. Total of same month last year ... | 2,163                         | 1,817            | 3,980             | 3,11,570   | 3,966             | 3,11,470   |          |

|   | Up.       | Down.     | Total.    |  | Ra. A.   |
|---|-----------|-----------|-----------|--|----------|
| 4. Total number of boats plying cargo No.     | 132       | 114       | 246       | Total tollage of month—<br>24 + 25 + 26 ...      | 3,567 9  |
| 5. Total number of boats plying passenger No. | 89        | 37        | 76        | Total tollage of same month last year ...        | 3,092 6  |
| 51. Ditto empty boats ...                     | 124       | 98        | 222       | <i>Memorandum of Tollage.</i>                    |          |
| 6. Total registered tonnage, cargo ...        | 2,159     | 1,919     | 4,078     |  |          |
| 7. Total registered tonnage, passenger ...    | 933       | 885       | 1,818     |  |          |
| 8. Ton mileage ...                            | 51,183    | 53,490    | 1,04,673  | 1. Balance not recovered on the 1st of the month | 5,433 14 |
| 9. Estimated value of cargo Ra.               | 1,72,100  | 1,22,660  | 2,95,060  | 2. Tollage per month ...                         | 3,567 9  |
| 0. Number of passengers ...                   | 1,915     | 1,396     | 3,311     |  |          |
| 1. Rafts, bamboos No.                         | 150       | .....     | 150       |  |          |
| 2. Do., timbers No.                           | .....     | 48        | 48        |  |          |
| 3. Estimated value of rafts Ra.               | 5         | 125       | 130       | 3. Total ...                                     | 9,001 7  |
| 4. Tollage on boats „                         | 1,919-3-3 | 1,635-1-1 | 3,554-4-4 |  |          |
| 5. Compounded tollage on boats Ra.            | .....     | .....     | .....     | 4. Amount credited in the accounts of the month  | 2,867 4  |
| 6. Tollage on rafts „                         | 0-1-6     | 13-3-6    | 13-6-0    |  |          |
| 7. Total tollage on boats per ton-mile ...    | .....     | .....     | 0-0-6 5   |  |          |
| 8. Ditto on rafts per 100 cubic feet ...      | .....     | .....     | 6-9-0     | 5. Balance due at the end of the month ...       | 6,144 3  |

## HIGH LEVEL CANAL, RANGE I.

LENGTH OF CANAL OPEN, 33 MILES.

| Number of boats or rafts. | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |         |                    |              | PRIVATE.           |              | REMARKS. |
|---------------------------|---------------------------------------|-------------------------------|---------|--------------------|--------------|--------------------|--------------|----------|
|                           |                                       | Quantity—Tons.                |         |                    | Value.       | Quantity.          | Value.       |          |
|                           |                                       | Up.                           | Down.   | Total.             | Rupees.      | Tons.              | Rupees.      |          |
| 98                        | 1. Grain ...                          | 454                           | .....   | 454                | 26,310       | 454                | 26,310       |          |
| 2                         | 2. Cotton ...                         | .....                         | 21      | 21                 | 6,000        | 21                 | 6,000        |          |
| .....                     | 3. Oilseeds ...                       | .....                         | .....   | .....              | .....        | .....              | .....        |          |
| 49                        | 4. Salt ...                           | .....                         | 269     | 269                | 22,500       | 269                | 22,500       |          |
| .....                     | 5. Piece-goods ...                    | .....                         | .....   | .....              | .....        | .....              | .....        |          |
| .....                     | 6. Metal ...                          | .....                         | .....   | .....              | .....        | .....              | .....        |          |
| 2                         | 7. Building materials ...             | 7                             | 7       | 14                 | 100          | 14                 | 100          |          |
| 59                        | 8. Miscellaneous ...                  | 130                           | 132     | 262                | 45,660       | 262                | 45,660       |          |
| 8                         | 9. Fuel ...                           | 34                            | .....   | 34                 | 110          | 34                 | 110          |          |
| 1 raft                    | 10. Timber ...                        | 21 No.                        | .....   | 21 No.             | 50           | 21 No.             | 50           |          |
| .....                     | 11. Bamboos ...                       | .....                         | .....   | .....              | .....        | .....              | .....        |          |
| 218 & 1 raft              | 12. Total ...                         | { 625 & 21 No. }              | { 429 } | { 1,054 & 21 No. } | { 1,00,730 } | { 1,054 & 21 No. } | { 1,00,730 } |          |
| 295                       | 13. Total of same month last year ... | 667                           | 525     | 1,192              | 92,460       | 1,131              | 92,260       |          |

|  | Up.     | Down.   | Total.   |  | Rs. A. P. |
|--|---------|---------|----------|--|-----------|
| 4. Total number of boats plying cargo No.        | 135     | 83      | 218      | Total tollage of month—<br>24 + 25 + 26 ...          | 626 8 3   |
| 5. Total number of boats plying passenger No.    | 4       | 3       | 7        | Total tollage of same month last year ...            | 646 6 9   |
| 5½. Total number of empty boats No.              | 18      | 71      | 89       | <i>Memorandum of Tollage.</i>                        |           |
| 6. Total registered tonnage, cargo ...           | 961     | 756     | 1,717    |  |           |
| 7. Total registered tonnage, passenger ...       | 16      | 13      | 29       |  |           |
| 8. Ton-mileage ...                               | 19,685  | 13,984  | 33,669   |  | Rs. A. P. |
| 9. Estimated value of cargo ...                  | 51,660  | 49,020  | 1,00,680 | 1. Balance not recovered on the 1st of the month ... | 141 7 9   |
| 0. Number of passengers ...                      | 11      | 13      | 24       | 2. Tollage per month ...                             | 626 8 3   |
| 1. Rafts, bamboos c. ft. ....                    | .....   | .....   | .....    | 3. Total ...   | 768 0 0   |
| 2. Do., timbers No. ....                         | 21      | .....   | 21       | 4. Amount credited in the accounts of the month ...  | 304 14 0  |
| 3. Estimated value of rafts ...                  | 50      | .....   | 50       | 5. Balance due at the end of the month ...           | 463 2 0   |
| 4. Tollage on boats Rs. ....                     | 329-7-0 | 279-3-3 | 608-10-3 |  |           |
| 5. Compounded tollage on boats Rs. ....          | .....   | .....   | .....    |  |           |
| 6. Tollage on rafts „ ....                       | 17-14-0 | .....   | 17-14-0  |  |           |
| 7. Total tollage on boats per ton-mile ...       | .....   | .....   | 0-0-3-5  |  |           |
| 8. Total tollage on rafts per 100 cubic feet ... | .....   | .....   | 20-13-11 |  |           |

## HIGH LEVEL CANAL, RANGE II.

LENGTH OF CANAL OPEN, 12½ MILES.

| Number of boats or rafts. | DESCRIPTION.                         | TOTAL GOVERNMENT AND PRIVATE. |                    |                    |         | PRIVATE.            |         | REMARKS. |
|---------------------------|--------------------------------------|-------------------------------|--------------------|--------------------|---------|---------------------|---------|----------|
|                           |                                      | Quantity—Tons.                |                    |                    | Value.  | Quantity.           | Value.  |          |
|                           |                                      | Up.                           | Down.              | Total.             | Rupees. | Tons.               | Rupees. |          |
| 62                        | 1. Grain ...                         | 209                           | 6                  | 215                | 9,125   | 215                 | 9,125   |          |
| .....                     | 2. Cotton ...                        | .....                         | .....              | .....              | .....   | .....               | .....   |          |
| 15                        | 3. Oilseeds ...                      | .....                         | 61½                | 61½                | 4,324   | 61½                 | 4,324   |          |
| 8                         | 4. Salt ...                          | 7                             | 41½                | 48½                | 6,447   | 48½                 | 6,447   |          |
| 6                         | 5. Piece-goods ...                   | .....                         | 13½                | 13½                | 3,910   | 13½                 | 3,910   |          |
| .....                     | 6. Metal ...                         | .....                         | .....              | .....              | .....   | .....               | .....   |          |
| 49                        | 7. Building materials ...            | .....                         | 442½               | 442½               | 327     | .....               | .....   |          |
| 23                        | 8. Miscellaneous ...                 | 9                             | 67                 | 76                 | 9,525   | 76                  | 9,525   |          |
| 1                         | 9. Fuel ...                          | .....                         | 2                  | 2                  | 6       | 2                   | 6       |          |
| 1 raft                    | 10. Timber ...                       | .....                         | 61 No.             | 61 No.             | 180     | 61 No.              | 180     |          |
| .....                     | 11. Bamboos ...                      | .....                         | .....              | .....              | .....   | .....               | .....   |          |
| 164                       | 12. Total ...                        | 225                           | 634<br>&<br>61 No. | 859<br>&<br>61 No. | 33,844  | 416½<br>&<br>61 No. | 33,517  |          |
| 203                       | 13. Total of same month last year .. | 768                           | 735                | 1,503              | 30,504  | 679                 | 27,587  |          |

|   | Up.     | Down.   | Total.   |  | Rs. A. P. |
|---|---------|---------|----------|--|-----------|
| 4. Total number of boats plying cargo ... No.     | 64      | 100     | 164      | Total tollage of month—<br>24+25+26 ...              | 352 6 9   |
| 5. Total number of boats plying passenger ... No. | 2       | 2       | 4        | Total tollage of same month last year ...            | 232 15 3  |
| 5½. Total number of empty boats ...               | 74      | 47      | 121      | <i>Memorandum of Tollage.</i>                        |           |
| 3. Total registered tonnage, cargo ...            | 450     | 1,268   | 1,718    |  |           |
| 4. Total registered tonnage, passenger ...        | 11      | 10      | 21       |  |           |
| Ton mileage ...                                   | 8,866   | 13,212  | 22,078   |  |           |
| Estimated value of cargo Rs.                      | 10,217  | 23,447  | 33,664   | 1. Balance not recovered on the 1st of the month ... | 62 8 9    |
| Number of passengers ...                          | 161     | 147     | 308      | 2. Tollage per month ...                             | 352 6 9   |
| Rafts, bamboos c. ft. ....                        | .....   | .....   | .....    | 3. Total ...   | 414 15 6  |
| Do., bullahs No. ....                             | .....   | 61      | 61       | 4. Amount credited in the accounts of the month ...  | 343 8 6   |
| Estimated value of rafts ...                      | .....   | 180     | 180      | 5. Balance due at the end of the month ...           | 71 7 0    |
| Tollage on boats Rs.                              | 115-5-9 | 236-5-6 | 351-11-3 |  |           |
| Compounded tollage on boats ... Rs.               | .....   | .....   | .....    |  |           |
| Tollage on rafts ..                               | .....   | 0-11-6  | 0-11-6   |  |           |
| Total tollage on boats per ton-mile ...           | .....   | .....   | 0-0-3 0  |  |           |
| Ditto on rafts per 100 cubic feet ...             | .....   | .....   | 1-3-0    |  |           |

## HIGH LEVEL CANAL, RANGE III.

LENGTH OF CANAL OPEN, 19½ MILES.

| Number of boats or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |         |         |  | PRIVATE.  |         | REMARKS.  |
|---------------------------|---|-------------------------------|---------|---------|--|-----------|---------|-----------|
|                           |   | Quantity—Tons.                |         |         | Value.   | Quantity. | Value.  |           |
|                           |   | Up.                           | Down.   | Total.  | Rupees.  | Tons.     | Rupees. |           |
| 35                        | 1. Grain ...                                  | 65                            | 3       | 68      | 4,005  | 68        | 4,005   |           |
| ...                       | 2. Cotton ...                                 | .....                         | .....   | .....   | .....  | .....     | .....   |           |
| 7                         | 3. Oilseeds ...                               | .....                         | 26      | 26      | 3,710  | 26        | 3,710   |           |
| 2                         | 4. Salt ...                                   | 4                             | 2½      | 6½      | 740  | 6½        | 740     |           |
| .....                     | 5. Piece-goods ...                            | .....                         | .....   | .....   | .....  | .....     | .....   |           |
| .....                     | 6. Metal ...                                  | .....                         | .....   | .....   | .....  | .....     | .....   |           |
| 15                        | 7. Building materials ...                     | .....                         | 154½    | 154½    | 269  | .....     | .....   |           |
| 7                         | 8. Miscellaneous ...                          | .....                         | 32½     | 32½     | 4,612  | 32½       | 4,612   |           |
| .....                     | 9. Fuel ...                                   | .....                         | .....   | .....   | .....  | .....     | .....   |           |
| .....                     | 10. Timber ...                                | .....                         | .....   | .....   | .....  | .....     | .....   |           |
| .....                     | 11. Bamboos ...                               | .....                         | .....   | .....   | .....  | .....     | .....   |           |
| 66                        | 12. Total ...                                 | 69                            | 218½    | 287½    | 13,336   | 133       | 13,067  |           |
| 83                        | 13. Total of same month last year.            | 496                           | 251     | 747     | 20,684   | 189       | 20,684  |           |
|                           |   | Up.                           | Down.   | Total.  |  |           |         | Rs. A. P. |
| 14.                       | Total number of boats plying cargo No.        | 35                            | 31      | 66      | Total tollage of month—<br>24 + 25 + 26 ...          |           |         | 119 2 3   |
| 15.                       | Total number of boats plying passenger No.    | 1                             | 1       | 2       | Total tollage of same month last year ...            |           |         | 113 4 0   |
| 15½.                      | Total number of empty boats ...               | 38                            | 23      | 61      |  |           |         |           |
| 6.                        | Total registered tonnage, cargo ...           | 138                           | 437     | 575     |  |           |         |           |
| 7.                        | Total registered tonnage, passenger ...       | .....                         | .....   | .....   |  |           |         |           |
| 8.                        | Ton-mileage ...                               | 3,796                         | 4,244   | 8,040   | 1. Balance not recovered on the 1st of the month ... |           |         | 0 15 6    |
| 9.                        | Estimated value of cargo ...                  | 4,109                         | 9,227   | 13,336  | 2. Tollage per month ...                             |           |         | 119 2 3   |
| 0.                        | Number of passengers ...                      | 159                           | 122     | 281     | 3. Total ...   |           |         | 120 1 9   |
| 1.                        | Rafts, bamboos c. ft. ....                    | .....                         | .....   | .....   | 4. Amount credited in the accounts of the month ...  |           |         | 85 2 6    |
| 2.                        | Do., bullahs " ....                           | .....                         | .....   | .....   | 5. Balance due at the end of the month ...           |           |         | 34 15 3   |
| 3.                        | Estimated value of rafts Rs. ....             | .....                         | .....   | .....   |  |           |         |           |
| 4.                        | Tollage on boats " 38-8-9                     | 80-9-6                        | 1-9-2-3 |         |  |           |         |           |
| 5.                        | Compounded tollage on boats Rs. ....          | .....                         | .....   |         |  |           |         |           |
| 6.                        | Tollage on rafts " ....                       | .....                         | .....   |         |  |           |         |           |
| 7.                        | Total tollage on boats per ton-mile ...       | .....                         | .....   | 2-8 pie |  |           |         |           |
| 8.                        | Total tollage on rafts per 100 cubic feet ... | .....                         | .....   | .....   |  |           |         |           |

## SOUTH-WESTERN CIRCLE.

## MIDNAPORE CANAL.

LENGTH OF CANAL OPEN, 53 MILES.

| Number of boats or rafts. | DESCRIPTION.                       | TOTAL GOVERNMENT AND PRIVATE. |                   |                        |           | PRIVATE.               |           | REMARKS. |
|---------------------------|------------------------------------|-------------------------------|-------------------|------------------------|-----------|------------------------|-----------|----------|
|                           |                                    | Quantity—Tons.                |                   |                        | Value.    | Quantity.              | Value.    |          |
|                           |                                    | Up.                           | Down.             | Total.                 | Rupees.   | Tons.                  | Rupees.   |          |
| 871                       | 1. Grain ...                       | 5,388                         | 799               | 6,187                  | 2,82,981  | 6,187                  | 2,82,981  |          |
| 3                         | 2. Cotton ...                      | .....                         | 4.                | 4                      | 2,205     | 4                      | 2,205     |          |
| 42                        | 3. Oilseeds ...                    | 25                            | 255               | 280                    | 30,649    | 250                    | 30,649    |          |
| 110                       | 4. Salt ...                        | .....                         | 1,236             | 1,236                  | 90,837    | 1,236                  | 90,837    |          |
| 11                        | 5. Piece-goods ...                 | 13                            | .....             | 13                     | 24,500    | 13                     | 24,500    |          |
| 37                        | 6. Metal ...                       | 59                            | 130               | 189                    | 1,55,875  | 189                    | 1,55,875  |          |
| 54                        | 7. Building materials ...          | 165                           | 97                | 262                    | 3,663     | 262                    | 3,663     |          |
| 544                       | 8. Miscellaneous ...               | 968                           | 841               | 1,809                  | 4,41,402  | 1,809                  | 4,41,402  |          |
| 51                        | 9. Fuel ...                        | 132                           | 187               | 319                    | 3,298     | 319                    | 3,298     |          |
| 2 rafts                   | 10. Timber ...                     | 10,045 c. ft.                 | 78 c. ft.         | 10,123 c. ft.          | 12,897    | 10,123 c. ft.          | 12,897    |          |
| 2 "                       | 11. Bamboos ...                    | 25 "                          | 12 "              | 37 "                   | 4         | 37 "                   | 4         |          |
| 723 & 1 rafts             | 12. Total ...                      | 6,750 & 10,070 c. ft.         | 3,549 & 90 c. ft. | 10,299 & 10,160 c. ft. | 10,48,311 | 10,299 & 10,160 c. ft. | 10,48,311 |          |
| 811 & 3 rafts             | 13. Total of same month last year. | 6,575 & 7,884 c. ft.          | 4,374             | 10,949 & 7,884 c. ft.  | 12,54,258 | 10,949 & 7,884 c. ft.  | 12,54,258 |          |

|   | Up.       | Down.     | Total.     |  | Rs. A. P.  |
|---|-----------|-----------|------------|--|------------|
| 1. Total number of boats plying cargo No.         | 1,006     | 717       | 1,723      | Total tollage of month—<br>24 + 25 + 26 ...          | 9,765 11 6 |
| 5. Total number of boats plying passenger No.     | 36        | 683       | 1,319      | Total tollage of same month last year ...            | 8,517 6 6  |
| 1. Total number of empty boats No                 | 525       | 726       | 1,251      |  |            |
| 3. Total registered tonnage, cargo ... Tons       | 14,945    | 9,527     | 24,472     | Memorandum of Tollage.                               |            |
| 7. Total registered tonnage, passenger ... Tons   | 3,102     | 2,741     | 5,843      |  |            |
| 8. Total registered tonnage, empty ...            | 1,924     | 3,142     | 5,066      |  |            |
| 9. Ton-mileage ...                                | 3,92,876  | 2,40,674  | 6,33,550   | 1. Balance not recovered on the 1st of the month ... | 6,893 8 2  |
| 10. Estimated value of cargo Rs.                  | 4,84,984  | 5,50,426  | 10,35,410  | 2. Tollage per month ...                             | 9,765 11 6 |
| 11. Number of passengers No.                      | 5,911     | 512       | 6,423      | 3. Total ...   | 16,669 3 8 |
| 12. Rafts, bamboos c. ft.                         | 25        | 12        | 37         |  |            |
| 13. Do., bullahs "                                | 10,045    | 78        | 10,123     | 4. Amount paid into treasury during the month ...    | 8,480 7 6  |
| 14. Estimated value of rafts. ...                 | 12,869    | 32        | 12,901     | 5. Balance due at the end of the month ...           | 8,178 12 3 |
| 15. Tollage on boats Rs.                          | 5,517-5-9 | 3,906-5-0 | 9,423-10-9 |  |            |
| 16. Compounded tollage on boats ... Rs            | .....     | .....     | .....      |  |            |
| 17. Tollage on rafts "                            | 341-12-0  | 0-4-9     | 342-0-9    |  |            |
| 18. Total tollage on boats per ton-mile Pie       | .....     | .....     | 2-9 pies   |  |            |
| 19. Total tollage on rafts per 100 cubic feet Rs. | .....     | .....     | 3-5-9      |  |            |



**HIDGELLER TIDAL CANAL.**  
**LENGTH OF CANAL OPEN, 29 MILES.**

| Number of boats or rafts. | DESCRIPTION.                       | TOTAL GOVERNMENT AND PRIVATE. |                         |                         |            | PRIVATE.                |            |
|---------------------------|------------------------------------|-------------------------------|-------------------------|-------------------------|------------|-------------------------|------------|
|                           |                                    | Quantity—Tons.                |                         |                         | Value.     | Quantity.               | Value.     |
|                           |                                    | Up.                           | Down.                   | Total.                  | Rupces.    | Tons.                   | Rupces.    |
| 450                       | 1. Grain ...                       | 2,954                         | 11                      | 2,965                   | 88,990     | 2,965                   | 88,990     |
| .....                     | 2. Cotton ...                      | .....                         | .....                   | .....                   | .....      | .....                   | .....      |
| .....                     | 3. Oilseeds ...                    | .....                         | .....                   | .....                   | .....      | .....                   | .....      |
| 54                        | 4. Salt ...                        | .....                         | 474                     | 474                     | 33,270     | 474                     | 33,270     |
| 16                        | 5. Piece-goods ...                 | .....                         | 64                      | 64                      | 44,500     | 64                      | 44,500     |
| 6                         | 6. Metal ...                       | .....                         | 10                      | 10                      | 2,360      | 4                       | 1,000      |
| 9                         | 7. Building materials ...          | 9                             | 44                      | 53                      | 390        | 53                      | 390        |
| 861                       | 8. Miscellaneous ...               | 978                           | 707                     | 1,685                   | 1,58,480   | 1,685                   | 1,58,480   |
| 18                        | 9. Fuel ...                        | 30                            | 72                      | 102                     | 1,279      | 102                     | 1,279      |
| 11 rafts                  | 10. Timber ...                     | .....                         | 410 c. ft.              | 410 c. ft.              | 616        | 410 c. ft.              | 616        |
| 1 raft                    | 11. Bamboos ...                    | .....                         | 440 c. ft.              | 440 c. ft.              | 60         | 440 c. ft.              | 60         |
| 414 & 12 rafts            | 12. Total ...                      | { 3,971<br>.....              | { 1,382 &<br>850 c. ft. | { 5,353 &<br>850 c. ft. | { 3,29,945 | { 5,347 &<br>850 c. ft. | { 3,28,585 |
| 180 & 9 rafts             | 13. Total of same month last year. | { 3,065                       | { 1,073 &<br>531 c. ft. | { 4,138 &<br>531 c. ft. | { 2,60,591 | { 4,137 &<br>531 c. ft. | { 2,60,561 |

|   | Up.        | Down.     | Total.    |  | Rs. A. P.  |
|---|------------|-----------|-----------|--|------------|
| 1. Total number of boats plying cargo No.         | 699        | 715       | 1,414     | Total tollage of month—<br>24 + 25 + 26 ...          | 4,762 4 6  |
| 2. Total number of boats plying passenger No.     | 62         | 61        | 123       | Total tollage of same month last year                | 3,890 0 0  |
| 3. Total registered tonnage, cargo ... Tons       | 8,672      | 5,557     | 14,229    | <i>Memorandum of Tollage.</i>                        |            |
| 4. Total registered tonnage, passenger ... Tons   | 480        | 438       | 918       |  |            |
| 5. Ton-mileage ...                                | 159,802    | 107,713   | 267,515   |  | Rs. A. P.  |
| 6. Estimated value of cargo Rs.                   | 1,14,812   | 2,14,457  | 3,29,269  | 1. Balance not recovered on the 1st of the month ... | 1,467 11 0 |
| 7. Number of passengers No.                       | 893        | 705       | 1,598     |  |            |
| 8. Rafts, bamboos c. ft.                          | .....      | 440       | 440       | 2. Tollage per month ...                             | 4,762 4 6  |
| 9. Do., bullahs „                                 | .....      | 410       | 410       |  |            |
| 10. Estimated value of rafts Rs.                  | .....      | 676       | 676       | 3. Total ...   | 6,229 15 6 |
| 11. Tollage on boats „                            | 2,670-15-3 | 1,745-9-6 | 4,416-8-9 |  |            |
| 12. Compounded tollage on boats ... Rs.           | 124-9-9    | 140-7-6   | 265-1-3   | 4. Amount paid into treasury during the month ...    | 4,060 3 6  |
| 13. Tollage on rafts „                            | .....      | 80-10-6   | 80-10-6   |  |            |
| 14. Total tollage on boats per ton-mile ...       | .....      | .....     | 0-0-3     |  |            |
| 15. Total tollage on rafts per 100 cubic feet ... | .....      | .....     | 9-7-9     | 5. Balance due at the end of the month ...           | 2,169 12 0 |

**SONE CIRCLE.**  
**PATNA CANAL SYSTEM.**  
**LENGTH OF CANAL OPEN, 86½ MILES.**

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE.  |          | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|-------|--------|----------|-----------|----------|----------|
|                           |                                   | Quantity—Tons.                |       |        | Value.   | Quantity. | Value.   |          |
|                           |                                   | Up.                           | Down. | Total. | Rupees.  | Tons.     | Rupees.  |          |
| 9                         | 1. Grain ...                      | .....                         | 82    | 82     | 5,996    | 82        | 5,996    |          |
| .....                     | 2. Cotton ...                     | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| 12                        | 3. Oilseeds ...                   | .....                         | 190   | 190    | 17,415   | 190       | 17,415   |          |
| 3                         | 4. Salt ...                       | 70                            | ..... | 70     | 6,086    | 70        | 6,086    |          |
| 40                        | 5. Piece-goods ...                | 175                           | 67    | 242    | 44,362   | 237       | 44,112   |          |
| .....                     | 6. Metal ...                      | 11                            | ..... | 11     | 6,131    | 11        | 6,131    |          |
| 19                        | 7. Building materials ...         | .....                         | 230   | 230    | 1,071    | 155       | 870      |          |
| 52                        | 8. Miscellaneous ...              | 95                            | 368   | 463    | 77,835   | 463       | 77,835   |          |
| .....                     | 9. Fuel ...                       | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| .....                     | 10. Timber ...                    | .....                         | ..... | .....  | .....    | .....     | .....    |          |
| 1                         | 11. Bamboos ...                   | 7                             | ..... | 7      | 50       | 7         | 50       |          |
|                           | Ditto rafts.                      | .....                         | 3     | 3      | 40       | 3         | 40       |          |
| 136                       | 12. Total ...                     | 358                           | 940   | 1,298  | 1,58,986 | 1,218     | 1,58,535 |          |
| 151                       | 13. Total of same month last year | 348                           | 1,346 | 1,694  | 2,10,226 | 1,672     | 2,09,551 |          |

|   | Up.     | Down.      | Total.    |  | Rs. A. P.  |
|---|---------|------------|-----------|--|------------|
| 4. Total number of boats plying cargo No.     | 49      | 87         | 136       | Total tollage of month—<br>24 + 25 + 26 ...          | 1,571 0 9  |
| 5. Total number of boats plying passenger No. | 8       | 5          | 13        |  |            |
| 5½. Total number of empty boats No.           | 62      | 22         | 84        | Total tollage of same month last year ...            | 2,219 0 3  |
| 6. Total registered tonnage, cargo            | 606     | 1,556      | 2,162     |  |            |
| 7. Total registered tonnage, passenger        | 150     | 114        | 264       |  |            |
| 7½. Total registered tonnage, empty boats     | 60      | 170        | 230       |  |            |
|   |         |            |           | <i>Memorandum of Tollage.</i>                        |            |
| 3. Ton-mileage                                | 62,013  | 1,12,878   | 1,74,891  |  |            |
| 9. Estimated value of cargo Rs.               | 68,737  | 90,209     | 1,58,946  |  |            |
| 0. Number of passengers No.                   | 449½    | 311½       | 761       |  |            |
| 1. Rafts, bamboos c. ft.                      | .....   | 407        | 407       | 1. Balance not recovered on the 1st of the month ... | 203 14 0   |
| 2. Do., bullahs                               | .....   | .....      | .....     | 2. Tollage per month ...                             | 1,571 0 9  |
| 3. Estimated value of rafts Rs.               | .....   | 40         | 40        |  |            |
| 4. Tollage on boats                           | 417-9-9 | 1,002-14-9 | 1,420-8-6 | 3. Total ...   | 1,774 14 9 |
| 5. Compounded tollage on boats Rs.            | 75-0-0  | 75-0-0     | 150-0-0   |  |            |
| 6. Tollage on rafts                           | .....   | 0-8-3      | 0-8-3     | 4. Amount credited in the accounts of the month ...  | 1,458 10 0 |
| 7. Total tollage on boats per ton-mile        | .....   | .....      | 1·7 pias. |  |            |
| 8. Total tollage on rafts per 100 cubic feet  | .....   | .....      | 0-2-0     | 5. Balance due at the end of the month ...           | 316 4 9    |

## ARRAH CANAL SYSTEM.

LENGTH OF CANAL OPEN, 65 MILES.

| Number of boats or rafts. | Description.                               | TOTAL GOVERNMENT AND PRIVATE. |          |                    |  | PRIVATE.  |            | REMARKS. |
|---------------------------|--|-------------------------------|----------|--------------------|--|-----------|------------|----------|
|                           |  | Quantity—Tons.                |          |                    | Value.   | Quantity. | Value.     |          |
|                           |  | Up.                           | Down.    | Total.             | Rupees.  | Tons.     | Rupees.    |          |
| 16                        | 1. Grain ...                               | 41                            | 48       | 89                 | 4,493  | 89        | 4,493      |          |
| .....                     | 2. Cotton ...                              | 19                            | 1        | 20                 | 6,380  | 20        | 6,380      |          |
| 18                        | 3. Oilseeds ...                            | 9                             | 115      | 124                | 10,969   | 124       | 10,969     |          |
| 29                        | 4. Salt ...                                | 255                           | 8        | 263                | 23,882   | 263       | 23,882     |          |
| 2                         | 5. Piece-goods ...                         | 31                            | 3        | 34                 | 5,024  | 34        | 5,024      |          |
| .....                     | 6. Metal ...                               | 3                             | 1        | 4                  | 79,095   | 4         | 79,095     |          |
| 7                         | 7. Building materials ...                  | 29                            | 42       | 71                 | 412  | 36        | 132        |          |
| 98                        | 8. Miscellaneous ...                       | 361                           | 510      | 871                | 52,508   | 828       | 52,466     |          |
| 2                         | 9. Fuel ...                                | .....                         | 16       | 16                 | 225  | 16        | 225        |          |
| 1                         | 10. Timber ...                             | .....                         | 4        | 4                  | 135  | 4         | 135        |          |
| Rafts {                   | Firewood ...                               | .....                         | 41       | 41                 | 156  | 41        | 156        |          |
|                           | 11. Bamboos ...                            | .....                         | 1        | 1                  | 11   | 1         | 11         |          |
| 173                       | 12. Total ...                              | 748                           | 790      | 1,538              | 1,83,290   | 1,460     | 1,82,968   |          |
| 299                       | 13. Total of same month last year          | 584                           | 3,075    | 3,659              | 2,34,098   | 3,579     | 2,33,712   |          |
|                           |  | Up                            | Down.    | Total.             |  |           | Rs. A. P.  |          |
| 14.                       | Total number of boats plying cargo No.     | 86                            | 87       | 173                | Total tollage of month—<br>24 + 25 + 26 ...          |           | 1,148 10 0 |          |
| 15.                       | Total number of boats plying passenger No. | 20                            | 17       | 37                 |  |           |            |          |
| 15½.                      | Total number of empty boats No.            | 61                            | 56       | 117                | Total tollage of same month last year ...            |           | 2,221 12 0 |          |
| 16.                       | Total registered tonnage, cargo            | 1,126                         | 1,350    | 2,476              |  |           |            |          |
| 17.                       | Total registered tonnage, passenger        | 155                           | 100      | 255                | Memorandum of Tollage.                               |           |            |          |
| 17½.                      | Total registered tonnage, empty            | 193                           | 195      | 388                |  |           |            |          |
| 18.                       | Ton-mileage                                | 51,596                        | 70,889   | 1,22,485           |  |           |            |          |
| 19.                       | Estimated value of cargo Rs.               | 1,31,126                      | 51,997   | 1,83,123           | 1. Balance not recovered on the 1st of the month ... |           | 163 5 9    |          |
| 20.                       | Number of passengers No.                   | 1,381                         | 1,269    | 2,650              |  |           |            |          |
| 21.                       | Rafts, bamboos c. ft.                      | .....                         | 100      | 100                | 2. Tollage per month ...                             |           | 1,148 10 0 |          |
| 22.                       | Do., bullahs "                             | .....                         | .....    | .....              |  |           |            |          |
|                           | Do., Firewood "                            | .....                         | 3,075    | 3,075              |  |           |            |          |
| 23.                       | Estimated value of rafts Rs.               | .....                         | 167      | 167                |  |           |            |          |
| 24.                       | Tollage on boats "                         | 313-8-9                       | 440-13-6 | 754-6-3            | 3. Total ...   |           | 1,311 15 9 |          |
| 25.                       | Compounded tollage on boats Rs.            | 196-0-0                       | 196-0-0  | 392-0-0            | 4. Amount credited in the accounts of the month ...  |           | 1,251 11 0 |          |
| 26.                       | Tollage on rafts "                         | .....                         | 2-3-9    | 2 3-9              |  |           |            |          |
| 27.                       | Total tollage on boats per ton-mile        | .....                         | .....    | 1 pie              |  |           |            |          |
| 28.                       | Total tollage on rafts per 100 cubic feet  | .....                         | .....    | Rs. A. P.<br>0-1-1 | 5. Balance due at the end of the month ...           |           | 60 4 9     |          |

## BUXAR CANAL SYSTEM.

LENGTH OF CANAL OPEN, 67 MILES.

| Number of boats or rafts. | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |       |        |         | PRIVATE.  |         | REMARKS. |
|---------------------------|-----------------------------------|-------------------------------|-------|--------|---------|-----------|---------|----------|
|                           |                                   | Quantity—Tons.                |       |        | Value.  | Quantity. | Value.  |          |
|                           |                                   | Up.                           | Down. | Total. | Rupees. | Tons.     | Rupees. |          |
| 2                         | 1. Grain ...                      | 7                             | 17    | 24     | 1,968   | 24        | 1,968   |          |
| .....                     | 2. Cotton ...                     | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| .....                     | 3. Oilseeds ...                   | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| .....                     | 4. Salt ...                       | 3                             | ..... | 3      | 400     | 3         | 400     |          |
| .....                     | 5. Piece-goods ...                | 4                             | ..... | 4      | 6,250   | 4         | 6,250   |          |
| .....                     | 6. Metal ...                      | 5                             | ..... | 5      | 2,405   | 5         | 2,405   |          |
| 9                         | 7. Building materials             | 13                            | 113   | 126    | 2,693   | 22        | 388     |          |
| 47                        | 8. Miscellaneous ...              | 42                            | 473   | 515    | 41,562  | 515       | 41,562  |          |
| .....                     | 9. Fuel ...                       | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| Rafts                     | 10. Timber ...                    | .....                         | 4     | 4      | 75      | 4         | 75      |          |
| .....                     | 11. Bamboos ...                   | .....                         | ..... | .....  | .....   | .....     | .....   |          |
| 58                        | 12. Total ...                     | 74                            | 607   | 681    | 55,353  | 577       | 53,048  |          |
| 79                        | 13. Total of same month last year | 85                            | 990   | 1,075  | 87,431  | 895       | 81,381  |          |

|   | Up.     | Down.    | Total.  |  | Rs. A. P. |
|---|---------|----------|---------|--|-----------|
| 14. Total number of boats plying cargo No.        | 7       | 51       | 58      | Total tollage of month—<br>24 + 25 + 26 ...          | 456 10 11 |
| 15. Total number of boats plying passenger No.    | 9       | 9        | 18      |  |           |
| 15½. Total number of empty boats No.              | 23      | 21       | 44      | Total tollage of same month last year ...            | 540 10 0  |
| 16. Total registered tonnage, cargo ...           | 87      | 802      | 889     |  |           |
| 17. Total registered tonnage, passenger ...       | 243     | 243      | 486     |  |           |
| 17½. Total registered tonnage, empty ...          | 124     | 27       | 151     |  |           |
| 18. Ton-mileage ...                               | 8,582   | 27,640   | 36,222  | Memorandum of Tollage.                               |           |
| 19. Estimated value of cargo Rs.                  | 20,280  | 34,998   | 55,278  |  | Rs. A. P. |
| 20. Number of passengers No                       | 709     | 713½     | 1,422½  | 1. Balance not recovered on the 1st of the month ... | 20 13 3   |
| 21. Rafts, bamboos c. ft.                         | .....   | .....    | .....   |  |           |
| 22. Do., bullahs ..                               | .....   | 333      | 333     | 2. Tollage per month ...                             | 456 10 11 |
| 23. Estimated value of rafts Rs.                  | .....   | 75       | 75      |  |           |
| 24. Tollage on boats ..                           | 40-11-6 | 217-12-3 | 258-7-9 | 3. Total ...   | 477 8 2   |
| 25. Compounded tollage on boats Rs.               | 75-0-0  | 123-0-2  | 198-0-2 |  |           |
| 26. Tollage on rafts ..                           | .....   | 0-3-0    | 0-3-0   | 4. Amount credited in the accounts of the month ...  | 384 3 11  |
| 27. Total tollage on boats per ton-mile ...       | .....   | .....    | 24 pies |  |           |
| 28. Total tollage on rafts per 100 cubic feet ... | .....   | .....    | 10 pies | 5. Balance due at the end of the month ...           | 93 4 3    |

**ABSTRACT FOR THE MONTH OF SEPTEMBER 1887, AS COMPARED WITH THE CORRESPONDING MONTH OF THE PREVIOUS YEAR.**

| CANAL.                     | TRAFFIC, 1887-88. |    |    |                      |    |    | TRAFFIC, 1886-87. |    |    |                      |    |    | REMARKS. |
|----------------------------|-------------------|----|----|----------------------|----|----|-------------------|----|----|----------------------|----|----|----------|
|                            | During the month. |    |    | To end of the month. |    |    | During the month. |    |    | To end of the month. |    |    |          |
| Orissa Circle.             | Rs.               | A. | P. | Rs.                  | A. | P. | Rs.               | A. | P. | Rs.                  | A. | P. |          |
| Taldunda Canal System ...  | 245               | 7  | 0  | 2,280                | 3  | 6  | 9                 | 9  | 0  | 1,471                | 10 | 7  |          |
| Kondrapara Canal System    | 3,567             | 9  | 4  | 17,691               | 5  | 5  | 3,092             | 6  | 2  | 20,174               | 3  | 6  |          |
| High Level, Range I ...    | 626               | 8  | 3  | 2,964                | 13 | 6  | 646               | 6  | 9  | 3,333                | 4  | 9  |          |
| Ditto, " II ...            | 352               | 6  | 9  | 1,851                | 9  | 9  | 232               | 15 | 3  | 1,774                | 6  | 3  |          |
| Ditto, " III ...           | 119               | 2  | 3  | 595                  | 2  | 6  | 113               | 4  | 0  | 1,088                | 6  | 3  |          |
| Total Orissa Circle ...    | 4,911             | 1  | 7  | 25,383               | 2  | 8  | 4,094             | 9  | 2  | 27,841               | 15 | 4  |          |
| South-Western Circle.      |                   |    |    |                      |    |    |                   |    |    |                      |    |    |          |
| Midnapore Canal ...        | 9,765             | 11 | 6  | 60,015               | 2  | 6  | 8,517             | 6  | 6  | 59,820               | 12 | 3  |          |
| Hidgellee Tidal Canal ...  | 4,762             | 4  | 6  | 30,869               | 15 | 9  | 3,890             | 0  | 0  | 33,781               | 7  | 0  |          |
| Total South-Western Circle | 14,528            | 0  | 0  | 90,885               | 2  | 3  | 12,407            | 6  | 6  | 93,602               | 3  | 3  |          |
| Sone Circle.               |                   |    |    |                      |    |    |                   |    |    |                      |    |    |          |
| Patna Canal System ...     | 1,571             | 0  | 9  | 14,786               | 1  | 3  | 2,219             | 0  | 3  | 11,230               | 1  | 9  |          |
| Arrah ditto ...            | 1,118             | 10 | 0  | 8,637                | 11 | 1  | 2,221             | 12 | 0  | 10,554               | 10 | 7  |          |
| Buxar ditto ...            | 456               | 10 | 11 | 4,183                | 6  | 4  | 540               | 10 | 0  | 4,284                | 15 | 1  |          |
| Total Sone Circle ...      | 3,176             | 5  | 8  | 27,607               | 2  | 8  | 4,981             | 6  | 3  | 26,099               | 11 | 5  |          |
| GRAND TOTAL ...            | 22,615            | 7  | 3  | 1,43,855             | 7  | 7  | 21,483            | 5  | 11 | 1,17,543             | 14 | 0  |          |

**GOVERNMENT TRANSPORT SERVICE.**

| CANAL.                  | TRAFFIC, 1887-88. |        |                 |                      |        |                 | TRAFFIC, 1886-87. |        |                 |                      |        |                 |
|-------------------------|-------------------|--------|-----------------|----------------------|--------|-----------------|-------------------|--------|-----------------|----------------------|--------|-----------------|
|                         | During the month. |        |                 | To end of the month. |        |                 | During the month. |        |                 | To end of the month. |        |                 |
|                         | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. | Passen-<br>gers.  | Goods. | Total receipts. | Passen-<br>gers.     | Goods. | Total receipts. |
| <i>Orissa Circle.</i>   | No.               | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A. P.       | No.               | Mds.   | Rs. A. P.       | No.                  | Mds.   | Rs. A. P.       |
| High Level ...          | 220               | 332    | 242 0 8         | 1,810                | 2,722  | 2,379 5 6       | 464               | 778    | 539 3 8         | 5,512                | 12,176 | 6,416 3 4       |
| Total Orissa Circle ... | 220               | 332    | 242 0 8         | 1,810                | 2,722  | 2,379 5 6       | 464               | 778    | 539 3 8         | 5,512                | 12,176 | 6,416 3 4       |

**TOTAL NAVIGATION RECEIPTS.**

| * CANAL.              | EARNINGS, 1887-89. |    |    |                      |    |    | EARNINGS, 1886-87. |    |    |                      |    |    | REMARKS. |
|-----------------------|--------------------|----|----|----------------------|----|----|--------------------|----|----|----------------------|----|----|----------|
|                       | During the month.  |    |    | To end of the month. |    |    | During the month.  |    |    | To end of the month. |    |    |          |
|                       | Rs.                | A. | P. | Rs.                  | A. | P. | Rs.                | A. | P. | Rs.                  | A. | P. |          |
| Orissa Canals ...     | 5,153              | 2  | 3  | 27,762               | 8  | 2  | 4,633              | 12 | 10 | 34,258               | 2  | 8  |          |
| Midnapore Canal       | 9,765              | 11 | 6  | 60,015               | 2  | 6  | 8,517              | 6  | 6  | 59,820               | 12 | 3  |          |
| Hidgellee Tidal Canal | 4,762              | 4  | 6  | 30,869               | 15 | 9  | 3,890              | 0  | 0  | 33,781               | 7  | 0  |          |
| one Canals ...        | 3,176              | 5  | 8  | 27,607               | 2  | 8  | 4,981              | 6  | 3  | 26,099               | 11 | 5  |          |
| Total                 | 22,857             | 7  | 11 | 1,40,254             | 13 | 1  | 22,022             | 9  | 7  | 1,53,960             | 1  | 4  |          |

A. D. MCARTHUR, MAJOR, R.E.,  
Under-Secy. to the Govt. of Bengal.

CALCUTTA,  
The 22nd November 1887.

## CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 19th November 1887,  
compared with the corresponding week of the previous year.*

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>19TH NOVEMBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>20TH NOVEMBER 1886. |                     |          |
|--------------------|--|---------------------|----------|--|---------------------|----------|
|                    | Number of<br>boats.                              | Weight of<br>cargo. | Tollage. | Number of<br>boats.                              | Weight of<br>cargo. | Tollage. |
|                    | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... | 844  | 1,04,142            | 1,707    | 425  | 56,290              | 924      |
| Jute ...           | 291  | 1,39,625            | 2,964    | 228  | 2,45,200            | 2,688    |
| Firewood ...       | 132  | 71,325              | 1,051    | 114  | 49,875              | 764      |
| Other articles ... | 1,092  | 2,69,875            | 4,357    | 951  | 2,19,030            | 3,449    |
| Total ...          | 2,362  | 5,84,967            | 10,079   | 1,718  | 5,70,395            | 7,825    |

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 12th November 1887, on 1,513½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                 | Other earnings (estimated). | Total earnings.   | TRAFFIC TRAIN-MILES RUN. |              |            |
|---|-----------------------|--------------------|----------------------------------|-----------------|-----------------------------|-------------------|--------------------------|--------------|------------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.       |                             |                   | Coaching.                | Merchandise. | Total.     |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.       | Rs. A. P.                   | Rs. A. P.         |                          |              |            |
| Total traffic for the week ...                              | 232,312               | 2,86,713 5 0       | 24,59,050 10                     | 5,78,909 2 9    | 17,025 4 3                  | 8,92,617 6 0      | 63,100½                  | 86,903½      | 150,100    |
| Or per mile of railway ...                                  |                       | 1-9 0 6            |                                  | 382 6 11        | 11 4 0                      | 581 1 5           |                          |              |            |
| For previous 13 weeks of half-year ...                      | 4,355,700             | 15,61,718 11 0     | 3,87,75,791 10                   | 84,63,505 12 2  | 2,95,029 4 0                | 1,31,20,251 11 11 | 1,179,837½               | 1,460,801    | 2,640,638½ |
| Total for 19 weeks ...                                      | 4,588,111             | 18,48,432 0 0      | 4,12,34,841 20                   | 90,42,413 14 11 | 3,12,053 3 0                | 1,42,02,301 1 1   | 1,243,03½                | 1,547,794½   | 2,790,828½ |
| COMPARISON.   |                       |                    |                                  |                 |                             |                   |                          |              |            |
| Total for corresponding week of previous year ...           | 240,024½              | 3,04,572 4 11      | 25,76,529 3                      | 6,26,476 5 0    | 21,001 14 3                 | 9,52,030 5 7      | 63,603                   | 97,025       | 163,630    |
| Per mile of railway corresponding week of previous year ... |                       | 201 0 7            |                                  | 413 8 3         | 13 13 0                     | 628 6 8           |                          |              |            |
| Total to corresponding date of previous year ...            | 4,45,902½             | 18,90,887 13 3     | 4,17,78,547 0                    | 90,18,577 2 0   | 3,43,824 14 4               | 1,52,43,291 13 7  | 1,315,933                | 1,732,154    | 3,047,787  |

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 13TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 13TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 12TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 1,516  | 9,52,051  | 625              | 1,513½                                       | 8,91,947  | 583              | 1,515   | 2,90,36,971     | 678              | 1,518   | 2,66,10,418     | 549              | .....                   | 14,26,426               |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 12th November 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 11,934                | 15,969 11 0        | 47,123 0                         | 2,082 4 0   | 24 14 0                     | 8,976 13 0      | 1,801                    | 593          | 2,394  |
| Or per mile of railway ...                                  | 209                   | 101 5 10           | 824 0                            | 52 3 2      | 0 6 11                      | 153 14 11       |                          |              |        |
| For previous 13 weeks of half-year ...                      | 269,278               | 1,44,532 15 0      | 6,35,476 30                      | 41,915 13 0 | 672 12 0                    | 1,87,121 8 0    | 33,118½                  | 12,321½      | 46,440 |
| Total for 19 weeks ...                                      | 281,192               | 1,70,502 10 0      | 6,42,601 30                      | 41,898 1 0  | 657 10 0                    | 1,96,038 5 0    | 4,919½                   | 12,914½      | 47,831 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 10,364                | 10,013 0 0         | 23,713 0                         | 2,530 10 0  | 38 15 6                     | 12,578 10 3     | 1,529                    | 505          | 2,394  |
| Per mile of railway corresponding week of previous year ... | 337                   | 175 1 5            | 503 0                            | 44 3 10     | 0 9 3                       | 219 11 6        |                          |              |        |
| Total to corresponding date of previous year ...            | 290,311               | 1,64,145 13 10     | 7,77,500 0                       | 50,182 8 0  | 723 5 9                     | 2,15,321 11 7   | 31,815                   | 14,750       | 46,575 |

\* The decrease in coaching traffic is owing to abnormal traffic during the corresponding period on account of Sonapur Fair.

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 13TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 13TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 12TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 57½  | 12,579    | 220              | 57½  | 8,977     | 157              | 57½   | 3,42,010        | 187              | 57½   | 3,15,318        | 173              | .....                   | 26,638                  |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 12th November 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 3,586                 | 430 15 0           | 13,081 10                        | 250 13 0   | 7 0 0                       | 644 15 0        | 370 1                    | 133          | 503 1   |
| Or per mile of railway ...                                  |                       | 35 14 7            | .....                            | 21 6 8     | 0 9 4                       | 57 14 4         | .....                    | .....        | .....   |
| For previous 12 weeks of half-year ...                      | 82,155                | 8,098 12 0         | 1,85,050 30                      | 3,644 13 6 | 114 14 0                    | 12,438 7 0      | 7,210                    | 1,814        | 9,024   |
| Total for 12 weeks ...                                      | 51,742                | 9,129 11 0         | 1,78,141 0                       | 3,901 10 0 | 121 13 0                    | 12,559 3 0      | 7,580 1                  | 1,937        | 9,517 1 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 2,554                 | 433 12 1           | 9,605 30                         | 206 8 0    | 6 1 6                       | 635 0 7         | 886                      | 107          | 993     |
| Per mile of railway corresponding week of previous year ... | .....                 | 36 5 0             | .....                            | 17 2 11    | 0 10 10                     | 54 2 9          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 50,223                | 5,445 1 2          | 1,74,334 30                      | 3,850 7 0  | 165 5 9                     | 12,301 13 11    | 7,713                    | 2,136        | 9,849   |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 12th NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12th NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1st APRIL 1886 TO 12th NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1st APRIL 1887 TO 12th NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 12   | 650       | 54               | 12   | 695       | 58               | 12  | 29,672          | 77               | 12  | 27,763          | 73               | .....                   | 1,819                   |

## SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 12th November 1887, on 74 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 4,405                 | 3,141 7 0          | 1,25,206 0                       | 6,418 9 0  | 83 0 0                      | 10,582 0 0      | 742                      | 1,976        | 2,718  |
| Or per mile of railway ...                                  | .....                 | 42 8 8             | .....                            | 91 2 6     | 1 1 7                       | 152 13 9        | .....                    | .....        | .....  |
| For previous 12 weeks of half-year ...                      | 95,723                | 79,517 8 9         | 16,35,293 20                     | 69,643 0 0 | 1,878 10 0                  | 1,42,069 2 9    | 12,691                   | 27,165       | 39,756 |
| Total for 12 weeks ...                                      | 100,218               | 74,028 15 9        | 17,09,595 36                     | 76,161 9 0 | 1,969 10 0                  | 1,52,151 3 9    | 13,336                   | 29,141       | 42,477 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 4,385                 | 3,615 12 2         | 1,08,226 20                      | 3,517 15 0 | 155 14 0                    | 7,289 9 2       | 686                      | 1,503        | 1,989  |
| Per mile of railway corresponding week of previous year ... | .....                 | 48 5 5             | .....                            | 47 0 8     | 2 1 4                       | 97 7 3          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 102,875               | 74,40 3 2          | 10,50,640 30                     | 55,767 0 9 | 1,896 1 0                   | 1,51,901 11 5   | 13,381                   | 21,186       | 34,567 |

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 12th NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12th NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1st APRIL 1886 TO 12th NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1st APRIL 1887 TO 12th NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 74   | 7,290     | 97               | 74   | 10,382    | 139              | 74  | 2,23,278        | 95               | 74  | 2,00,453        | 111              | 22,825                  | .....                   |



## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 12th November 1887, on 2½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |           | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-----------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts. |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P. | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 16,851                | 4,317 6 0          | 5,284 30                         | 209 1 0   | 8 14 0                      | 4,834 5 0       | 911                      | 57           | 968    |
| Or per mile of railway ...                                  | 194 0 7               | ...                | ...                              | 9 5 7     | 0 6 5                       | 203 13 7        | ...                      | ...          | ...    |
| For previous 18 weeks of half-year ...                      | 301,146               | 77,615 12 0        | 77,823 20                        | 2,855 7 0 | 90 9 0                      | 87,501 13 0     | 10,801½                  | 60¼          | 17,806 |
| Total for 19 weeks ...                                      | 317,937               | 81,933 2 0         | 83,108 10                        | 3,063 8 0 | 99 7 0                      | 88,096 1 0      | 17,002½                  | 65½          | 18,654 |
| COMPARISON.   |                       |                    |                                  |           |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 18,305½               | 4,787 6 7          | 5,672 20                         | 219 7 0   | 5 3 9                       | 5,012 1 4       | 932                      | 56           | 988    |
| Per mile of railway corresponding week of previous year ... | ...                   | 215 2 8            | ...                              | 9 13 9    | 0 3 9                       | 225 4 2         | ...                      | ...          | ...    |
| Total to corresponding date of previous year ...            | 306,60½               | 76,416 7 3         | 68,693 30                        | 2,162 7 0 | 113 8 0                     | 78,602 6 3      | 18,448                   | 408          | 18,856 |

Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI. Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 13TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 12TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 12TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
| Rs.  | Rs.       | Rs.              | Rs.  | Rs.       | Rs.              | Rs.   | Rs.             | Rs.              | Rs.   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 221  | 5,013     | 225              | 221  | 4,514     | 204              | 221   | 1,51,427        | 213              | 221   | 1,62,168        | 229              | 10,741                  | ---                     |

## INDIAN MIDLAND RAILWAY.

Approximate Return of Traffic for week ended 12th November 1887, on 42 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,105                 | 1,005 6 0          | 13,433 10                        | 1,177 4 0   | 20 8 0                      | 2,181 8 0       | 233                      | 355          | 588    |
| Or per mile of railway ...                                  | 23 16 0               | ...                | ...                              | 27 8 10     | 0 7 10                      | 51 15 8         | ...                      | ...          | ...    |
| For previous 18 weeks of half-year ...                      | 38,868                | 17,170 3 6         | 4,51,430 20                      | 30,212 0 0  | 306 12 0                    | 47,717 15 6     | 5,172                    | 6,638        | 11,810 |
| Total for 19 weeks ...                                      | 41,083                | 18,175 9 0         | 4,61,832 30                      | 31,390 4 0  | 326 4 0                     | 49,901 1 6      | 6,404                    | 6,994        | 13,398 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,031                 | 1,300 15 1         | 30,258 10                        | 1,796 7 0   | 26 0 0                      | 3,132 6 1       | 246                      | 436          | 682    |
| Per mile of railway corresponding week of previous year ... | ...                   | 31 3 0             | ...                              | 42 12 4     | 0 9 11                      | 74 9 3          | ...                      | ...          | ...    |
| Total to corresponding date of previous year ...            | 48,043                | 20,755 4 0         | 2,59,260 20                      | 22,991 12 0 | 603 4 6                     | 44,250 5 3      | 5,558                    | 6,172        | 11,730 |

Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI. Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 13TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 12TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 12TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
| Rs.  | Rs.       | Rs.              | Rs.  | Rs.       | Rs.              | Rs.   | Rs.             | Rs.              | Rs.   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 42   | 2,138     | 75               | 42   | 2,183     | 52               | 42  | 70,363          | 53               | 42  | 97,633          | 73               | 27,331                  | ---                     |

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS).

Approximate Return of Traffic for week ended 5th November 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |                      | MERCHANDISE AND MINERAL TRAFFIC. |                        | Other earnings (estimated), including Steam-boat. | Total earnings.        | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|----------------------|----------------------------------|------------------------|---|------------------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts.   | Weight carried.                  | Receipts.              |   |                        | Coaching.                | Merchandise. | Total.  |
| Total traffic for the week...                             | *166,278              | Rs. A. P. 63,117 0 0 | Mds. s. 6,78,637 0               | Rs. A. P. 1,71,317 0 0 | Rs. A. P. 17,421 0 0                              | Rs. A. P. 2,51,855 0 0 | 20,890                   | 26,068       | 47,957  |
| Or per mile of railway                                    | 243                   | 98 0 0               | 1,053 0                          | 260 0 0                | (s) 1 0 0   | 365 0 0                | .....                    | .....        | .....   |
| For previous 17 weeks of half-year                        | 2,605,377             | 8,60,782 0 0         | 1,17,39,351 0                    | 22,18,961 0 0          | 2,77,778 0 0                                      | 33,65,021 0 0          | 345,069                  | 432,176      | 767,259 |
| Total for 18 weeks  | 2,765,655             | 9,32,290 0 0         | 1,18,14,498 0                    | 22,90,279 0 0          | 2,95,199 0 0                                      | 36,17,779 0 0          | 365,981                  | 443,834      | 814,815 |
| COMPARISON.   |                       |                      |                                  |                        |   |                        |                          |              |         |
| Total for corresponding week of previous year             | 126,354               | 69,075 0 0           | 5,89,293 0                       | 1,23,103 0 0           | 14,903 0 0  | 2,12,479 0 0           | 18,746                   | 24,279       | 43,075  |
| Per mile of railway corresponding period of previous year | 200                   | 114 0 0              | 972 0                            | 212 0 0                | .....   | 326 0 0                | .....                    | .....        | .....   |
| Total to corresponding date of previous year              | 2,045,335             | 8,15,985 0 0         | 98,24,884 0                      | 17,96,363 0 0          | 2,06,138 0 0                                      | 29,18,455 0 0          | 339,814                  | 374,544      | 701,368 |

\* Includes monthly tickets.

(a) Steam-boat earnings Rs. 16,121 have been excluded from the calculation.

† Audited up to week ending 30th June 1887.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1886. |              |                  | RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1887. |              |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 6TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 5TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|--------------|------------------|---|--------------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts.    | Per mile worked. | Mean mileage worked.                        | Receipts.    | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
| 606   | Rs. 2,12,439 | 351              | 645   | Rs. 2,51,855 | 390              | 606  | Rs. 47,61,927   | 253              | 645  | Rs. *54,13,390  | 271              | Rs. 6,51,472            | .....                   |

\* Audited up to 30th June 1887.

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 5th November 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                      | MERCHANDISE AND MINERAL TRAFFIC. |                     | Other earnings (estimated). | Total earnings.      | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|----------------------|----------------------------------|---------------------|-----------------------------|----------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts.   | Weight carried.                  | Receipts.           |                             |                      | Coaching.                | Merchandise. | Total. |
| Total traffic for the week...                             | *36,330               | Rs. A. P. 10,729 0 0 | Mds. s. 51,518 0                 | Rs. A. P. 3,053 0 0 | Rs. A. P. 30 0 0            | Rs. A. P. 13,812 0 0 | 3,786                    | 1,424        | 5,210  |
| Or per mile of railway                                    | 291                   | 86 0 0               | 413 0                            | 24 0 0              | .....                       | 110 0 0              | .....                    | .....        | .....  |
| For previous 17 weeks of half-year                        | 398,326               | 1,35,309 0 0         | 7,63,895 0                       | 47,906 0 0          | 1,681 0 0                   | 1,81,896 0 0         | 61,980                   | 31,805       | 93,785 |
| Total for 18 weeks  | 434,656               | 1,46,038 0 0         | 8,15,403 0                       | 50,959 0 0          | 1,711 0 0                   | 1,98,709 0 0         | 65,766                   | 33,229       | 98,995 |
| COMPARISON.   |                       |                      |                                  |                     |                             |                      |                          |              |        |
| Total for corresponding week of previous year             | 23,121                | 8,424 0 0            | 18,400 0                         | 1,412 0 0           | 25 0 0                      | 9,862 0 0            | 4,014                    | 1,106        | 5,210  |
| Per mile of railway corresponding period of previous year | 185                   | 68 0 0               | 147 0                            | 11 0 0              | .....                       | 79 0 0               | .....                    | .....        | .....  |
| Total to corresponding date of previous year              | 410,423               | 1,36,796 0 0         | 3,42,031 0                       | 23,771 0 0          | 430 0 0                     | 1,63,909 0 0         | 71,492                   | 24,591       | 96,083 |

\* Includes 7,040 monthly tickets.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 6TH NOVEMBER 1887. |            |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 6TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 5TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|------------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts.  | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. |                         |                         |
| 125   | Rs. 2,489 | 79               | 125   | Rs. 12,812 | 110              | 125  | Rs. 3,39,597    | 88               | 125  | Rs. 3,62,743*   | 94               | Rs. 24,156              | .....                   |

\* Audited up to 30th June 1887.

## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 5th November 1887, on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 13,132                | 4,648 0 0          | 84,257 0                         | 3,376 0 0  | 78 0 0                      | 8,102 0 0       | 2,161                    | 803          | 2,964  |
| Or per mile of railway ...                                    | 153                   | 54 0 0             | 968 0                            | 39 0 0     | 1 0 0                       | 94 0 0          | .....                    | .....        | .....  |
| For previous 17 weeks of half-year ...                        | 189,800               | 60,103 0 0         | 3,42,013 0                       | 27,400 0 0 | 2,086 0 0                   | *93,587 0 0     | 37,404                   | 18,948       | 56,352 |
| Total for 18 weeks ...  | 202,941               | 70,751 0 0         | 3,70,270 0                       | 30,776 0 0 | 2,163 0 0                   | 1,03,680 0 0    | 39,655                   | 19,851       | 59,506 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 13,035                | 4,442 0 0          | 10,333 0                         | 1,172 0 0  | 126 0 0                     | 5,740 0 0       | 2,323                    | 714          | 3,040  |
| Per mile of railway corresponding period of previous year ... | 152                   | 52 0 0             | 190 0                            | 14 0 0     | 1 0 0                       | 67 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | * 178,873             | 58,239 0 0         | 1,61,934 0                       | 17,263 0 0 | 5,387 0 0                   | 80,831 0 0      | 30,163                   | 13,120       | 43,273 |

\* Audited up to week ending 30th June 1887.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 5TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 5TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| 86  | 5,740     | 67               | 86  | 8,102     | 94               | 86   | 1,47,231        | 55               | 86   | *1,69,413       | 63               | 21,184                  | .....                   |

\* Audited up to 30th June 1887.

## ASSAM-BEHAR STATE RAILWAY.

(PUANEH SECTION.)

*Approximate Return of Traffic for week ended 5th November 1887, on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 3,074                 | 1,184 0 0          | 8,525 0                          | 750 0 0    | 7 0 0                       | 1,941 0 0       | 723                      | 364          | 1,088  |
| Or per mile of railway ...                                    | 79                    | 31 0 0             | 219 0                            | 10 0 0     | .....                       | 50 0 0          | .....                    | .....        | .....  |
| For previous 17 weeks of half-year ...                        | 50,879                | 18,082 0 0         | 162,234 0                        | 16,463 0 0 | 370 0 0                     | 34,915 0 0      | 11,936                   | 6,763        | 18,704 |
| Total for 18 weeks ...  | 53,953                | 19,266 0 0         | 170,759 0                        | 17,213 0 0 | 77 0 0                      | 35,856 0 0      | 12,664                   | 7,127        | 19,796 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 5TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 5TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 5TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. |                         |                         |
|   | Rs.       | Rs.              |   | Rs.       | Rs.              |  | Rs.             | Rs.              |  | Rs.             | Rs.              | Rs.                     |                         |
| .....                                       | .....     | .....            | 39  | 1,941     | 50               | .....  | .....           | .....            | 39   | 77,091          | 64               | 77,091                  | .....                   |

## NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 12th November 1887, on 2½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                   | Other earnings (estimated). | Total earnings.     | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|-------------------|-----------------------------|---------------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.         |                             |                     | Coaching.                | Merchandise. | Total.  |
| Total traffic for the week ...                              | 2,514                 | Rs. A. P. 923 7 1  | Mds. s. 9,519 20                 | Rs. A. P. 550 6 0 | Rs. A. P. 9 6 0             | Rs. A. P. 1,492 3 1 | 800                      | 254          | 768     |
| Or per mile of railway ...                                  | 92                    | 33 14 0            | 342 0                            | 20 8 0            | 0 6 0                       | 54 12 0             | .....                    | .....        | .....   |
| For previous 18 weeks of half-year ...                      | 50,949                | 20,016 8 11        | 1,56,133 20                      | 9,025 10 0        | 257 10 0                    | 20,950 13 11        | 9,344                    | 5,741½       | 15,085½ |
| Total for 19 weeks ...                                      | 50,363                | 20,970 0 0         | 1,55,453 0                       | 10,185 0 0        | 257 0 0                     | 31,152 0 0          | 9,533                    | 5,995½       | 15,528½ |
| COMPARISON.   |                       |                    |                                  |                   |                             |                     |                          |              |         |
| Total for corresponding week of previous year ...           | 2,445½                | 900 15 3           | 8,541 20                         | 614 1 0           | 11 0 0                      | 1,025 0 3           | 539                      | 254          | 768     |
| Per mile of railway corresponding week of previous year ... | 90                    | 36 11 0            | 313 0                            | 22 0 0            | 0 6 0                       | 59 10 0             | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 46,698½               | 17,958 10 0        | 1,14,590 10                      | 8,827 8 0         | 273 10 6                    | 27,050 13 3         | 9,880                    | 5,044        | 14,924  |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 13TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 12TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 2½   | 1,025     | 60               | 2½   | 1,492     | 55               | 2½  | 61,395          | 50               | 2½  | 55,940          | 65               | 5,545                   | .....                   |

## TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for week ended 12th November 1887, on 240 miles open.

|   | COACHING TRAFFIC.     |                      | MERCHANDISE AND MINERAL TRAFFIC. |                      | Other earnings (estimated). | Total earnings.      | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|----------------------|----------------------------------|----------------------|-----------------------------|----------------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts.   | Weight carried.                  | Receipts.            |                             |                      | Coaching.                | Merchandise. | Total.  |
| Total traffic for the week on 240 miles open ...                    | 28,514½               | Rs. A. P. 15,030 5 3 | Mds. s. 1,63,890 20              | Rs. A. P. 16,068 0 0 | Rs. A. P. 3,005 12 9        | Rs. A. P. 34,702 3 0 | 6,283                    | 5,225        | 11,508  |
| Or per mile of railway ...  | 156                   | 60 6 0               | 680 0                            | 64 8 0               | 3 13 0                      | 127 11 0†            | .....                    | .....        | .....   |
| For previous 18 weeks of half-year ...                              | 750,414½              | 2,73,788 10 9        | 20,61,831 20                     | 1,49,147 0 0         | 57,442 3 3                  | 5,22,677 14 0        | 117,501                  | 83,149       | 200,710 |
| Total for 19 weeks ...  | 799,231               | 2,90,819 0 0         | 22,27,063 0                      | 2,05,513 0 0         | 61,048 0 0                  | 5,57,390 0 0         | 123,844                  | 86,374       | 212,218 |
| COMPARISON.   |                       |                      |                                  |                      |                             |                      |                          |              |         |
| Total for corresponding week of previous year on 240 miles open ... | 70,180                | 31,104 2 3           | 1,10,533 0                       | 10,510 4 0           | 2,615 4 9                   | 44,238 11 0          | 7,714                    | 3,833        | 11,547  |
| Per mile of railway corresponding week of previous year ...         | 288                   | 129 7 0              | 450 0                            | 43 12 0              | 0 12 0                      | 163 15 0†            | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...                    | 657,016               | 2,27,488 8 4         | 21,19,050 30                     | 2,12,178 13 9        | 58,422 13 2                 | 4,98,150 3 3         | 100,133                  | 81,695       | 181,828 |

\* Steam-hoat earnings excluded in calculating "Total earnings per mile of Railway."

† Sonapur mile took place in the corresponding week of last year.

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 13TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 12TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         |                         |
| 240  | 44,239    | 180              | 240  | 54,702    | 139              | 240   | 9,10,277        | 120              | 240   | 10,51,413       | 132              | 1,03,136                | .....                   |

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|  |     |     |     |     |     |     |           |
|--|-----|-----|-----|-----|-----|-----|-----------|
| Approximate earnings for week ending 5th November 1887 | ... | ... | ... | ... | ... | ... | Rs.       |
| Corresponding week last year                           | ... | ... | ... | ... | ... | ... | 9,849     |
| Increase   | ... | ... | ... | ... | ... | ... | 7,364     |
| Receipts from 1st July to 5th November 1887            | ... | ... | ... | ... | ... | ... | 2,485     |
| From 1st July to 5th November 1886                     | ... | ... | ... | ... | ... | ... | 1,74,556  |
| Decrease   | ... | ... | ... | ... | ... | ... | 1,79,175  |
| Miles open, week ending 5th November 1887              | ... | ... | ... | ... | ... | ... | Miles.    |
| Corresponding week last year                           | ... | ... | ... | ... | ... | ... | 51        |
| Receipts per mile open, week ending 5th November 1887  | ... | ... | ... | ... | ... | ... | 51        |
| Corresponding week last year                           | ... | ... | ... | ... | ... | ... | Rs. A. P. |
| Increase   | ... | ... | ... | ... | ... | ... | 193 1 11  |
|  | ... | ... | ... | ... | ... | ... | 144 6 3   |
|  | ... | ... | ... | ... | ... | ... | 48 11 8   |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 15th November 1887.

D. L. PRESTAGE, for Acting Manager.





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, NOVEMBER 30, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## RESOLUTION ON THE ANNUAL REPORT OF THE GOVERNMENT CINCHONA PLANTATION AND CINCHONA FACTORY IN BENGAL FOR THE YEAR 1886-87.

### FINANCIAL DEPARTMENT—MISCELLANEOUS.

*Calcutta, the 22nd November 1887.*

#### RESOLUTION.

#### READ—

Annual Report of the Government Cinchona Plantation and Cinchona Factory in Bengal for the year 1886-87.

The chief incident in the history of the cinchona plantation for the year was the occurrence, during a heavy downfall of rain in the month of June, of a number of landslips by which no fewer than 300,000 cinchona trees—some of them amongst the best on the estate—were hopelessly destroyed. This is the severest accident of the kind that has occurred since the plantation was begun twenty-five years ago. The accident was fortunately attended by but little loss of life. A hailstorm at an earlier part of the season also destroyed 20,000 promising young trees.

2. The policy of substituting yellow and hybrid for red-bark cinchona trees is being steadily carried out by the Superintendent. During the year under review about 300,000 red cinchona trees were uprooted for the sake of their bark, while 389,000 calisaya trees and hybrids were planted. As the bark of the two latter yields quinine, while the red-bark can be converted economically only into cinchona febrifuge, this policy is a good one; and if it be steadily pursued during the next seven or eight years, the red-bark trees now growing on these

plantations should be completely worked out, and the Government should have on its hands a cinchona estate from which pure quinine and some combination of quinine and cinchonidine (probably a tartrate) should be produced at almost as cheap a rate as the present febrifuge. The plantation is worked solely with a view to the requirements of the factory, these in turn being governed by the demand for febrifuge. And as the consumption of febrifuge has of late been materially affected by the extraordinary cheapness of quinine, the plantation has been called upon to produce a comparatively small crop. The crop of the year (225,631 pounds) was harvested at a total cost of a fraction over 5½ annas per pound. This compares favourably with the outturn of the Madras Government's plantations on the Nilgiris, which is shown in the report for the same year to have cost a little over 10½ annas per pound. The whole of the crop was made over to the factory for conversion into febrifuge.

3. The cost price of the raw material used in the factory during the year was Rs. 73,548, and the cost of working this up (i.e., the factory expenditure proper was Rs. 20,480. The outturn of the factory, on the other hand, consisted of 6,641 pounds of ordinary and 149 pounds of crystalline febrifuge, the value of which, at Rs. 16-8 and Rs. 24 per pound, respectively, amounts to Rs. 1,13,152; and of this outturn 5,885 pounds were taken off by the Medical Departments and the general public. The sales during the year were thus better by 385 pounds than those of the previous year, but they fall far short of those for the years 1881 to 1884, when, owing to the great demand for febrifuge consequent on the high price of quinine, the plantation and factory were worked up to their full producing power. The cheapness of quinine was not, however, the only cause of the comparatively small demand for febrifuge, for the Medical Departments were under the necessity of working off the considerable stocks which they still hold of English quinetum—a preparation similar to febrifuge, of which the Secretary of State sent out a large quantity some years ago.

4. If the realizations for febrifuge and bark during the year and the stock in hand at the end of it be put against the working expenditure, there is a balance in favour of the plantation (i.e., a profit) of Rs. 18,464. This is a much less favourable result than was obtained in several former years. Looked at from a purely commercial point of view, the year has been a bad one—the price of quinine and consequently of all cinchona products having fallen below the lowest previously recorded limits. From another and higher point of view, however, the low price of quinine is most satisfactory; for the cheapening of this invaluable drug cannot fail to be an advantage to the Indian population, and is indeed the very result which Government proposed to itself in originally introducing cinchona cultivation into the country. The present low price of cinchona bark (and therefore of quinine) can, however, hardly be expected to continue. The real cause of it is understood to be the enormous export from Ceylon, where the cinchona trees having become almost universally unhealthy, they are being rapidly uprooted to make way for tea. This abnormal export—averaging fifteen million pounds annually for the last three years—cannot possibly be long maintained, as no new cinchona plantations are being made. When it ceases, cinchona bark must again in all probability increase in price. In the meantime the Superintendent should keep down expenditure on the Government plantations as far as may be practicable; and the experiments in the manufacture of quinine, which are understood to be in progress at the factory, should be pushed on.

5. The Lieutenant-Governor observes with approval that the firewood plantation above the factory is being extended. The formation of this plantation is a wise measure, and is especially deserving of imitation in a district which is becoming so rapidly denuded of timber as is the cultivated part of British Sikkim.

6. The favourable report given by Dr. King of the good work done by Mr. Gammie and his son and also by Mr. Pantling is noted with satisfaction. The thanks of Government are due to Dr. King for his administration of the plantations and the factory during the year.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

Secretary to the Government of Bengal.



RESOLUTION ON THE GENERAL ADMINISTRATION REPORT OF THE  
BURDWAN DIVISION FOR THE YEAR 1886-87.

GENERAL DEPARTMENT—MISCELLANEOUS.

*Calcutta, the 28th November 1887.*

RESOLUTION.

READ—

The General Administration Report of the Burdwan Division for the year 1886-87.

MR. E. E. LOWIS was in charge of the division until his transfer to Rajshahye on the 25th September, when Mr. Coxhead officiated as Commissioner for a month, and Mr. Beames held the post for the remainder of the year. The report is submitted by Mr. R. H. Wilson, who held charge after the close of the year.

2. The changes in the office of Commissioner interfered with the usual tour of inspection. During the rains, however, Mr. Lowis inspected the Beerbhoom district office, and in the cold weather Mr. Beames visited all districts of the division except Bankoora, and made useful inspections and enquiries. The tours of the district officers, except in Burdwan and Howrah, extended over the prescribed number of days, and all the eleven Sub-divisional Officers were in camp for 120 days or more. The Joint-Magistrate of Midnapore, and the Assistant Magistrate of Burdwan, were in camp for 25 days and 37 days respectively. Exception is properly taken to Mr. Warde-Jones's tour in Raupore Hât, which was confined mainly to a corner of one thana, while the rest of the sub-division was not adequately inspected.

Mr. Oldham, Collector of Burdwan, in reviewing the tours of the Deputy Collectors of Cutwa and Culna, observes that the rule requiring Sub-divisional Officers to spend 120 days in camp is harassing to the officers themselves, inconvenient to the legal practitioners who attend their Courts, and furnishes a ready excuse for delays in the decision of cases. He considers that the rule possesses no compensating advantages when applied to the native gentlemen who now constitute the great majority of Sub-divisional Officers. Mr. Wilson states that these remarks seem to him to deserve serious consideration, and he gives his own opinion on the subject in the following words:—

"While fully recognising the importance of maintaining and increasing the existing facilities for personal intercourse between Sub-divisional Officers and the people under their charge, I cannot overlook the fact that the most striking defect in district administration is at present the extreme delay in disposing of criminal work, which is too common on the part of Bengali Magistrates. Anything therefore which tends to diminish the necessity for adjournment in hearing criminal cases is so far an advantage."

The subject, which is of much importance, is now under consideration.

3. Except in a portion of Midnapore bordering the coast, the rainfall was sufficient for agricultural purposes and was favourably distributed. The general outturn of the crops is said by the Commissioner to have been better than for some years past, and the *aman* rice, which is the principal crop of the division, is described as having been such as has seldom been known within recent years. This description is borne out by the statistical tables (appended to the report) for Burdwan, Bankoora, Beerbhoom, and Midnapore, except Contai sub-division, but the tables for Hooghly and Howrah show an *aman* crop of 12 to 14 annas only, although in the body of the report it is stated that the outturn of the principal crops in Howrah was good. The explanation of the apparent discrepancy may be that in the two last-named districts the orders of 1885 with regard to appraisement of outturn of crops in annas have been overlooked.

4. The general health of the people throughout the division was comparatively good, and fever and cholera, though present both in the rural areas and in the towns, nowhere assumed the form of an epidemic. In Burdwan there was a remarkable decrease in the mortuary returns, and the testimony borne by them was supported by what the people themselves said as to the healthiness of the year; in Beerbhoom also the year is reported to have been unusually healthy.

Public health.

\* Weather and crops.

Most encouraging progress has been made in this division in vaccination. Cases of small-pox are rare, and there has been no outbreak of an epidemic of late. The Commissioner writes that the people fully appreciate the benefit of protection, their former prejudice has almost entirely died out, and vaccination is everywhere readily sought for by persons of all classes.

5. The cultivating classes were benefited by the good harvests, and were able to pay off debts and lay by something for the future, while the salaried and non-agricultural population reaped the advantage of the low price of food-grains. An appreciable advance in the standard of comfort is noticed in the Hooghly district, and in the more prosperous parts of the Burdwan district. An exception, however, is made in the case of the weaving classes of Burdwan, Bankoora, and Beerbhoom, whose occupation is said to be disappearing under the stress of European competition. The wages of labour remained almost stationary. There was a falling off in registered emigration from every district, which was due to an increase of free emigration to the tea districts, as well as to the general prosperity of the year.

6. The manufacture of silk is a declining industry in this division, but an impulse has been given to the trade in cocoons by the demand of European firms both for mulberry and tusser cocoons, and a consequent rise in prices. As in Chota Nagpore, tusser-weavers are relinquishing their own trade on account of the high price of cocoons, but a considerable quantity of tusser silk is still manufactured in Bankoora and Beerbhoom. The cultivation of indigo is on the decline in this division, and the shell-lac industry has suffered by the competition of European dyes. The cotton mills in Howrah did good business, and the jute mills in this district and in Hooghly worked nine days instead of eight days in the fortnight. The increased outturn of coal and lime in the Burdwan district is noticed below.

7. In the Burdwan and Beerbhoom districts the good harvests were followed by a revival of trade; the exports of rice from the two districts during the year under review were 60 lakhs of maunds, or more than double those of the preceding year, and there was an increase in the imports of salt, pulses and oilseeds, due to the increased purchasing power of the people. On the other hand, the import trade of this division in European piece-goods declined, or remained stationary; this trade should be specially noticed in next year's report. A large increase in the exports of coal from Raneegunge, which rose to 783,517 tons against 635,921 tons in the preceding year, is attributed to the revival in the jute trade in Calcutta, to an increase in the lime and brick industries, and to the use of this coal by some of the steam-ship companies. There was a great development in the lime industry, due to the resumption of works in the Kidderpore Docks; 611,051 maunds of lime were exported from Raneegunge during the year under review, against 304,034 maunds in the preceding year.

8. With regard to the state of public feeling, the Commissioner makes the following remarks:—

“No general public opinion, properly so called, exists in this division. Such as is found in the advanced districts of Hooghly, Howrah and Burdwan is merely a reproduction of what is said in Calcutta. A vague feeling of mistrust sometimes haunts the minds of the people in connection with some Government measure, legislative or administrative, but it is seldom sufficiently definite to be capable of analysis or clear statement. The strong feeling which the Tenancy Act once evoked seems to be gradually disappearing, and no general interest is now manifested in its working, except by a few active agents. The Judge of Beerbhoom observes that its provisions are not as yet generally understood either by parties or by the Civil Courts. I agree with him in thinking that the real working of the Act will not become apparent until it has been for some time longer in force.

The Queen's Jubilee gave occasion to a gratifying display of loyal feeling throughout the division. Not only in the more important municipal towns, but even in remote villages, the auspicious event was very generally celebrated in one way or another; and this not merely by displays of fireworks and the like, but in a more substantial way by the establishment of memorial schools, dispensaries, and scholarships.”

9. The Division of Burdwan is one in which the backward position of Muhammadans, and the limited extent to which they find employment in the public service has

received attention. The following table indicates the number of Muhammadans now serving under Government:—

*Table showing the extent to which the Muhammadans are at present employed in the Government offices in the several districts comprised in the Burdwan Division.*

| District.        | Percentage of Muhammadans in district population. | Percentage of Muhammadans in educated population (males.) | TOTAL NUMBER OF PERSONS EMPLOYED IN GOVERNMENT SERVICE IN THE DISTRICT. |                               |                               | NUMBER OF MUHAMMADANS EMPLOYED IN THE DISTRICT. |                               |                               |
|------------------|---|---|---|-------------------------------|-------------------------------|---|-------------------------------|-------------------------------|
|                  |   |   | Gazetted officers.  | Officers in superior service. | Officers in inferior service. | Gazetted officers.                              | Officers in superior service. | Officers in inferior service. |
| Burdwan ... ..   | 18.95   | 11.48   | 37  | 1,123                         | 530                           | 1   | 125                           | 158                           |
| Bankura ... ..   | 4.44  | 5.30  | 24  | 132                           | 376                           | 1   | 14                            | 95                            |
| Hooghly ... ..   | 30.47   | 15.94   | 17  | 220                           | 597                           | 2   | 13                            | 169                           |
| Midnapore ... .. | 6.51  | 8.33  | 22  | 676                           | 2,043                         | 5   | 77                            | 420                           |
| Howrah ... ..    | 18.44   | 13.11   | 14  | 108                           | 108                           | 1   | 4                             | 17                            |
| Total ... ..     | 20.79   | 12.53   | 48  | 475                           | 47                            | .....   | 193                           | 18                            |
| Total ... ..     | 12.95   | 8.34  | 186   | 2,764                         | 3,691                         | 10  | 425                           | 597                           |

\* Six Muhammadans have been taken in as apprentices, of whom four were acting on the date of the Magistrate's report.

The Commissioner observes:—

With reference to the figures of the Hooghly district, Mr. Toynbee observes that the claims of Muhammadans are not overlooked, but Muhammadan candidates for vacancies are nearly always beaten in examinations held to test qualifications. This is no doubt a difficulty in the way of the endeavour to secure for Muhammadans a larger share of the higher appointments, though it may be doubted whether competition in examinations conducted by untrained examiners is in any case the best way of selecting useful public servants. Mr. Oldham admits the difficulty, but would face it. "I unhesitatingly hold," he says, "that this sacrifice is not so great that it should not be incurred. Precisely the same argument was used with regard to the employment of Beharis in Behar, and from my recollection of Behar it had greater force there. Nevertheless, the existing rule has been introduced with excellent results, and I should not oppose the introduction of a rule framed on equally rigid principles for the employment of Muhammadans in Bengal."

Mr. Oldham very correctly interprets the instructions of Government, as conveyed in the Resolution of the 8th October 1886. In districts in which Muhammadans obtain a fair share of public appointments by competitive examination and similar methods no action is needed. It is because in some districts they require special, though temporary, encouragement and support that the necessity has arisen for exceptional treatment. The figures quoted above do not, however, indicate that the Muhammadans of the Burdwan Division are in any way behind hand, indeed it would seem that they hold more than a proportionate number of all except the gazetted offices.

10. The Commissioner writes that the police as a body did fairly well during the year, but the crime statistics do not support this conclusion. Both cognizable and non-cognizable crime increased, the results of trials before the Sessions Courts were not good, the small percentage of convictions in dacoity cases being particularly noticeable, and the returns in connection with the prosecution of complainants in false cases are unsatisfactory. In cognizable cases tried by Magistrates there was an increase in the percentage of convictions. Improvement is reported in the conduct of chowkidars enrolled under Act VI of 1870, and much attention is now paid by local officers to the punctual payment of wages by the punchayats.

11. There was a small increase in civil litigation in the aggregate, but a considerable decrease under the head of rent-suits. The decrease in rent-suits corresponds with the returns of other divisions, and the prevailing opinion is that it is due to uncertainty as to the effect of the provisions of the Tenancy Act.

12. The Collectors of Midnapore and Hooghly report that it has grown into a practice to accept without enquiry arrears of revenue tendered between the day fixed by law as the latest on which payment may be made, and that fixed by advertisement for the sale of estates in consequence of default. The Commissioner, Mr. Wilson, considers this to be a subject to which the attention of Government might with advantage be directed. He observes:—

It is idle to fix a latest day for payment if all defaulters are allowed to make good their default, without loss to their pockets, up to the subsequent dates fixed for the sale of defaulting estates. But, on the other hand, it is quite impossible to formulate any rule or principle which should guide a Collector in deciding whether or not to accept payment of revenue

after the due date. All must depend on the Collector's individual judgment, which can hardly fail to incline towards extreme leniency, since Government has declared that "the cancellation of a sale on the ground of hardship is one of the most severe censures which can be passed on a Collector." Even if it could be determined what excuses, if well established, should be regarded as valid, it is quite impossible for a Collector to decide summarily in each particular case whether the excuses alleged are in fact true. Mere frequency of default is no reason for not showing indulgence, as the scarcely remunerative estates and estates held by numerous undivided proprietors, in which defaults are most frequent, are just the estates in which the *bond fide* obstacles in the way of punctuality are greatest. The true remedy for the present state of things is, I think, a provision of law or executive orders authorizing the levy of a moderate penalty upon exempting a defaulting estate from sale.

The matter is one which has for some time formed the subject of correspondence between the Bengal Government and the Board of Revenue, and is still under consideration. The executive orders issued have checked the evil of hasty and inconsiderate sales for trifling defaults, evidently the result of mistake; but it is a question whether greater punctuality might not be secured by some self-acting sanction, such as that suggested by Mr. Wilson, and also whether zemindars might not in some cases receive notice before their estates are advertised for sale on account of arrears.

13. Under the head of communications must be mentioned the opening of the Jubilee Bridge over the Hooghly on the 21st February last, which is the most important engineering work completed in recent times in these Provinces. The Commissioner remarks that the bulk of the funds of the District Boards are spent on repairs, as distinguished from the construction of new works, and the figures embodied in the report show that this is the case in Burdwan and Hooghly, which in this respect resemble the metropolitan districts of the Presidency Division. It is generally a matter of complaint that the wants of these districts have outgrown the income available from the Road Cess, even where the tax is levied at the maximum rate. The Magistrate of Hooghly considers that "the future remedy for this state of affairs lies in the construction of steam tramways, and of toll-bars on metalled roads."

14. There was an increase of both schools and pupils in every district except Beerbhoom, where there was a falling off in the number of lower primary schools. It is observed that the decrease in that district was to some extent due to mal-administration, the nature of which is not specified, and a further report upon this subject will be called for through the Director of Public Instruction. The grant now made for primary schools is very small, in proportion to the great requirements of the country, and, owing to financial pressure, it has hitherto been found impossible to give effect to the recommendations of the Education Commission, entirely accepted by this Government, that the amount should be largely increased. There is the more necessity that the moderate resources available should be husbanded with the greatest care. The Lieutenant-Governor expects that Commissioners and District Officers will give close attention to the expenditure of funds sanctioned for primary schools. The progress of female education in this division has been slow, notwithstanding the efforts of the zenana mission, and in four of the six districts of the division the number of girls' schools was less than in the preceding year.

15. With regard to the working of the Boards recently constituted under the Local Self-Government Act, the Commissioner writes that it is premature to report. The Municipal Committees of Burdwan, Culna, Bally and Howrah are said to have done good work, but in some municipalities there has been neglect of business and want of harmony among the Commissioners.

16. With few exceptions, the conduct of zemindars towards their tenantry has been satisfactory. The names of several zemindars, who were conspicuous during the year for their liberality and public spirit, and by their fair dealings with their tenantry, are enumerated in the Commissioner's report.

17. The remarks regarding the qualifications of officers will be considered in the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN.

Secretary to the Government of Bengal.

APPOINTMENT OF A COMMITTEE OF ENQUIRY INTO THE WORKING OF THE SONE CANAL SYSTEM OF IRRIGATION.

No. 18847.

GOVERNMENT OF BENGAL,—PUBLIC WORKS DEPARTMENT.

IRRIGATION.

Dated Calcutta, the 11th November 1887.

RESOLUTION.

READ—

- Letter No. 347., dated Gya, 12th May 1886, from the Officiating Collector of Gya.
- Letter No. 1186, dated Arrah, the 13th April 1887, from the Superintending Engineer, Sone Circle, and its enclosure, No. 2106, dated Arrah, the 17th June 1886, from the same, to the Commissioner of the Patna Division.
- Memorial of certain residents of Shahabad, without date, presented to the Hon'ble the Lieutenant-Governor of Bengal in August 1887.
- Letter from Messrs. Burrows, Thomson and Mylne, dated Beheea, the 26th August 1887, to the Chief Secretary to the Government of Bengal.
- Memorandum by Mr. L. H. Mylne, dated Beheea, the 30th August 1887, on Irrigation in Shahabad.
- Note by Special Deputy Collector in charge of Water-rate Collections in the district of Shahabad, dated Doonraon, the 31st August 1887.
- Letter from Mr. L. H. Mylne, dated Beheea, the 3rd September 1887, and enclosures, being correspondence between Messrs Burrows, Thomson and Mylne and the Special Deputy Collector in charge of Water-rate Collections, Shahabad district.
- Letter No. 541G., dated Bankipore, the 30th September 1887, from the Commissioner of the Patna Division, with its enclosure. Letter No. 727., dated Arrah, the 22nd April 1887, from the Officiating Collector of Shahabad.
- Demi-official letter from G. E. Manisty, Esq., dated Arrah, the 30th September 1887, to the Chief Secretary to the Government of Bengal, with its enclosures; Memorandum on Irrigation in Arrah, dated Arrah, the 26th September 1887, and rough notes of complaints made on 9th and 10th September 1887.
- Letter No. 15757., dated Calcutta, the 4th October 1887, from the Officiating Chief Engineer, Public Works Department, Irrigation Branch, Bengal.
- Letter, dated London, the 20th October 1887, from Mr. E. Solano, to the Chief Secretary to the Government of Bengal.
- Letter No 3511 of the 8th November 1887, from the Superintending Engineer, Sone Circle, with enclosures, being notes by himself and other officers of the Sone Canals on the memorial of the residents of Shahabad, letter of Messrs. Burrows, Thomson and Mylne, and Mr. L. H. Mylne's memorandum.

WHILE on tour in the Behar Division, the Lieutenant-Governor received a memorial, numerously signed by leading residents of the Shahabad district, complaining of the system under which the Sone Canals are worked in that district. This was followed up by separate letters of complaint from Messrs. Burrows, Thomson and Mylne and from Mr. Solano, influential landholders of the district. The complaints were general, and not only dealt with the rates, but pointed out numerous difficulties and imperfections in the system of assessment, as well as in that of collection, and included allegations of insufficient water-supply and of injury to the general health of the district. On enquiry the Lieutenant-Governor found that the allegations were such as could not be satisfactorily dealt with by departmental agency.

2. The civil and departmental officers admitted that in many respects the system worked imperfectly, and added complaints from their own point of view of difficulties in securing the attendance of parties for assessment, in ascertaining the correct names of owners, in properly controlling distribution, and in promptly realising arrears.

3. The Lieutenant-Governor came to the conclusion that it was necessary to examine into the working of the entire system, with a view to provide remedies where possible for admitted defects, and to improve the rules, and, if necessary, the law under which the system is administered.

4. To carry out this enquiry, *it is resolved* to appoint a Committee consisting of—

|                                |     |     |            |
|--------------------------------|-----|-----|------------|
| Mr. H. J. S. Cotton, B.C.S.    | ... | ... | President. |
| „ C. W. Odling, M.E., M.I.C.E. | ... | ... | } Members. |
| Rai Jaiprakash Lal Bahadur     | ... | ... |            |

5. Mr. Cotton is placed on special duty from the date on which he was relieved by Sir Henry Harrison; and, after studying the papers bearing on the subject in the Bengal Office, will proceed to Arrah and there be joined by the Members.

6. The enquiry will extend to the working of the system in the Patna and Gya districts as well as in Shahabad, and should, it is considered, be completed at the outside in three months. Mr. Odling will continue to conduct his duties as Superintending Engineer, Sone Circle.

7. A separate letter of instructions will issue to the President and Members of the Committee this day.

ORDER.—Ordered that copies of this Resolution be forwarded to the officers and gentlemen nominated to serve on the Committee; to the Commissioner of the Patna Division, and to the Superintending Engineer of the Sone Canals, for information and guidance; to the Revenue, Appointment, and Financial Departments of this Government; the Board of Revenue, Lower Provinces; and the Examiner, Public Works Accounts, Bengal, for information.

By order of the Lieutenant-Governor of Bengal,

C. W. I. HARRISON, *Lieut.-Col., R.E.,*  
*Offg. Joint-Secretary to the Government of Bengal,*  
*P. W. Dept.*

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 26th November 1887.

| No.                       | District and date of              | Rainfall at Sudder Station in inches. | Character of the weather, state and prospects of the crops, and state of health at date.  |
|---------------------------|-----------------------------------|---------------------------------------|---|
| <b>BENGAL.</b>            |                                   |                                       |   |
| <i>Western Districts.</i> |                                   |                                       |   |
| EDWAR DITY.               | Jurdwan, Nov. 26, '87             | Nil                                   | Weather—seasonable. Rice harvest will be short of the average by from one-third to one-fourth owing to deficient rainfall. Prospects of all other crops fair.   |
|                           | Bankoora „ 26, '87                | Nil                                   | Weather—cold: <i>Haimanti</i> rice is ripening and is expected to yield a 10-anna crop in Bishenpore, and an 8-anna crop in the Sudder sub-division. The plants of mustard, wheat, barley and pulses are coming on well.  |
|                           | Beerbhoom „ 26, '87               | Nil                                   | Weather—warm by day; getting cooler at night. Winter rice is being cut; outturn throughout the district will average about 12 annas. Sugarcane is being irrigated. Lands are still being ploughed for cold-weather crops. |
|                           | 4 Midnapur „ 26, '87              | Nil                                   | Weather—cool and seasonable. Prospects of rice crop good. <i>Rubbi</i> crops are being sown in some parts.  |
|                           | 5 Hooghly „ 26, '87               | Nil                                   | Weather—warm for the time of year. Winter rice harvest has commenced. The crop will be below the average. Other crops doing well, but would be benefited by some rain.  |
|                           | Howrah „ 26, '87                  | Nil                                   | Ordinary cold weather. <i>Amun</i> harvest on high land continues. The crop is not ripe on low land. Sugarcane very strong. <i>Rubbi</i> sowings proceed.   |
| <i>Central Districts.</i> |                                   |                                       |   |
| PRESIDENCY DISTRICTS.     | 24 Parghs. Nov. 26, '87           | Nil                                   | Weather—normal and seasonable. Harvesting of <i>amun</i> going on in some places. Prospects of crops continue good.   |
|                           | Nudda „ 26, '87                   | Nil                                   | Weather—generally warm; nights getting colder. <i>Amun</i> is likely to give a fair outturn, as also sugarcane. <i>Rubbi</i> is good in south of the district. Complaints of want of rain are general.                    |
|                           | Khoolna „ 26, '87                 | Nil                                   | Weather—seasonable. Prospects of <i>amun</i> good. Reaping of <i>chhotan</i> rice has begun in places.  |
|                           | Jessore „ 26, '87                 | Nil                                   | Weather—seasonable. Harvesting of <i>amun</i> crop continues. <i>Rubbi</i> crops prospering.  |
|                           | 10 Moorshedabad „ 26, '87         | Nil                                   | Weather—cool. Prospect of <i>amun</i> good. In some parts it is being cut. <i>Kalai</i> and <i>moog</i> are being harvested. <i>Til</i> and <i>rahar</i> progressing.   |
|                           | 11 Dinagepur Nov. 26, '87         | Nil                                   | Weather—seasonable. Prospect of <i>haimanti</i> crop good. <i>Rubbi</i> crops being sown. Rice 21 seers per rupee.  |
| R. RAJY.                  | Rajshahy „ 26, '87                | Nil                                   | Weather—seasonable. State and prospects of crops excellent.   |
|                           | Rangpur „ 26, '87                 | Nil                                   | Weather—seasonable. Prospects of crops good. Mustard is in flower in some places.   |
|                           | 14 Bogra „ 26, '87                | Nil                                   | Weather—seasonable. State and prospects of crops continue good.   |
|                           | 15 Pubna „ 26, '87                | Nil                                   | Weather—seasonable. State and prospects of crops good.  |
|                           | 16 Darjeeling „ 26, '87           | Nil                                   | Weather—fine. State and prospects of crops good.  |
|                           | Julpigore „ 26, '87               | Nil                                   | Weather—seasonable. Reaping of <i>haimanti</i> paddy continues; prospects of outturn fair.  |
| <i>Eastern Districts.</i> |                                   |                                       |   |
| DACC. DISTRICTS.          | 18 Dacca. Nov. 26, '87            | Nil                                   | Weather—cool and fine. Harvesting of <i>amun</i> continues; outturn good. Winter crops doing well.  |
|                           | Furroedpur „ 26, '87              | Nil                                   | Weather—seasonable. Cloudy to-day (26th). State and prospects of all crops on the ground continue satisfactory.   |
|                           | 19 Backergunge „ 25, '87          | Nil                                   | Weather—days hot; nights comparatively cold. Prospects of crops excellent. Prices of rice stationary.   |
|                           | 20 „ „ „                          |                                       |   |
|                           | 21 Mymensingh „ 25, '87           | Nil                                   | Weather—seasonable. State and prospects of crops good.  |
|                           | 22 Chittagong Nov. 29, '87        | Nil                                   | Weather—seasonable. <i>Amun</i> thriving. Lands not yet ready for <i>rubbi</i> crops. Prices stationary.  |
| CHITTAGONG DISTRICTS.     | 23 Noakholly „ 25, '87            | Nil                                   | Weather—seasonable. State and prospects of <i>amun</i> crop good.   |
|                           | 24 Tipperah „ 24, '87             | Nil                                   | Weather—dry and seasonable. Harvesting of <i>amun</i> progressing; a good outturn expected. Lands are being prepared for cultivation of winter crops.   |
|                           | Chittagong Hill Tracts. „ 22, '87 | Nil                                   | Weather—seasonable with foggy mornings throughout the week. Harvesting of cotton still continues. Late rice crop is in flower. Lands are being ploughed for mustard and other cold-weather crops.                         |
|                           | Hill Tipperah „ 23, '87           | Nil                                   | Weather—getting cold. Prospects of <i>amun</i> paddy fair. Sugarcane and mustard doing well. Cotton and <i>til</i> still being reaped.  |

| No.                         | District and date of return. | Rainfall at Sudder Station in inches.   | Character of the weather, state and prospects of the crops, and state of health at date.   |
|-----------------------------|------------------------------|---|--|
| BEHAR.                      |                              |   |  |
| PATNA DIV.                  | 26 Patna Nov. 26, '87        | Nil   | Weather—cool. <i>Rubbi</i> and poppy are growing well. Mustard is flowering. Paddy has commenced to be reaped.   |
|                             | 27 Gya „ 26, '87             | Nil   | Weather—cold. Paddy is being harvested. <i>Rubbi</i> is coming on well, but is being injured in places by insects. Sowing of poppy nearly completed.   |
|                             | 28 Shahabad „ 26, '87        | Nil   | Weather—seasonable. Harvesting of paddy has commenced. <i>Rubbi</i> is coming on well; prospects continue favourable. Weather for poppy has not been favourable owing to high temperature and easterly wind; there is now a tendency to westerly wind; the whole crop is now above ground and promises well. |
|                             | 29 Durbhunga „ 26, '87       | Nil   | Weather—getting cold. Rice is being harvested. <i>Rubbi</i> sowing is almost over and prospects look very promising. Root crops are being harvested. Prices remain unchanged.  |
|                             | 30 Mozufferpur „ 26, '87     | Nil   | Weather—in the first part of the week cloudy, latterly clear and cold with west wind. Rice coming into ear and promising well. <i>Rubbi</i> in good condition. Poppy healthy.  |
|                             | 31 Saran „ 26, '87           | Nil   | Weather—fair and seasonable. <i>Aghani</i> paddy is being harvested. <i>Rubbi</i> and poppy crops coming on well; in some places the latter had to be re-sown. Prospects fair.   |
| 32 Chumparun „ 26, '87      | Nil                          | Weather—cool and foggy. Westerly winds prevail. Prospects of <i>rubbi</i> , which is germinating, very favourable. Sowing nearly completed. Early paddy is being harvested in places, and much of it is ripening. Poppy is in good condition. New rice in small quantities has begun to come into the market. |  |
| BHAGULPORE DIV.             | 33 Monghyr Nov. 26, '87      | Nil   | Weather—getting cool. Prospects of winter rice continue favourable. <i>Rubbi</i> crops coming on well. Poppy sowings nearly completed.   |
|                             | 34 Bhagulpur „ 26, '87       | Nil   | Weather—seasonable. Harvesting of late rice commencing in places. <i>Rubbi</i> crops doing well.   |
|                             | 35 Purneah „ 26, '87         | Nil   | Weather—cool. All crops doing well.  |
|                             | 36 Maldah „ 26, '87          | Nil   | Weather—seasonable. Harvesting of winter rice has commenced; an average outturn is expected. State of <i>rubbi</i> crops continues favourable. Common rice selling at an average of 23 seers per rupee.  |
|                             | 37 Sonthal Pergha „ 26, '87  | Nil   | Weather—seasonable. Rice harvest has begun; outturn much below the average. <i>Rubbi</i> crops doing well.   |
| ORISSA.                     |                              |   |  |
| ORISSA DIV.                 | 38 Cuttack Nov. 25, '87      | Nil   | Weather—seasonable. Reaping of <i>laghu sarad</i> continues. Late <i>sarad</i> ripening. <i>Rubbi</i> flowering. Sugarcane doing well. Common rice sells at 18 seers per rupee in town and 24 to 25 seers in the interior.   |
|                             | 39 Pooree „ 24, '87          | Nil   | Weather—seasonable with clouds. Late <i>sarad</i> ripening. Early <i>sarad</i> is being harvested. Land is being ploughed for <i>datura</i> crop. Common rice 21 seers 9 chittacks per rupee in the Sudder sub-division and 21 seers 13 chittacks in the Khorda sub-division.                                |
|                             | 40 Balasore „ 25, '87        | Nil   | Weather—seasonable. Harvesting of rice crop going on. Prospects of <i>rubbi</i> crop favourable.   |
| CHOTA NAGPORE.              |                              |   |  |
| South-West Frontier Agency. |                              |   |  |
| CHOTA NAGPORE DIV.          | 41 Hazaribagh Nov. 25, '87   | Nil   | Weather—bright and cold. Harvesting of paddy is being vigorously pushed on. Prospects of <i>rubbi</i> and poppy promising. Rain much wanted for these crops. Sugarcane doing well.   |
|                             | 42 Lohardugga „ 26, '87      | Nil   | Weather—bright and clear. Harvesting of paddy going on in parts of the district. Prices as before.   |
|                             | 43 Singhbhum „ 25, '87       | Nil   | Weather—sunny and seasonable. Reaping of paddy continues. Rain needed for <i>rubbi</i> , but the crops are favourably reported on.   |
|                             | 44 Manbhum „ 26, '87         | Nil   | Weather—cold and fair. Paddy is being reaped. <i>Rubbi</i> crops fair; a little rain would do them good. Price of common rice 18 to 24 seers per rupee.  |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 29th November 1887.P. NOLAN,  
Secy. to the Govt. of Bengal.





The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of April 1887.

## IMPORTS INTO CALCUTTA.

| SPECIFICATION OF ROUTES.                  | FOOD-GRAINS. |          |          |                  |                    | FIBROUS PRODUCTS. |             | OIL-SEEDS. |               | Tea, Indian. | Cotton, raw. | Silk, raw. | SUGAR.   |             | TOBACCO.  |              |
|---|--------------|----------|----------|------------------|--------------------|-------------------|-------------|------------|---------------|--------------|--------------|------------|----------|-------------|-----------|--------------|
|   | Rice.        | Paddy.   | Wheat.   | Gram and pulses. | Other food-grains. | Jute, raw.        | Gunny-bags. | Linseed.   | Mustard seed. |              |              |            | Drained. | Un-drained. | Bis-path. | Other kinds. |
|   | Mds.         | Mds.     | Mds.     | Mds.             | Mds.               | Mds.              | No.         | Mds.       | Mds.          | Mds.         | Mds.         | Mds.       | Mds.     | Mds.        | Mds.      | Mds.         |
| By country boats ...                      | 6,00,361     | 1,10,378 | 69,577   | 2,00,596         | 3,672              | 1,05,787          | 1,045,244   | 67,957     | 14,937        | .....        | 4,580        | 245        | 6,218    | 25,783      | ...       | 8,401        |
| " river steamers ...                      | 1,866        | 52       | 4,579    | 1,823            | .....              | 1,34,940          | .....       | 7,441      | 42,940        | 383          | 1,030        | 133        | 1,305    | 2           | 608       | 1,070        |
| " rail { East Indian Railway ...          | 1,84,451     | 2,107    | 6,62,330 | 1,41,542         | 9,583              | .....             | 58,310      | 7,88,223   | 1,59,787      | 361          | 1,90,814     | 1,088      | 333      | 2,223       | ...       | 800          |
| " rail { Eastern Bengal State Railway ... | 51,500       | 2,788    | 1,10,503 | 2,02,604         | 408                | 64,628            | 781,930     | 50,610     | 7,477         | 4,939        | 3,801        | 387        | 331      | 37,930      | 6,408     | 18,236       |
| " road ...                                | 73,384       | 6,118    | 1,217    | 5,174            | .....              | 10,798            | 10,330      | 4,313      | .....         | .....        | 271          | .....      | 11,485   | 21,283      | ...       | 11,438       |
| " sea ...                                 | 48,943       | 14,810   | 348      | 4,231            | .....              | 274               | 63,900      | .....      | .....         | 2            | 12,208       | 0          | 7,323    | .....       | ...       | 874          |
| Grand total of Imports in April ...       | 8,70,524     | 1,36,343 | 8,38,570 | 5,56,020         | 13,735             | 3,16,397          | 1,907,604   | 9,18,564   | 2,26,127      | 5,584        | 2,18,700     | 2,429      | 27,198   | 87,321      | 7,074     | 40,113       |
| ... 1886 ...                              | 8,89,405     | 1,04,309 | 8,86,190 | 4,66,710         | 65,738             | 2,18,191          | 2,269,076   | 14,10,448  | 3,44,080      | 4,144        | 1,04,778     | 1,951      | 28,138   | 70,770      | 5,347     | 43,571       |

The following Statement shows the Values, Quantities, and Numbers of the Principal Staples of Traffic exported Inland from Calcutta during the month of April 1887.

## EXPORTS FROM CALCUTTA.

| Whither exported.      | Cotton piece-goods. |         | Cotton twist. |         | Salt.    | Gunny-bags. | Whither exported.   | Cotton piece-goods. |          | Cotton twist. |         | Salt.    | Gunny-bags. |
|------------------------|---------------------|---------|---------------|---------|----------|-------------|---|---------------------|----------|---------------|---------|----------|-------------|
|                        | European.           | Indian. | European.     | Indian. |          |             |   | European.           | Indian.  | European.     | Indian. |          |             |
| BENGAL.                | Rs.                 | Rs.     | Mds.          | Mds.    | Mds.     | No.         | CHOTA NAGPORE.  | Rs.                 | Rs.      | Mds.          | Mds.    | Mds.     | No.         |
| Bardwan ...            | 3,03,358            | 360     | 270           | 1,089   | 34,000   | 96,057      | Hazareebagh ...   | 93,114              | .....    | .....         | 98      | 7,028    | 6,300       |
| Beerbhoom ...          | 2,03,998            | .....   | 184           | 501     | 10,800   | 52,155      | Manbhoom ...  | 36,666              | .....    | 70            | 1,929   | 6,380    | 1,155       |
| Midnapore ...          | 1,38,714            | 8,690   | 1,755         | .....   | 31,960   | 5,300       | Grand Total of supplies into the provinces under the Lieutenant-Governor of Bengal.   |                     |          |               |         |          | 7,455       |
| Hooghly ...            | 1,04,410            | 4,398   | 603           | 96      | 3,670    | 48,540      | Total of Chota Nagpore ...  | 1,29,780            | .....    | 70            | 1,287   | 13,304   | .....       |
| M-Fergannahs ...       | 1,09,441            | 7,273   | 381           | .....   | 11,416   | 14,438      | OTHER PROVINCES.  |                     |          |               |         |          | .....       |
| Nudda ...              | 3,91,449            | 1,810   | 1,455         | 83      | 24,651   | 107,688     | Assam ...   | 1,80,512            | .....    | 187           | .....   | 35,203   | 4,655       |
| Kulna ...              | 83,637              | .....   | 125           | .....   | 5,487    | 1,435       | North-Western Provinces and Oudh ...  | 35,08,030           | 18,370   | 3,302         | 729     | 13,921   | 763,005     |
| Jessore ...            | 70,772              | .....   | 971           | .....   | 17,637   | 7,393       | Punjab ...  | 10,11,150           | 0,050    | 969           | .....   | .....    | 88,455      |
| Moornhodabad ...       | 1,23,248            | 600     | 0             | 8       | 5,040    | 18,000      | Central Provinces ...   | 18,018              | .....    | 134           | .....   | .....    | 107,903     |
| Dinapore ...           | 1,40,088            | .....   | 106           | 40      | 8,168    | 7,035       | Rajputana States ...  | 38,907              | 220      | 108           | .....   | .....    | 13,330      |
| Kajshakye ...          | 2,35,431            | .....   | 69            | .....   | 14,652   | 11,060      | Bombay ...  | 7,614               | 4,680    | 4             | .....   | .....    | 1,967,237   |
| Bungpore ...           | 4,02,063            | .....   | 205           | 188     | 16,077   | 3,980       | Madras ...  | 57,144              | 537      | 1,475         | .....   | .....    | 310,130     |
| Borra ...              | 1,93,851            | .....   | 131           | 12      | 14,127   | 28,385      | Nizam's Territory ...   | .....               | 580      | 1             | .....   | .....    | 142,100     |
| Pabna ...              | 1,76,119            | .....   | 3             | 188     | 21,655   | 9,816       | British Burmah ...  | 2,95,664            | .....    | 1,390         | 763     | .....    | 1,385,494   |
| Darjeeling ...         | 60,829              | .....   | 31            | .....   | 691      | 245         | Other places ...  | 9,712               | 2,040    | 1,813         | 443     | 14       | 3,711,001   |
| Fuligporos ...         | 1,98,613            | .....   | 153           | 28      | 12,078   | 630         | Grand Total of Exports in April ...   | 1,30,14,577         | 59,651   | 21,700        | 8,944   | 5,98,678 | 9,856,945   |
| Dacca ...              | 3,10,053            | .....   | 443           | 285     | 17,550   | 10,303      | The Sea-borne Trade of Calcutta in these Staples during the month of March 1887 was as follows:-  |                     |          |               |         |          | .....       |
| Farrakapore ...        | 8,67,748            | .....   | 854           | 202     | 22,120   | 24,395      | IMPORTED INTO CALCUTTA—   | Rs.*                | Rs.      | Mds.          | Mds.    | Mds.     | No.         |
| Barak ...              | 84,048              | .....   | 18            | .....   | 19,375   | 875         | From Foreign Ports—   | .....               | .....    | .....         | .....   | .....    | .....       |
| Kyminsingh ...         | 78,930              | .....   | 30            | 40      | 11,400   | 140         | United Kingdom ...  | 1,18,33,479         | .....    | 23,071        | .....   | 4,44,157 | 50,000      |
| Tippurah ...           | .....               | .....   | .....         | .....   | 2,150    | .....       | Other Foreign ports ...   | 56,174              | .....    | 170           | .....   | 1,74,762 | .....       |
| Chittagong ...         | 73,270              | 1,805   | 120           | .....   | 3,427    | .....       | Total of Foreign Trade ...  | 1,19,39,653         | .....    | 23,241        | .....   | 6,18,939 | 50,000      |
| Noakholy ...           | 10,987              | .....   | .....         | .....   | 3,150    | .....       | From Indian Ports—  | .....               | .....    | .....         | .....   | .....    | .....       |
| Total of Bengal ...    | 29,41,074           | 22,394  | 7,829         | 2,770   | 3,08,691 | 470,398     | Bombay ...  | 2,783               | 1,52,516 | .....         | 5,045   | 18,225   | 7,000       |
| BHAR.                  | .....               | .....   | .....         | .....   | .....    | .....       | Madras ...  | 2,314               | 3,230    | .....         | .....   | .....    | .....       |
| Patna ...              | 5,20,380            | 880     | 148           | 139     | 66,104   | 2,58,385    | British Burmah ...  | 4,080               | 30       | .....         | .....   | .....    | .....       |
| Gya ...                | 3,46,815            | 1,870   | 124           | 574     | 14,904   | 35,350      | Other Indian ports ...  | .....               | .....    | .....         | 15      | .....    | 6,900       |
| Shahabad ...           | 5,20,380            | .....   | 1             | 200     | 17,733   | 36,716      | Total of Interportal Trade ...  | 0,217               | 1,55,905 | .....         | 5,080   | 18,225   | 18,900      |
| Moosherpore ...        | 2,03,616            | 110     | .....         | 13      | 6,416    | 4,480       | Grand Total of Im-ports in April ...  | 1,19,68,870         | 1,55,805 | 23,241        | 5,080   | 6,37,144 | 63,900      |
| Burhanga ...           | 4,75,835            | .....   | 50            | 643     | 13,226   | 92,915      | ports in April ...  | 1,25,97,022         | 1,17,398 | 20,580        | 7,209   | 6,60,132 | 7,700       |
| Barun ...              | 4,99,028            | .....   | 1             | 42      | 4,119    | 20,335      | * As per tariff declaration value.  |                     |          |               |         |          | .....       |
| Chumpanan ...          | 3,42,594            | 1,870   | 32            | 13      | 9,974    | 40,740      | The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported from Calcutta during the month of April 1887. |                     |          |               |         |          | .....       |
| Wonghyr ...            | 3,15,694            | .....   | 9             | 522     | 7,244    | 76,740      |   |                     |          |               |         |          | .....       |
| Bhagulpore ...         | 4,60,593            | .....   | 23            | 205     | 17,094   | 13,1045     |   |                     |          |               |         |          | .....       |
| Farasah ...            | 1,79,881            | .....   | 85            | 180     | 5,661    | 5,475       |   |                     |          |               |         |          | .....       |
| Maldah ...             | .....               | .....   | .....         | .....   | 8,875    | .....       |   |                     |          |               |         |          | .....       |
| Sonthal Purgannahs ... | 3,80,835            | .....   | 123           | 408     | 26,497   | 214,620     |   |                     |          |               |         |          | .....       |
| Total of Behar ...     | 42,34,041           | 4,780   | 596           | 3,012   | 1,94,825 | 925,800     |   |                     |          |               |         |          | .....       |
| ORISSA.                | .....               | .....   | .....         | .....   | .....    | .....       |   |                     |          |               |         |          | .....       |
| Cuttack ...            | 6,814               | .....   | 1             | .....   | .....    | 4,000       |   |                     |          |               |         |          | .....       |
| Balasore ...           | 90,301              | .....   | 3,803         | .....   | 14,565   | 89,840      |   |                     |          |               |         |          | .....       |
| Total of Orissa ...    | 1,03,115            | .....   | 3,804         | .....   | 14,565   | 93,840      |   |                     |          |               |         |          | .....       |

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported from Calcutta during the month of April 1887.

| SPECIFICATION OF ROUTES.                  | COTTON PIECE-GOODS. |         | COTTON TWIST. |         | Salt.    | Gunny-bags. |
|---|---------------------|---------|---------------|---------|----------|-------------|
|   | European.           | Indian. | European.     | Indian. |          |             |
|   | Rs.                 | Rs.     | Mds.          | Mds.    | Mds.     | No.         |
| By country boats ...                      | 1,70,211            | 10,523  | 2,072         | .....   | 1,50,790 | 86,825      |
| " river steamers ...                      | 4,53,385            | .....   | 800           | 274     | 50,889   | 46,941      |
| " rail { East Indian Railway ...          | 86,25,770           | 31,350  | 5,710         | 6,500   | 2,72,834 | 2,036,335   |
| " rail { Eastern Bengal State Railway ... | 26,43,102           | 110     | 3,901         | 900     | 98,008   | 187,540     |
| " road ...                                | 1,76,779            | 9,187   | 611           | 74      | 4,969    | 6,835       |
| " sea ...                                 | 5,46,530            | 8,383   | 8,606         | 1,308   | 13,489   | 7,422,449   |
| Grand Total of Exports in April ...       | 1,36,14,577         | 59,651  | 21,700        | 8,904   | 5,01,580 | 7,856,945   |
| ... 1886 ...                              | 1,56,46,880         | 60,074  | 23,114        | 9,707   | 6,31,673 | 18,982,994  |

Results of the Meteorological Observations taken at the Alipore Observatory from  
20th to 26th November 1887.

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 35° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |    | Miles recorded. | Rain.                | WEATHER. |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|----|-----------------|----------------------|----------|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. |    |                 |                      |          |
| 1887.  |       | °               |                                     | Inches.                              | °            | °        | °      | °        | °              | Inches.         | °          | %         |                       |    | Inches.         |                      |          |
| Nov.   | 20th  | 136.7           | 9.7                                 | 30.023                               | 73.0         | 82.4     | 10.2   | 66.2     | 68.2           | 0.427           | 65.4       | 78        | N and NNW ...         | 61 | Nil             | Chiefly clear,<br>P. |          |
| "      | 21st  | 137.0           | 9.9                                 | .007                                 | 72.7         | 82.5     | 16.7   | 65.8     | 67.8           | .616            | 64.8       | 78        | NNW ...               | 50 |                 | Chiefly clear,<br>P. |          |
| "      | 22nd  | 134.9           | 9.8                                 | .038                                 | 73.0         | 81.9     | 15.6   | 66.3     | 66.7           | .573            | 62.8       | 72        | N and N by W ...      | 83 |                 | Clear,<br>= P.       |          |
| "      | 23rd  | 135.8           | 8.3                                 | .051                                 | 70.7         | 80.5     | 17.1   | 63.4     | 63.8           | .503            | 59.1       | 68        | N by E and NNW ...    | 72 |                 | Chiefly clear,<br>P. |          |
| "      | 24th  | 131.3           | 8.6                                 | .016                                 | 68.9         | 79.0     | 17.7   | 61.3     | 62.2           | .473            | 57.4       | 68        | NNW ...               | 78 |                 | Chiefly clear,<br>P. |          |
| "      | 25th  | 134.7           | 8.7                                 | 29.999                               | 68.7         | 79.9     | 20.1   | 59.8     | 62.6           | .489            | 58.3       | 71        | N by W and NW by W.   | 69 |                 | Chiefly clear,       |          |
| "      | 26th  | 130.3           | 9.7                                 | 30.016                               | 69.8         | 79.7     | 17.2   | 62.5     | 61.9           | .453            | 56.2       | 63        | NNW and WNW ...       | 91 |                 | Chiefly clear.       |          |

The mean pressure of the seven days

The average pressure of the corresponding period for 24 years, S. G.'s Office

The total number of hours of bright sunshine

The maximum possible number of hours of sunshine

The mean temperature of the seven days

The average temperature of the corresponding period for 24 years, S. G.'s Office

The extreme variation of temperature

The maximum temperature

The highest velocity of the wind in one hour

The highest pressure of wind on one square foot

The mean relative humidity

The average relative humidity of the corresponding period for 24 years, S. G.'s Office

The total fall of rain from 20th to 26th November 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

The total fall from 1st January to 26th November 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

The mean pressure, temperature, &amp;c., are deduced from the traces of the Barograph and Thermograph.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The month of the rain-gauge is one foot above the ground.

— fog, — due

A. PEDLER,

For Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA :  
Calcutta, the 28th November 1887.

Meteorological Report of the Province of Bengal

| METEOROLOGICAL DIVISION | DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
|-------------------------|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------|---|---------------------|--------------------|---------------------------|---------------------------|-------------------------|-------------------------------------|---------------------------|
|                         |                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.         |   |                     |                    |                           |                           |                         |                                     |                           |
|                         |                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week. | Date.   | Lowest during week. | Date.              | Mean maximum temperature. | Mean minimum temperature. | Mean daily temperature. | Variation from normal mean of week. | Mean 10 A.M. temperature. |
|                         |                        |                         |                                 |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
| ORIGINAL.               | Pooree                 | Gopalpore               | 30.080                          | 30.100                     | +0.023               | NE                    | 101.0               | 83.2                 | 21st Nov.                                       | 68.9                | 23rd & 25th Nov.   | 81.3                      | 71.3                      | 76.3                    | +5.0                                | 76.3                      |
|                         | False Point            | False Point             | 30.088                          | 30.110                     | +0.020               | NE                    | 101.0               | 87.4                 | 19th "  | 57.0                | 25th "             | 83.8                      | 66.5                      | 74.1                    | +3.5                                | 78.9                      |
|                         | Cuttack                | Cuttack                 | 30.033                          | 30.115                     | +0.080               | ENE                   | 34.0                | 87.4                 | 22nd "  | 61.3                | 25th "             | 86.4                      | 67.3                      | 76.8                    | +2.7                                | 81.0                      |
|                         | Balasore               | Balasore                | 30.052                          | 30.112                     | +0.060               | NNW                   | 64.0                | 84.9                 | 19th "  | 54.5                | 25th "             | 85.7                      | 63.3                      | 78.1                    | +3.2                                | 76.2                      |
| SOUTH-WEST BENGAL.      | South-West Midnapore   | Saugor Island           | 30.006                          | 30.123                     | +0.017               | NNW                   | 208.0               | 62.7                 | 22nd & 23rd Nov.                                | 63.4                | 23rd & 25th Nov.   | 81.8                      | 66.6                      | 74.2                    | +1.3                                | 76.1                      |
|                         | Midnapore              | Midnapore               | 29.988                          | 30.142                     | +0.054               | N                     | 80.8                | 88.3                 | 20th "  | 57.7                | 25th "             | 85.0                      | 63.9                      | 74.0                    | +4.7                                | 76.6                      |
|                         | 24-Pergunnahs          |                         |                                 |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
|                         | Howrah                 | Calcutta                | 30.061                          | 30.113                     | +0.052               | NNW                   | 65.0                | 83.5                 | 20th "  | 59.8                | 25th "             | 81.9                      | 64.7                      | 73.3                    | +2.1                                | 76.7                      |
|                         | Hooghly                |                         |                                 |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
|                         | Burdwan                | Burdwan                 | 29.998                          | 30.101                     | +0.003               | NE                    | 51.3                | 80.5                 | 19th "  | 59.9                | 25th "             | 83.0                      | 63.8                      | 73.3                    | +2.1                                | 76.2                      |
|                         | Bankoora               | Bankoora                | 29.783                          | —                          | —                    | N                     | 51.9                | 86.1                 | 19th & 20th Nov.                                | 57.3                | 24th & 25th Nov.   | 84.6                      | 61.7                      | 76.2                    | —                                   | 77.6                      |
|                         | Beerbhoom              | Ransegunge              | 29.788                          | 30.103                     | +0.015               | NW                    | 89.9                | 87.8                 | 24th "  | 56.8                | 24th "             | 85.3                      | 60.3                      | 72.8                    | +3.0                                | 76.6                      |
|                         | West Burdwan           |                         |                                 |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
|                         | Moorshedabad           | Berhampore              | 30.057                          | 30.125                     | +0.068               | NNW                   | 40.7                | 84.6                 | 19th "  | 61.3                | 25th "             | 81.9                      | 63.6                      | 73.8                    | +1.3                                | 74.9                      |
|                         | Nuddea                 | Krishnaghar             | 30.043                          | 30.110                     | —                    | WNW                   | 51.3                | 84.7                 | 18th "  | 58.0                | 23rd "             | 83.2                      | 61.5                      | 73.4                    | —                                   | 76.8                      |
|                         | Jessore                | Jessore                 | 30.079                          | 30.104                     | +0.025               | NW                    | 51.6                | 85.7                 | 19th & 20th Nov.                                | 63.0                | 21st & 25th Nov.   | 84.5                      | 63.9                      | 74.3                    | +2.6                                | 77.4                      |
| EAST BENGAL.            | Chittagong             | Chittagong              | 29.982                          | 30.073                     | +0.011               | NE                    | 24.0                | 85.6                 | 19, 20, 22, & 23rd Nov. not received.           | 64.0                | 25th "             | 85.0                      | 63.7                      | 75.4                    | +2.7                                | 79.4                      |
|                         | Chittagong Hill Tracts | Dumagiri                |                                 |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
|                         | Boakergunge            | Barrisal                | 30.063                          | 30.075                     | +0.012               | Calm                  | 46.6                | 84.3                 | 20th "  | 62.1                | 25th "             | 83.9                      | 63.9                      | 73.4                    | +2.1                                | 78.3                      |
|                         | Noakholly              | Noakholly               | 30.023                          | 30.067                     | +0.044               | Calm                  | ?                   | 85.5                 | 19th "  | 62.0                | 21st & 22nd Nov.   | 84.2                      | 63.2                      | 73.5                    | +3.5                                | 78.9                      |
|                         | Furzedpore             | Furzedpore              | 30.055                          | 30.095                     | +0.040               | N & NW                | 36.0                | 83.0                 | 19th "  | 62.0                | 25th "             | 82.0                      | 63.3                      | 73.0                    | +2.1                                | 76.3                      |
|                         | Dacca                  | Dacca                   | 30.061                          | 30.085                     | +0.024               | NW                    | 48.0                | 85.1                 | 19, 21, 22, & 23rd Nov.                         | 63.4                | 25th "             | 84.5                      | 65.0                      | 75.3                    | +3.7                                | 77.9                      |
|                         | Commillah              | Commillah               | 30.042                          | 30.079                     | +0.037               | NW                    | 19.4                | 86.4                 | 23rd "  | 58.0                | 25th "             | 85.9                      | 62.0                      | 74.0                    | +3.2                                | 79.1                      |
|                         | Mymensingh             | Mymensingh              | 30.043                          | 30.102                     | +0.059               | NE                    | 33.0                | 84.4                 | 19th & 22nd Nov.                                | 60.1                | 25th "             | 83.7                      | 68.5                      | 73.1                    | +0.7                                | 76.4                      |
|                         | Bogra                  | Bogra                   | 30.009                          | 30.073                     | —                    | Calm                  | 29.0                | 83.7                 | 22nd "  | 60.4                | 25th "             | 83.9                      | 68.1                      | 73.5                    | —                                   | 74.1                      |
|                         | Pabna                  | Soragunge               | 30.045                          | 30.093                     | +0.048               | NE                    | 19.4                | 84.4                 | 22nd & 23rd Nov.                                | 61.0                | 25th "             | 83.7                      | 62.7                      | 73.2                    | +3.3                                | 76.9                      |
|                         | Rajahmhye              | Rampore Beau-jesh.      | 30.028                          | 30.100                     | +0.072               | N                     | 89.3                | 84.2                 | 19th "  | 58.7                | 23, 24 & 25th Nov. | 82.3                      | 60.3                      | 71.4                    | +4.0                                | 77.0                      |
|                         | Maldah                 | Maldah                  | 29.944                          | —                          | —                    | NW                    | 18.6                | 84.6                 | 19th "  | 57.4                | 25th "             | 83.6                      | 60.1                      | 71.4                    | —                                   | 73.9                      |
| NORTH BENGAL.           | Dinapore               | Dinapore                | 29.973                          | 30.096                     | +0.023               | WNW                   | 54.0                | 83.6                 | 19th "  | 58.3                | 24th & 25th Nov.   | 82.6                      | 60.6                      | 71.0                    | +2.8                                | 78.1                      |
|                         | Rungpore               | Rungpore                | 29.987                          | 30.115                     | +0.028               | ENE                   | 36.0                | 83.3                 | 22nd "  | 58.7                | 25th "             | 84.7                      | 60.6                      | 71.7                    | +3.7                                | 76.3                      |
|                         | Julpigoree             | Julpigoree              | 29.842                          | 30.136                     | +0.094               | NE                    | 12.4                | 81.9                 | 20th & 21st                                     | 56.9                | 21th "             | 81.1                      | 59.5                      | 70.3                    | +2.1                                | 74.1                      |
|                         | Cooch Behar            |                         |                                 |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
|                         | Darjeeling Hill Tracts | Darjeeling              | 23.133                          | —                          | —                    | Calm                  | 25.5                | 56.8                 | 21st  | 39.8                | 22nd "             | 55.0                      | 41.5                      | 48.3                    | +3.6                                | 55.5                      |
|                         | Purneah                | Purneah                 | 30.082                          | 30.153                     | +0.071               | Calm                  | 1.5                 | 81.2                 | 19, 20, 21, & 22nd Nov. observations suspended. | 56.7                | 23, 24 & 25th Nov. | 80.6                      | 58.6                      | 69.6                    | +0.7                                | 73.9                      |
|                         | North Bhagulpore       |                         |                                 |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
|                         | Mouafferpore           | Mouafferpore            |                                 |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
|                         | Durbhanga              | Durbhanga               | 29.976                          | 30.146                     | +0.070               | Westerly              | 54.0                | 83.4                 | 20th & 21st Nov.                                | 57.4                | 25th "             | 81.3                      | 61.9                      | 71.3                    | +3.0                                | 78.3                      |
|                         | Chumparan              | Mothari                 | 29.960                          | 30.093                     | +0.033               | W                     | 94.0                | 83.9                 | 21st "  | 53.1                | 22nd "             | 83.4                      | 67.3                      | 69.9                    | +3.5                                | 76.6                      |
|                         | Baran                  | Chupra                  | 29.925                          | 30.128                     | +0.003               | WNW                   | —                   | 84.5                 | 20th "  | 54.0                | 25th "             | 81.6                      | 58.0                      | 69.8                    | +1.8                                | 76.3                      |
|                         | Shahabad               | Dohree                  | 29.707                          | 30.134                     | +0.027               | SW                    | 110.8               | 83.0                 | 21st "  | 56.0                | 25th "             | 80.3                      | 60.3                      | 70.4                    | +5.2                                | 75.1                      |
| SOUTH BENGAL.           | Buxar                  | Buxar                   | 29.912                          | 30.163                     | +0.051               | W                     | 71.1                | 84.9                 | 21st "  | 53.9                | 24th "             | 83.0                      | 58.5                      | 70.7                    | +5.1                                | 76.5                      |
|                         | Arrah                  |                         | 29.926                          | 30.151                     | +0.025               | Westerly              | 21.7                | 84.3                 | 20th "  | 51.9                | 25th "             | 81.3                      | 59.3                      | 69.1                    | +1.3                                | 76.5                      |
|                         | Gya                    | Gya                     | 29.746                          | 30.134                     | +0.018               | Calm                  | 18.9                | 84.7                 | 20th "  | 54.3                | 25th "             | 83.9                      | 58.1                      | 70.5                    | +1.8                                | 76.3                      |
|                         | Patna                  | Bankipore               | 29.973                          | 30.163                     | +0.071               | W                     | 48.3                | 83.8                 | 20th "  | 53.9                | 25th "             | 81.4                      | 59.4                      | 70.4                    | +3.5                                | 75.3                      |
|                         | South Bhagulpore       |                         |                                 |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
|                         | Monghyr                | Bhagulpore              | 29.970                          | 30.136                     | +0.072               | W                     | 31.0                | 82.3                 | 19th "  | 54.9                | 24th "             | 81.3                      | 58.9                      | 69.9                    | +2.8                                | 76.7                      |
|                         | Sonthal Pergunnahs     | Dootaka                 | 29.904                          | —                          | —                    | NW                    | 92.7                | 84.6                 | 19th & 20th Nov.                                | 53.6                | 23rd "             | 82.0                      | 58.1                      | 70.3                    | +2.7                                | 76.7                      |
|                         | Hazaribagh             | Hazaribagh              | 29.983                          | 30.146                     | +0.071               | Variable              | 126.6               | 80.2                 | 20th "  | 53.6                | 24th "             | 77.3                      | 57.3                      | 67.3                    | +2.0                                | 68.3                      |
|                         | Lohardugga             |                         |                                 |                            |                      |                       |                     |                      |   |                     |                    |                           |                           |                         |                                     |                           |
|                         | Manbhoom               | Ranchee                 | 27.955                          | 30.128                     | +0.063               | Variable              | 108.2               | 79.2                 | 20th "  | 51.6                | 25th "             | 76.9                      | 55.3                      | 66.1                    | +3.0                                | 71.1                      |
|                         | Singbhoom              | Chytassae               | 29.232                          | —                          | —                    | NE                    | 19.3                | 84.5                 | 21st  | 52.7                | 25th "             | 83.0                      | 58.9                      | 70.8                    | +3.4                                | 77.3                      |

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the last ten years. The humidity of the atmosphere is expressed as percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The numbers are the numerical means or average of the rainfall in that district determined from the returns sent in by the sub-divisional stations for the period in question during the past 10 years. In the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

for the week ending Friday, the 25th November 1887.

| DISTRICT OBSERVATIONS.      |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |                 | Representative station. | DISTRICT.              | METEOROLOGICAL DIVISION. |  |  |  |
|-----------------------------|---|--|--------------------|--------------|---------------------|--------------|------------|--------------------|--------------|------------|-------------------------------|------------------------------|-----------------|-------------------------|------------------------|--------------------------|--|--|--|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | OF WEEK.           |              | RAINFALL.           |              |            |                    |              |            |                               |                              |                 |                         |                        |                          |  |  |  |
|                             |   |  | Mean for district. | Normal mean. | Since 1st of month. |              |            | Since May 15th.    |              |            | Average number of rainy days. | Normal number of rainy days. |                 |                         |                        |                          |  |  |  |
|                             |   |  |                    |              | Mean for district.  | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. |                               |                              |                 |                         |                        |                          |  |  |  |
| 68                          | 41  | 0.53                                   | —                  | —            | —                   | —            | —          | —                  | —            | —          | —                             | —                            | —               | Gopalpore               | ...                    | CENTRAL.                 |  |  |  |
| 68                          | 43  | 0.06                                   | Nil                | 0.25         | 1.88                | 1.76         | +0.12      | 43.97              | 55.01        | -11.04     | 0.0                           | 0.3                          | False Point     | ...                     | Pooree                 |                          |  |  |  |
| 66                          | 40  | Nil                                    | Nil                | 0.34         | 0.84                | 0.92         | -0.08      | 44.85              | 51.88        | -6.73      | 0.0                           | 0.2                          | Outack          | ...                     | Outack                 |                          |  |  |  |
| 68                          | 11  | 0.08                                   | Nil                | 0.11         | 0.14                | 0.78         | -0.64      | 41.80              | 53.30        | -11.50     | 0.0                           | 0.2                          | Balsore         | ...                     | Balsore                |                          |  |  |  |
| 74                          | 3.9                                       | Nil                                    | Nil                | 0.03         | 1.35                | 0.53         | +0.82      | 58.28              | 61.46        | -3.18      | 0.0                           | 0.1                          | Sangor Island   | ...                     | South-West Midnapore   | CENTRAL.                 |  |  |  |
| 66                          | 1.7                                       | Nil                                    | Nil                | 0.03         | 0.05                | 0.23         | -0.17      | 50.46              | 50.79        | -0.33      | 0.0                           | 0.1                          | Midnapore       | ...                     | South 24-Pergunnahs    |                          |  |  |  |
| 68                          | 4.1                                       | Nil                                    | Nil                | 0.02         | 0.04                | 0.30         | -0.26      | 40.30              | 51.50        | -11.00     | 0.0                           | 0.1                          | Calcutta        | ...                     | 24-Pergunnahs          |                          |  |  |  |
| 60                          | 2.9                                       | Nil                                    | Nil                | Nil          | 0.33                | 0.29         | +0.04      | 45.04              | 46.15        | -1.11      | 0.0                           | 0.0                          | Burdwan         | ...                     | Howrah                 |                          |  |  |  |
| 68                          | 0.6                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.33         | -0.32      | 40.34              | 51.88        | -2.34      | 0.0                           | 0.0                          | Bankoora        | ...                     | Hooghly                | SOUTH-WEST BENGAL.       |  |  |  |
| 46                          | 0.6                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.14         | -0.14      | 47.71              | 51.85        | -4.14      | 0.0                           | 0.0                          | Raneegunge      | ...                     | Bankoora               |                          |  |  |  |
| 70                          | 1.7                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.25         | -0.25      | 58.85              | 49.18        | +9.67      | 0.0                           | 0.0                          | Berhampore      | ...                     | Boorbhoom              |                          |  |  |  |
| 68                          | 2.1                                       | Nil                                    | Nil                | 0.01         | 0.01                | 0.31         | -0.30      | 42.78              | 48.95        | -6.17      | 0.0                           | 0.1                          | Krishnagur      | ...                     | West Burdwan           |                          |  |  |  |
| 67                          | 4.7                                       | Nil                                    | Nil                | 0.07         | 0.42                | 0.37         | +0.05      | 41.50              | 53.18        | -11.68     | 0.0                           | 0.2                          | Jessore         | ...                     | Nuddea                 | SOUTH-WEST BENGAL.       |  |  |  |
| 72                          | 1.3                                       | Nil                                    | Nil                | 0.02         | 3.76                | 1.08         | +2.68      | 90.03              | 113.50       | -17.47     | 0.0                           | 0.5                          | Chittagong      | ...                     | Jessore                |                          |  |  |  |
| 73                          | 0   | Nil                                    | Nil                | 0.22         | 4.66                | 1.12         | +3.54      | 59.32              | 77.22        | -17.90     | 0.0                           | 0.3                          | Barrisal        | ...                     | Khoolna                |                          |  |  |  |
| 64                          | 2.7                                       | Nil                                    | Nil                | 0.55         | 4.82                | 2.30         | +2.52      | 72.07              | 108.24       | -35.57     | 0.0                           | 0.4                          | Noakholly       | ...                     | Chittagong Hill Tracts |                          |  |  |  |
| 69                          | 0.0                                       | Nil                                    | Nil                | 0.10         | 0.41                | 0.39         | +0.02      | 35.91              | 55.32        | -19.41     | 0.0                           | 0.2                          | Furzedpore      | ...                     | Backergunge            | SOUTH-WEST BENGAL.       |  |  |  |
| 72                          | 2.9                                       | Nil                                    | Nil                | 0.11         | 1.08                | 0.51         | +0.57      | 40.29              | 60.48        | -20.19     | 0.0                           | 0.2                          | Dacca           | ...                     | Noakholly              |                          |  |  |  |
| 68                          | 1.6                                       | Nil                                    | Nil                | 0.14         | 1.12                | 0.70         | +0.42      | 42.01              | 70.42        | -28.41     | 0.0                           | 0.2                          | Commillah       | ...                     | Furzedpore             |                          |  |  |  |
| 76                          | 2.7                                       | Nil                                    | Nil                | 0.02         | 0.12                | 0.24         | -0.12      | 60.33              | 67.04        | -6.51      | 0.0                           | 0.1                          | Mymensingh      | ...                     | Dacca                  |                          |  |  |  |
| 73                          | 0.6                                       | Nil                                    | Nil                | 0.01         | Nil                 | 0.35         | -0.35      | 60.48              | 56.55        | +3.93      | 0.0                           | 0.1                          | Bogra           | ...                     | Commillah              | SOUTH-WEST BENGAL.       |  |  |  |
| 75                          | 2.0                                       | Nil                                    | Nil                | 0.02         | 0.05                | 0.27         | -0.22      | 43.99              | 53.38        | -9.39      | 0.0                           | 0.1                          | Serajgunge      | ...                     | Mymensingh             |                          |  |  |  |
| 68                          | 0.0                                       | Nil                                    | Nil                | Nil          | 0.15                | 0.20         | -0.05      | 49.57              | 53.79        | -4.22      | 0.0                           | 0.0                          | Rampore Beanlah | ...                     | Bogra                  |                          |  |  |  |
| 66                          | 0.0                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.17         | -0.17      | 46.61              | 54.25        | -7.64      | 0.0                           | 0.0                          | Maldah          | ...                     | Pubna                  |                          |  |  |  |
| 63                          | 0.0                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.04         | -0.04      | 69.06              | 55.51        | +13.55     | 0.0                           | 0.0                          | Dinagore        | ...                     | Rajshahye              | NORTH BENGAL.            |  |  |  |
| 68                          | 0.0                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.08         | -0.08      | 80.01              | 72.74        | +7.27      | 0.0                           | 0.0                          | Rungpore        | ...                     | Maldah                 |                          |  |  |  |
| 66                          | 0.0                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.04         | -0.04      | 117.42             | 100.94       | +16.48     | 0.0                           | 0.0                          | Julpigoree      | ...                     | Dinagore               |                          |  |  |  |
| 64                          | 0.7                                       | Nil                                    | 0.07               | 0.02         | 0.07                | 0.23         | -0.16      | 117.17             | 119.80       | -2.63      | 0.0                           | 0.1                          | Darjeeling      | ...                     | Rungpore               |                          |  |  |  |
| 71                          | 0.0                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.03         | -0.03      | 65.04              | 57.39        | +7.65      | 0.0                           | 0.0                          | Purneah         | ...                     | Julpigoree             | NORTH BENGAL.            |  |  |  |
| 74                          | 0.0                                       | Nil                                    | Nil                | 0.02         | Nil                 | 0.08         | -0.08      | 46.01              | 42.50        | +3.51      | 0.0                           | 0.1                          | Mosufferpore    | ...                     | Cooch Behar            |                          |  |  |  |
| 51                          | 0.2                                       | Nil                                    | Nil                | 0.01         | Nil                 | 0.03         | -0.03      | 49.02              | 45.60        | +3.42      | 0.0                           | 0.1                          | Durbhunga       | ...                     | Darjeeling Hill Tracts |                          |  |  |  |
| 68                          | 0.0                                       | Nil                                    | Nil                | 0.03         | Nil                 | 0.01         | -0.01      | 49.38              | 45.63        | +3.75      | 0.0                           | 0.1                          | Motihari        | ...                     | Purneah                |                          |  |  |  |
| 54                          | 0.0                                       | Nil                                    | Nil                | 0.03         | Nil                 | 0.09         | -0.09      | 39.35              | 42.24        | -2.89      | 0.0                           | 0.1                          | Chupra          | ...                     | North Bhagulpore       | NORTH BENGAL.            |  |  |  |
| 56                          | 0.0                                       | Nil                                    | Nil                | 0.03         | Nil                 | 0.18         | -0.18      | 37.45              | 39.31        | -1.86      | 0.0                           | 0.1                          | Buxar           | ...                     | Mosufferpore           |                          |  |  |  |
| 56                          | 0.0                                       | Nil                                    | Nil                | 0.03         | Nil                 | 0.17         | -0.17      | 38.00              | 40.74        | -2.74      | 0.0                           | 0.1                          | Gya             | ...                     | Durbhunga              |                          |  |  |  |
| 64                          | 0.2                                       | Nil                                    | Nil                | 0.03         | Nil                 | 0.13         | -0.13      | 36.04              | 40.74        | -4.70      | 0.0                           | 0.1                          | Bankipore       | ...                     | Chumpanun              |                          |  |  |  |
| 59                          | 0.1                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.13         | -0.13      | 42.22              | 42.44        | +0.22      | 0.0                           | 0.0                          | Bhagulpore      | ...                     | Saran                  | NORTH BENGAL.            |  |  |  |
| 50                          | 0.3                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.13         | -0.13      | 32.49              | 50.22        | +17.73     | 0.0                           | 0.0                          | Doomke          | ...                     | Shahabad               |                          |  |  |  |
| 48                          | 2.3                                       | Nil                                    | Nil                | 0.04         | Nil                 | 0.26         | -0.26      | 46.42              | 49.78        | -3.36      | 0.0                           | 0.1                          | Hasaribagh      | ...                     | Arrah                  |                          |  |  |  |
| 68                          | 2.6                                       | Nil                                    | Nil                | 0.04         | Nil                 | 0.28         | -0.28      | 44.34              | 46.56        | -2.22      | 0.0                           | 0.1                          | Ranchoe         | ...                     | Gya                    |                          |  |  |  |
| 47                          | 0.0                                       | Nil                                    | Nil                | Nil          | Nil                 | 0.23         | -0.23      | 49.02              | 50.46        | -1.44      | 0.0                           | 0.0                          | Chyphassa       | ...                     | Patna                  | NORTH BENGAL.            |  |  |  |
|                             |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |                 |                         | South Bhagulpore       |                          |  |  |  |
|                             |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |                 |                         | Monghyr                |                          |  |  |  |
|                             |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |                 |                         | Sonthal Pergunnahs     |                          |  |  |  |
|                             |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |                 |                         | Hasaribagh             | NORTH BENGAL.            |  |  |  |
|                             |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |                 |                         | Lohardugga             |                          |  |  |  |
|                             |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |                 |                         | Manbhoom               |                          |  |  |  |
|                             |   |  |                    |              |                     |              |            |                    |              |            |                               |                              |                 |                         | Singbhoom              |                          |  |  |  |

The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater. The means of the district are the numerical averages of the rainfall return received in the district, i.e., from the total rainfall at the sub-divisions.





Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 25th of November 1887.—*con. id.*

| Meteorological Division.      | District.           | Station.          | RAINFALL.                |                        |                        |                         |                           |                          |                        | TOTAL.                |              | Total rainfall since 1st of month. | Average total rainfall from 1st of month. | Total rainfall since 18th May 1887. | Average rainfall from 18th May to date. |
|-------------------------------|---------------------|-------------------|--------------------------|------------------------|------------------------|-------------------------|---------------------------|--------------------------|------------------------|-----------------------|--------------|------------------------------------|---|-------------------------------------|---|
|                               |                     |                   | Saturday, 19th November. | Sunday, 20th November. | Monday, 21st November. | Tuesday, 22nd November. | Wednesday, 23rd November. | Thursday, 24th November. | Friday, 25th November. | Number of rainy days. | of rainfall. |                                    |   |                                     |   |
| NORTH BHAR— <i>continued.</i> | Baran.              | Gopalgunge...     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.11                                      | 41.80                               | 48.46                                   |
|                               |                     | Sowan...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.09                                      | 38.94                               | 48.44                                   |
| SOUTH BHAR                    | Shahabad.           | Onurab...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.07                                      | 37.48                               | 39.77                                   |
|                               |                     | Buxar...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.10                                      | 38.58                               | 37.78                                   |
|                               |                     | Dumree...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 37.86                               | ?                                       |
|                               |                     | Hanboosh...       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.41                                      | 40.74                               | 39.61                                   |
|                               |                     | Samsaram...       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.14                                      | 35.44                               | 36.90                                   |
|                               |                     | Arrah...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.08                                      | 40.35                               | 39.23                                   |
|                               |                     | Mohania...        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | ?                                   | ?                                       |
|                               | Gya.                | Aurungabad...     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.18                                      | 39.23                               | 48.16                                   |
|                               |                     | Gya...            | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.23                                      | 42.15                               | 41.70                                   |
|                               |                     | Nowadah...        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.12                                      | 38.03                               | 39.25                                   |
|                               |                     | Jehanabad...      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.15                                      | 45.61                               | 39.57                                   |
|                               |                     | Arwal...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 38.24                               | ?                                       |
|                               |                     | Imadnagar...      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 27.51                               | ?                                       |
|                               |                     | Sherrghati...     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 35.75                               | ?                                       |
|                               |                     | Kajauli...        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 27.43                               | ?                                       |
|                               |                     | Pabri Barwan...   | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 21.43                               | ?                                       |
|                               | Patna.              | Patna...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.08                                      | 36.36                               | 41.62                                   |
|                               |                     | Dinapur...        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.09                                      | 37.50                               | 40.81                                   |
|                               |                     | Behar...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.14                                      | 34.50                               | 41.34                                   |
|                               |                     | Harr...           | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.16                                      | 35.71                               | 38.74                                   |
|                               |                     | Bokros...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 39.75                               | ?                                       |
|                               |                     | Husa...           | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 33.54                               | ?                                       |
|                               | Mungheer.           | Begoesra...       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.21                                      | 48.86                               | 38.82                                   |
|                               |                     | Moukhyr...        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.07                                      | 40.64                               | 45.84                                   |
|                               |                     | Jamu...           | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.04                                      | 38.09                               | 42.33                                   |
|                               |                     | Gogri...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 42.65                               | ?                                       |
|                               |                     | Shrikpura...      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 28.14                               | ?                                       |
|                               | South Wazirpore.    | Wazirpore...      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.21                                      | 40.85                               | 41.68                                   |
|                               |                     | Hanka...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.07                                      | 39.34                               | 43.30                                   |
|                               |                     | Kolung...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 43.27                               | ?                                       |
|                               | Sonthal Pergunnahs. | Rajmehal...       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.11                                      | 57.73                               | 51.58                                   |
|                               |                     | Godda...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.05                                      | 40.10                               | 44.30                                   |
|                               |                     | Pasour...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.05                                      | 77.75                               | 53.00                                   |
|                               |                     | Nya Doocha...     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.18                                      | 41.77                               | 55.33                                   |
|                               |                     | Deognar...        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.10                                      | 46.71                               | 49.54                                   |
|                               |                     | Jaintara...       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.30                                      | 53.90                               | 49.16                                   |
|                               |                     | Bimra...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | ?                                   | ?                                       |
|                               |                     | Namhat...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 36.54                               | ?                                       |
| CHUTIA NAG-PUR.               | Hasaribagh.         | Paonamda...       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.17                                      | 40.97                               | 47.14                                   |
|                               |                     | (Guridi)...       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.23                                      | 45.43                               | 47.29                                   |
|                               |                     | Hasaribagh...     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.23                                      | 39.32                               | 45.58                                   |
|                               |                     | Semagura...       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.45                                      | 47.26                               | 47.03                                   |
|                               |                     | Mahudi Hills...   | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.21                                      | 57.10                               | 61.88                                   |
|                               |                     | Jhoomrah Hills... | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 38.27                               | ?                                       |
|                               |                     | Barhi...          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 4.72                                | ?                                       |
|                               |                     | Chitra...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 72.16                               | ?                                       |
|                               |                     | Karagdeha...      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 59.34                               | ?                                       |
|                               |                     | Kamphur...        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | ?                                   | ?                                       |
|                               | Lohardugga.         | Lohardugga...     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 63.67                               | ?                                       |
|                               |                     | Kanoni...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.37                                      | 50.45                               | 50.83                                   |
|                               |                     | Panmow...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.37                                      | 48.28                               | 41.97                                   |
|                               |                     | Sili...           | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 42.66                               | ?                                       |
|                               |                     | Batumat...        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | ?                                   | ?                                       |
|                               |                     | Kossonabad...     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 31.08                               | ?                                       |
|                               |                     | Gerwah...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 52.79                               | ?                                       |
|                               | Singbhoom.          | Chyotassa...      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.23                                      | 40.63                               | 50.50                                   |
|                               |                     | Chakradhar...     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 30.99                               | ?                                       |
|                               |                     | Chhatilla...      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 53.40                               | ?                                       |
|                               |                     | Baharagura...     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 38.04                               | ?                                       |
|                               | Manbhoom.           | Parula...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.18                                      | 44.11                               | 48.44                                   |
|                               |                     | Gobindpore...     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | 0.15                                      | 24.53                               | 45.04                                   |
|                               |                     | Kaghunath...      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 38.94                               | ?                                       |
|                               |                     | Barabhoop...      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | 40.02                               | ?                                       |
|                               |                     | Jhalda...         | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | ?                                   | ?                                       |
|                               |                     | Chas...           | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                      | Nil                    | Nil                   | Nil          | Nil                                | ?   | ?                                   | ?                                       |

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 29th November 1887



# SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 25TH OF NOVEMBER 1887.

At the close of the previous week the normal cold-weather conditions which had previously obtained in Bengal had become partially reversed by the existence of slightly disturbed weather in the south of the Bay. At the commencement of the present week, therefore, the sky was moderately clouded, temperature and humidity were rather high and distinctly above the normal, and in fact both temperature and humidity were increasing, and pressure was also high. A light north-easterly wind prevailed over the greater part of the Province, though at some stations winds were even south-easterly. The effect of the disturbed conditions in the south of the Bay, however, rapidly passed away, and from Saturday the 19th pressure, temperature and humidity commenced to decrease, the sky also cleared rather rapidly, and winds became more north-westerly. These conditions continued up till the 23rd, when again the sky began to cloud over in South Bengal, while humidity increased, though temperature was almost unaffected; these changes being apparently again brought about by slightly disturbed conditions to the south of the centre of the Bay, as indicated by high wind velocities at Diamond Island on the 21st and 22nd. These slightly disturbed conditions only existed in Bengal up to the 25th, when the sky again cleared, temperature became decidedly lower, and humidity commenced to decrease. The north-east monsoon conditions have therefore been rather feeble in Bengal during the week, but in no case has any rainfall been reported from any district, though cloud proportion, pressure, temperature and humidity have all been comparatively high for the season.

**Pressure**—Was high at the commencement of the week, and then fell slowly till about the 21st, when it again rose, attaining its maximum point on the 23rd, when it subsequently commenced to fall again. These oscillations are of the usual character noticeable even during fine settled weather. For the whole week, taking into consideration only those stations which have recorded observations for a long series of years, and which, therefore, yield reliable averages, the mean pressure of the Province has been 0.061 inch in excess of the normal. The excess pressure has been largest in the north of the Province, where at Purneah and Durbhunga it has equalled 0.09 inch, and on the other hand it has been small at Burdwan and Chittagong, where it has only equalled 0.04 inch.

**Temperature**—As previously stated, has been comparatively high throughout the week, and thus the mean temperature of the whole Province has been no less than 2.7° in excess of the normal. In the districts of Orissa and North Bengal the excess has been even larger than 3°. The temperature has been fairly steadily above the normal throughout the week, and the excess has been very noticeable both in the day and in the night temperatures, though perhaps the excess in the night or minimum temperatures has been rather more pronounced than in the maximum or day temperatures. This is shown in the following table, where the mean maximum and minimum temperatures for the week at nine typical stations in different districts of the Province are given compared with the normal means for the same period. At the nine stations the mean night temperatures have been 2.6° in excess of the normal, and the day temperatures 1.6° in excess:—

*Table showing the excess or defect of the actual temperature from the normal mean during the week ending 19th to 25th November 1887.*

|                        | Normal<br>mean maxi-<br>mum tem-<br>perature for<br>the week<br>ending 25th<br>November. | Actual<br>mean maxi-<br>mum tem-<br>perature for<br>the week<br>ending 25th<br>November<br>1887. | Excess or<br>defect from<br>the normal<br>mean. | Normal<br>mean mini-<br>mum tem-<br>perature for<br>the week<br>ending 25th<br>November. | Actual<br>mean mini-<br>mum tem-<br>perature for<br>the week<br>ending 25th<br>November<br>1887. | Excess or<br>defect from<br>the normal<br>mean. | Normal<br>mean daily<br>tempera-<br>ture for<br>the week<br>ending the<br>25th Novem-<br>ber. | Actual<br>mean daily<br>tempera-<br>ture for the<br>week end-<br>ing 25th<br>November<br>1887. | Excess or<br>defect from<br>the normal<br>mean. |
|------------------------|--|--|---|--|--|---|---|--|---|
| Cuttack ...            | 84.7   | 86.4   | +1.7  | 63.5   | 67.2   | +3.7  | 74.1  | 76.8   | +2.7  |
| Calcutta (Alipore) ... | 80.4   | 81.9   | +1.5  | 61.9   | 64.7   | +2.8  | 71.2  | 73.3   | +2.1  |
| Dacca ...              | 82.3   | 84.5   | +2.2  | 62.6   | 65.0   | +2.3  | 72.5  | 75.2   | +2.7  |
| Burdwan ...            | 81.3   | 83.6   | +2.3  | 61.0   | 62.8   | +1.8  | 71.1  | 73.2   | +2.1  |
| Patna (Bankipore) ...  | 80.0   | 81.4   | +1.4  | 55.8   | 59.4   | +3.6  | 67.9  | 70.4   | +2.5  |
| Gya ...                | 81.3   | 82.9   | +1.6  | 56.4   | 58.1   | +1.7  | 68.9  | 70.5   | +1.6  |
| Purneah ...            | 81.2   | 80.6   | -0.6  | 56.1   | 58.6   | +2.5  | 68.7  | 68.6   | -0.1  |
| Hazribagh ...          | 75.7   | 77.3   | +1.6  | 51.8   | 57.3   | +5.5  | 65.3  | 67.3   | +2.0  |
| Darjeeling ...         | 82.3   | 85.0   | +2.7  | 39.0   | 41.5   | +2.5  | 45.7  | 48.3   | +2.6  |

**Rainfall.**—As before stated, the whole Province has been rainless throughout the week.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 25th of November 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |           | RAINFALL.       |            |                         |                                |            |                     |                 |                      |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|-------------------------|--------------------------------|------------|---------------------|-----------------|----------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | (Of week. |                 |            | Rainy days.             |                                |            | Since 1st of month. |                 | Since 18th May 1887. |                 |
|                              |                               |                              | of highest of each day. | of lowest of each day. | of mean for each day. |  | Average.  | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.            | Normal average. | Average.             | Normal average. |
|                              |                               |                              |                         |                        |                       |  |           |                 |            |                         |                                |            |                     |                 |                      |                 |
|                              |                               |                              |                         |                        |                       |  |           |                 |            |                         |                                |            |                     |                 |                      |                 |
| Orissa                       | 87.4                          | 54.5                         | 83.6                    | 66.6                   | 75.1                  | +3.1   | Nil       | 0.22            | -0.22      | 0.0                     | 0.2                            | -0.2       | 0.75                | 1.00            | 43.04                | 53.18           |
| South-West Bengal            | 88.3                          | 56.8                         | 85.5                    | 63.1                   | 75.3                  | +2.5   | Nil       | 0.03            | -0.02      | 0.0                     | 0.1                            | -0.1       | 0.20                | 0.30            | 46.66                | 51.54           |
| East Bengal                  | 86.4                          | 58.0                         | 83.9                    | 64.0                   | 74.0                  | +2.3   | Nil       | 0.22            | -0.22      | 0.0                     | 0.2                            | -0.2       | 2.46                | 0.90            | 55.40                | 78.60           |
| North Bengal                 | 84.0                          | 56.9                         | 82.6                    | 60.8                   | 71.7                  | +3.3   | Nil       | Nil             | Nil        | 0.0                     | 0.0                            | 0          | 0.03                | 0.14            | 73.80                | 69.41           |
| North Behar                  | 84.5                          | 53.1                         | 81.5                    | 58.9                   | 70.2                  | +2.1   | Nil       | 0.02            | -0.02      | 0.0                     | 0.1                            | -0.1       | Nil                 | 0.05            | 51.99                | 47.71           |
| South Behar                  | 84.9                          | 51.9                         | 80.8                    | 58.5                   | 70.2                  | +2.6   | Nil       | 0.02            | -0.02      | 0.0                     | 0.1                            | -0.1       | Nil                 | 0.14            | 41.88                | 48.37           |
| Central Nagpur               | 80.2*                         | 51.6*                        | 77.1*                   | 56.3*                  | 66.7*                 | +2.6   | Nil       | 0.03            | -0.03      | 0.0                     | 0.1                            | -0.1       | Nil                 | 0.25            | 44.56                | 48.56           |

\* Ohyabassa not included.

METEOROLOGICAL OFFICE, BENGAL :

A. PEDLER,

The 29th November 1887.

Offg. Meteorological Reporter to the Govt. of Bengal.

Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 20th to 26th November 1887.

| MONTH.   | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRI.     |            |           | Rain.   |
|----------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|          |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.    |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| November | 20th  | 73.8         | 83.9     | 10.0   | 64.9     | 68.8           | .638            | 65.9       | 76        | Nil.    |
| "        | 21st  | 73.9         | 83.9     | 10.0   | 64.1     | 69.1           | .648            | 66.3       | 77        | "       |
| "        | 22nd  | 74.0         | 83.7     | 19.6   | 64.1     | 67.3           | .580            | 66.2       | 69        | "       |
| "        | 23rd  | 71.2         | 82.1     | 20.2   | 61.9     | 63.9           | .498            | 58.8       | 65        | "       |
| "        | 24th  | 69.8         | 81.0     | 21.3   | 59.7     | 62.9           | .483            | 58.0       | 60        | "       |
| "        | 25th  | 69.8         | 81.9     | 28.2   | 58.7     | 62.0           | .459            | 56.6       | 64        | "       |
| "        | 26th  | 69.2         | 81.9     | 23.0   | 58.9     | 62.7           | .484            | 58.0       | 68        | "       |

The mean temperature of the seven days ... 71.6  
The extreme variation of temperature ... 25.2  
The maximum temperature ... 83.9  
The mean relative humidity ... 69  
Inches.

The total fall of rain from 20th to 26th November 1887 ... Nil

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,

A. PEDLER,

The 28th November 1887.

For Offg. Meteorological Reporter to the Govt. of India.

# MEMORANDUM.

THE leading facts in connection with the mortuary statistics of the districts in Bengal, for the month of September 1887, are the following:—

1. That the deaths of 112,626 persons were registered out of a population of 66,163,884 in these districts, or at the rate of 20.40 per 1,000 per annum, against 24.96 per 1,000 in the preceding month, and 21.60 per 1,000 in the corresponding month of 1886, indicating, as compared with both the periods (especially with the former), a considerable falling off in the number of deaths recorded.

2. That the highest death-rates were reported to have occurred in the following districts:—

| Districts. |     |                  | Districts.  |     |                  |
|------------|-----|------------------|-------------|-----|------------------|
|            |     | Ratio per mille. |             |     | Ratio per mille. |
| Monghyr    | ... | 36.24            | Patna       | ... | 28.63            |
| Lohardugga | ... | 36.00            | Maldah      | ... | 28.44            |
| Shahabad   | ... | 35.76            | Murshidabad | ... | 27.60            |
| Gya        | ... | 32.28            | Darjiling   | ... | 27.48            |
| Hazaribagh | ... | 29.52            | Dinajpur    | ... | 26.64            |
| Bhagulpore | ... | 28.80            | Rajshahye   | ... | 26.40            |

3. That in comparison with the casualties of the corresponding month of the past year, the mortality from fever had diminished to a considerable extent, the death-rate from small-pox was stationary, and there were no noticeable differences in fatal results from the other diseases; *cide* figures given below:—

|                  |     |     |     | Ratio per mille during— |                 |
|------------------|-----|-----|-----|-------------------------|-----------------|
|                  |     |     |     | September 1887.         | September 1886. |
| Cholera          | ... | ... | ... | .96                     | .72             |
| Small-pox        | ... | ... | ... | .01                     | .01             |
| Fever            | ... | ... | ... | 15.00                   | 16.20           |
| Bowel-complaints | ... | ... | ... | .84                     | .72             |
| Injury           | ... | ... | ... | .48                     | .72             |
| Other causes     | ... | ... | ... | 2.76                    | 3.00            |

4. That the following districts returned conspicuously high mortality from cholera and fever, and that no districts exhibited any noticeable high death-rate from the other diseases mentioned in the above table, excepting Puri, where 10.20 per 1,000 of population died from the unspecified diseases coming under the head of "Other Causes:—"

| Cholera.   |     |                  | Fever.      |     |                  |
|------------|-----|------------------|-------------|-----|------------------|
|            |     | Ratio per mille. |             |     | Ratio per mille. |
| Lohardugga | ... | 9.84             | Monghyr     | ... | 27.72            |
| Puri       | ... | 3.60             | Maldah      | ... | 27.00            |
| Shahabad   | ... | 3.48             | Shahabad    | ... | 26.88            |
| Sarun      | ... | 3.00             | Rajshahye   | ... | 24.84            |
| Cuttack    | ... | 2.76             | Murshidabad | ... | 24.60            |
| Gya        | ... | 2.16             | Dinajpur    | ... | 24.24            |
| Chumparun  | ... | 2.16             | Hazaribagh  | ... | 24.00            |
|            |     |                  | Gya         | ... | 23.88            |
|            |     |                  | Bhagulpore  | ... | 22.68            |
|            |     |                  | Rogra       | ... | 20.88            |

5. That in relation to *Sex*, *Class* and *Age*, the death-rates during the month under ice stood as follows:—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |     |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |     | Ratio per mille. |
| Males   | ... | 21.60            | Christians          | ... | 18.60            | Under 1 year         | ... | 131.64           |
| Females   | ... | 19.20            | Hindus              | ... | 21.36            | 1 and under 5 years  | ... | 28.68            |
| Ratio of male deaths to every 100 female deaths | ... | 110              | Mahomedans          | ... | 17.76            | 5 " " 10 "           | ... | 12.60            |
|   |     |                  | Budhists            | ... | 12.60            | 10 " " 15 "          | ... | 9.96             |
|   |     |                  | Other classes       | ... | 27.84            | 15 " " 20 "          | ... | 12.60            |
|   |     |                  |                     |     |                  | 20 " " 30 "          | ... | 12.96            |
|   |     |                  |                     |     |                  | 30 " " 40 "          | ... | 13.92            |
|   |     |                  |                     |     |                  | 40 " " 50 "          | ... | 17.88            |
|   |     |                  |                     |     |                  | 50 " " 60 "          | ... | 26.76            |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 42.12            |

R. LIDDERDALE, M.D., Deputy Surgeon-General,

The 25th November 1887.

Sanitary Commissioner for Bengal.





## MEMORANDUM.

The principal Municipalities in Bengal returned, during the week ending 5th November 1887, the birth and death-rates of 22.5 and 29.1 per 1,000 of population, respectively, as opposed to 23.5 and 27.6 per 1,000, respectively, in the preceding week ending 29th October, indicating a retrogression in the registration of births, but a fair advance in that of deaths.

2. The following Municipalities furnished the highest proportions of births and deaths:—

| Births.    |     |                  | Deaths.             |     |                  |
|------------|-----|------------------|---------------------|-----|------------------|
|            |     | Ratio per mille. |                     |     | Ratio per mille. |
| Bhagulpore | ... | 46.8             | Purneah             | ... | 72.7             |
| Serampore  | ... | 44.1             | Puri                | ... | 67.1             |
| Durbhanga  | ... | 44.8             | Serampore           | ... | 64.8             |
| Monghyr    | ... | 42.5             | Suburbs of Calcutta | ... | 44.7             |
| Narainganj | ... | 37.2             | Gya                 | ... | 43.7             |
| Beauleah   | ... | 36.8             | Bhagulpore          | ... | 38.0             |
| Gya        | ... | 31.4             | Beauleah            | ... | 36.8             |
|            |     |                  | Narainganj          | ... | 33.1             |
|            |     |                  | Durbhanga           | ... | 32.3             |
|            |     |                  | Krishnaghur         | ... | 32.2             |

3. The following table denotes that, as compared with the results of the preceding week, there was a small increase of mortality from cholera, but no important differences in the casualty-rates from the other diseases; *vide* figures given below:—

|                  | Ratio per mille during the weeks ending— |                 |
|------------------|--|-----------------|
|                  | 5th Nov. 1887.                           | 29th Oct. 1887. |
| Cholera          | 2.6                                      | 1.7             |
| Small-pox        | .1                                       | ...             |
| Fever            | 14.0                                     | 13.4            |
| Bowel-complaints | 4.5                                      | 4.6             |
| Injury           | .2                                       | .1              |
| Other causes     | 7.7                                      | 7.7             |

4. While no Municipalities suffered much from small-pox, or presented a large number of casualties from injury, the following returned conspicuously high death-rates from the other diseases specified in the above table:—

| Cholera.            |                  | Fever.              |                  | Bowel-complaints. |                  | Other causes.       |                  |
|---------------------|------------------|---------------------|------------------|-------------------|------------------|---------------------|------------------|
|                     | Ratio per mille. |                     | Ratio per mille. |                   | Ratio per mille. |                     | Ratio per mille. |
| Puri                | 16.8             | Purneah             | 58.9             | Puri              | 20.9             | Serampore           | 15.7             |
| Serampore           | 13.7             | Beauleah            | 28.9             | Serampore         | 15.7             | Gya                 | 15.0             |
| Bhagulpore          | 8.1              | Kishnaghur          | 28.4             | Gya               | 10.9             | Suburbs of Calcutta | 12.6             |
| Monghyr             | 4.5              | omillah             | 23.1             |                   |                  | Puri                | 12.6             |
| Suburbs of Calcutta | 3.9              | Suburbs of Calcutta | 22.1             |                   |                  | Dacca               | 11.7             |
| Durbhanga           | 3.1              | Santipore           | 21.0             |                   |                  | Chittagong          | 11.7             |
| Howrah              | 2.3              |                     |                  |                   |                  | Monghyr             | 11.7             |

5. The death-rates in relation to *Sex*, *Class* and *Age*, stood as follows:—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |     |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |     | Ratio per mille. |
| Males   | ... | 29.5             | Christians          | ... | 34.8             | Under 1 year         | ... | 204.1            |
| Females   | ... | 28.7             | Hindus              | ... | 29.9             | 1 and under 5 years  | ... | 36.5             |
| Ratio of male deaths to every 100 female deaths | 116 |                  | Mahomedans          | ... | 27.5             | 5 " 10 "             | ... | 18.3             |
|   |     |                  |                     |     |                  | 10 " 15 "            | ... | 13.1             |
|   |     |                  |                     |     |                  | 15 " 20 "            | ... | 16.7             |
|   |     |                  |                     |     |                  | 20 " 30 "            | ... | 19.6             |
|   |     |                  |                     |     |                  | 30 " 40 "            | ... | 22.3             |
|   |     |                  |                     |     |                  | 40 " 50 "            | ... | 19.8             |
|   |     |                  |                     |     |                  | 50 " 60 "            | ... | 30.6             |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 78.2             |

R. LIDDERDALE, M.D., Deputy Surgeon-General,

The 23rd November 1887.

Sanitary Commissioner for Bengal.

*Registration of Births and Deaths in the Principal Municipalities in Bengal during the week ending 5th November 1947.*

[illegible]

A special census of the Europeans in the tariffing Municipality was recently taken, as the census of this section of the community taken in February 1891, was not reliable owing to the Europeans being at a minimum in that month. As before, as it was not necessary to re-census them, the ratios have consequently been calculated on the revised population. The ratios have been calculated on the revised population, and the ratios have been calculated on the revised population.

|               |                               | 13                      |         |             | 14         |                |               | 15                   |                       |  | 16                     |                        |                        |                        |                        |                        |
|---------------|-------------------------------|-------------------------|---------|-------------|------------|----------------|---------------|----------------------|-----------------------|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|               |                               | MORTALITY ACCORDING TO— |         |             |            |                |               |                      |                       |  |                        |                        |                        |                        |                        |                        |
| DISTRICTS.    | NAMES OF MUNICI-<br>PALITIES. | Class.                  |         |             |            | Age.           |               |                      |                       | Ratio per 1,000 of Population per Annum. |                        |                        |                        |                        |                        |                        |
|               |                               | Deaths among—           |         |             |            | Deaths.        |               |                      |                       | Ratio per 1,000 of Population per Annum. |                        |                        |                        |                        |                        |                        |
|               |                               | Christians.             | Hindus. | Mahomedans. | Buddhists. | Other classes. | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years.                   | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and up-wards. |
| Burdwan       | Burdwan                       | 7                       | 153     | 385         | ...        | ...            | 5             | 2                    | 1                     | 1  | 1                      | 1                      | 1                      | 1                      | 1                      | 1                      |
| Midnapore     | Midnapore                     | 3                       | 80      | 300         | ...        | ...            | 2             | ...                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Hughli        | Hughli and Chinsurah          | 11                      | 181     | 305         | ...        | ...            | 1             | 3                    | 4                     | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Serampore     | Serampore                     | 25                      | 815     | 435         | ...        | ...            | 4             | 5                    | 3                     | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
|               | Utterpara                     | 2                       | 105     | ...         | ...        | ...            | ...           | ...                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Howrah        | Howrah                        | 29                      | 221     | 293         | ...        | ...            | 8             | 1                    | 2                     | 1  | 3                      | 6                      | 3                      | 2                      | 5                      | 2016                   |
|               | Bali                          | 5                       | 116     | ...         | ...        | ...            | 1             | ...                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | 1476                   |
| 24-Pargunnahs | Suburbs of Calcutta           | 5                       | 643     | 472         | ...        | ...            | 34            | 22                   | 11                    | 6  | 15                     | 30                     | 32                     | 22                     | 21                     | 3710                   |
|               | Kishinagar                    | 1                       | 917     | 279         | ...        | ...            | 2             | 5                    | ...                   | 1  | 1                      | ...                    | 1                      | 1                      | 1                      | 2037                   |
| Kuddees       | Ranaghat                      | 1                       | 71      | ...         | ...        | ...            | 1             | ...                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | 212                    |
|               | Santipore                     | 13                      | 327     | ...         | ...        | ...            | ...           | ...                  | 2                     | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Jessore       | Jessore                       | 1                       | 115     | 194         | ...        | ...            | ...           | ...                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Bajshahye     | Rampore Beaulah               | 10                      | 525     | 212         | ...        | ...            | 2             | 5                    | 1                     | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Derjiling     | Derjiling                     | 3                       | 319     | ...         | ...        | ...            | 1             | ...                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Dacca         | Dacca                         | 1                       | 1003    | 323         | ...        | ...            | 3             | 2                    | 1                     | 4  | 5                      | 4                      | 9                      | 2                      | 3                      | 823                    |
|               | Narainganj                    | 1                       | 52      | 591         | ...        | ...            | 1             | 1                    | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | 1563                   |
| Chittagong    | Chittagong                    | 1                       | 653     | 204         | ...        | ...            | 2             | 1                    | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | 1847                   |
| Tipperah      | Comilla                       | 2                       | 175     | 281         | ...        | ...            | ...           | ...                  | 2                     | 2  | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Patna         | Patna City                    | 40                      | 214     | 105         | ...        | ...            | 7             | 6                    | 4                     | 3  | 2                      | 12                     | 7                      | 4                      | 3                      | 845                    |
| Gya           | Gya                           | 54                      | 245     | 323         | ...        | ...            | 10            | 2                    | 4                     | 8  | 9                      | 6                      | 8                      | 2                      | 20                     | 2903                   |
| Shahabad      | Arrah                         | ...                     | ...     | 42          | ...        | ...            | 1             | ...                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | 404                    |
| Monsiehpore   | Monsiehpore                   | 3                       | 35      | ...         | ...        | ...            | ...           | ...                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
|               | Durbhanga                     | 29                      | 311     | 353         | ...        | ...            | 9             | 8                    | 5                     | 3  | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Saran         | Chupra                        | 3                       | 39      | ...         | ...        | ...            | 1             | ...                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Bhagalpore    | Bhagalpore                    | 33                      | 451     | 372         | ...        | ...            | 10            | 10                   | 2                     | 1  | 2                      | 4                      | 2                      | 2                      | 8                      | 4355                   |
| Monghyr       | Monghyr                       | 28                      | 326     | 124         | ...        | ...            | 8             | 1                    | 3                     | 1  | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Purneah       | Purneah                       | 12                      | 630     | 837         | ...        | ...            | 4             | 3                    | 1                     | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Puri          | Puri                          | 32                      | 678     | ...         | ...        | ...            | 2             | ...                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Totals        |                               | 8                       | 349     | 299         | ...        | ...            | 119           | 71                   | 46                    | 29                                       | 33                     | 102                    | 98                     | 61                     | 61                     | 121                    |
|               |                               | 558                     | 507     | ...         | ...        | ...            | 201           | 342                  | ...                   | ...                                      | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,  
The 28th November 1897.

R. LUDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.



CIRCULAR AND EASTERN CANALS.

*Approximate return of traffic for the week ending Saturday, the 26th November 1887, compared with the corresponding week of the previous year.*

| NATURE OF CARGO.   | WEEK ENDING SATURDAY, THE<br>26TH NOVEMBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>27TH NOVEMBER 1886. |                     |          |
|--------------------|--|---------------------|----------|--|---------------------|----------|
|                    | Number of<br>boats.                              | Weight of<br>cargo. | Tollage. | Number of<br>boats.                              | Weight of<br>cargo. | Tollage. |
|                    | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... | 641  | 97,100              | 1,636    | 357  | 48,440              | 780      |
| Jute ...           | 335  | 3,10,600            | 4,054    | 209  | 1,14,305            | 1,987    |
| Firewood ...       | 160  | 88,100              | 1,264    | 177  | 94,875              | 1,449    |
| Other articles ... | 901  | 2,52,049            | 3,625    | 1,062  | 2,47,580            | 3,923    |
| Total ...          | 2,037  | 7,47,848            | 10,578   | 1,805  | 5,05,200            | 8,139    |

## Eastern Bengal State Railway.

*Abstract of principal commodities carried over the Eastern Bengal State Railway during the month of July 1887, as compared with the same month of the previous year.*

| STAPLES.                                  | 1887.  |        | 1886.  |        | TOTAL. |        | Increase. | Decrease. |
|---|--------|--------|--------|--------|--------|--------|-----------|-----------|
|   | Up.    | Down.  | Up.    | Down.  | 1887.  | 1886.  |           |           |
|   | Tons.  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.     | Tons.     |
| Coal                                      | 6,480  | 1,466  | 3,836  | 1,783  | 7,936  | 5,119  | 2,817     | .....     |
| Cotton, raw                               | 1      | 196    | .....  | 91     | 197    | 91     | 106       | .....     |
| Cotton, twist and yarn—                   |        |        |        |        |        |        |           |           |
| 1.—European                               | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 2.—Indian                                 | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| Cotton piece-goods—                       |        |        |        |        |        |        |           |           |
| 1.—European—                              |        |        |        |        |        |        |           |           |
| a.—In bales and bundles                   | 1,519  | 171    | 1,368  | 236    | 1,690  | 1,594  | 166       | .....     |
| b.—In boxes                               | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 2.—Indian—                                |        |        |        |        |        |        |           |           |
| a.—In bales and bundles                   | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| b.—In boxes                               | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| Grains—                                   |        |        |        |        |        |        |           |           |
| 2.—Rice                                   | 1,303  | 1,602  | 395    | 2,432  | 2,405  | 3,017  | .....     | 123       |
| 5.—Others                                 | 826    | 4,648  | 175    | 1,920  | 5,314  | 2,043  | 3,219     | .....     |
| Hides and Skins—                          |        |        |        |        |        |        |           |           |
| 1.—Hides of cattle—                       |        |        |        |        |        |        |           |           |
| a.—Dressed                                | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| b.—Undressed                              | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 2.—Skins of sheep, &c.—                   |        |        |        |        |        |        |           |           |
| a.—Dressed                                | 22     | 468    | 6      | 572    | 510    | 578    | .....     | 68        |
| b.—Undressed                              | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| Horns                                     | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| Jute—                                     |        |        |        |        |        |        |           |           |
| 1.—Raw—                                   |        |        |        |        |        |        |           |           |
| a.—Scorwed                                | .....  | 1,641  | .....  | 392    | 1,641  | 372    | 1,269     | .....     |
| b.—Unscorwed                              | 4      | 10,616 | 3      | 4,284  | 10,620 | 4,286  | 6,334     | .....     |
| 2.—Gunny-bags and cloth                   | 117    | 739    | 89     | 546    | 856    | 675    | 181       | .....     |
| Metals—                                   |        |        |        |        |        |        |           |           |
| 1.—Copper, unwrought                      | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 2.—Brass, unwrought                       | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 3.—Steel and copper, wrought              | 1,121  | 121    | 628    | 94     | 1,242  | 722    | 520       | .....     |
| 4.—Iron                                   | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 5.—Tin                                    | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 6.—Others                                 | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| Oils—                                     |        |        |        |        |        |        |           |           |
| 2.—Kerosine                               | 684    | 2      | .....  | .....  | 686    | .....  | 686       | .....     |
| 3.—Others                                 | 254    | 35     | 129    | 3      | 292    | 531    | .....     | 239       |
| Oilseeds—                                 |        |        |        |        |        |        |           |           |
| 1.—Linseed                                | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 2.—Rape and mustard                       | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 3.—Til or gingelly                        | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 4.—Niger                                  | 416    | 2,278  | 257    | 1,093  | 2,694  | 1,950  | 744       | .....     |
| 5.—Castor                                 | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 6.—Poppy                                  | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 7.—Others                                 | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| Provisions—                               |        |        |        |        |        |        |           |           |
| 2.—Betelnuts                              | 58     | 111    | 17     | 53     | 169    | 75     | 94        | .....     |
| 3.—Others                                 | 186    | 427    | 17     | 343    | 613    | 490    | 123       | .....     |
| Railway plant and rolling-stock           | 2,950  | 1,179  | 647    | 636    | 4,029  | 1,233  | 2,796     | .....     |
| Salt                                      | 3,476  | 9      | 5,746  | 4      | 5,430  | 5,770  | .....     | 2,285     |
| Sugar—                                    |        |        |        |        |        |        |           |           |
| 1.—Drained                                | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| 2.—Undrained                              | 290    | 461    | 208    | 37     | 751    | 482    | 269       | .....     |
| Tea—                                      |        |        |        |        |        |        |           |           |
| 1.—Foreign                                | .....  | 1,892  | .....  | 1,618  | 1,892  | 1,616  | 276       | .....     |
| 2.—Indian                                 | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| Wood—                                     |        |        |        |        |        |        |           |           |
| 1.—Timber                                 | 117    | 124    | .....  | .....  | 241    | .....  | 241       | .....     |
| 2.—Firewood                               | 1,130  | .....  | 1,457  | 34     | 1,130  | 1,405  | .....     | 365       |
| Tobacco                                   | 91     | 2,652  | 43     | 1,350  | 2,143  | 1,444  | 739       | .....     |
| All other articles of merchandise—        |        |        |        |        |        |        |           |           |
| 1.—Unmanufactured                         | 1,985  | 1,445  | 1,250  | 1,233  | 3,370  | 2,443  | 847       | .....     |
| 2.—Manufactured                           | .....  | .....  | .....  | .....  | .....  | .....  | .....     | .....     |
| Hay, straw, and wool (C. & S. E. Section) | 401    | 7      | 347    | .....  | 498    | 347    | 151       | .....     |
| Total                                     | 23,221 | 51,673 | 16,630 | 10,725 | 54,894 | 36,345 | 21,628    | 3,079     |

## INCREASES.

|  |       |
|--|-------|
| Coal   | 2,817 |
| For Railway and Steamer Company's purposes.  | ..... |
| Grains   | 3,219 |
| Moonshiganj, Poradah, Bheramora, Kooshta and Rajbari contributed largely with the Northern Section to this increase. | ..... |
| Jute   | 7,603 |
| Principally from Serajganj, Dacca, Mymensingh and the Northern Section.  | ..... |
| Metals   | 520   |
| English manufactures.  | ..... |
| Kerosine oil   | 686   |
| For up-country consumption.  | ..... |
| Oilseeds   | 744   |
| Principally in castor and linseed.   | ..... |
| Railway plant  | 2,796 |
| Repairs and renewals.  | ..... |
| Tobacco  | 739   |
| Principally from Rungpore and Kaunia.  | ..... |

## DECREASES.

|  |       |
|--|-------|
| Salt   | 2,285 |
| Principally in despatches to Dacca and North Bengal. | ..... |
| Firewood   | 365   |
| Extensive stocks in the market.                      | ..... |

## Bengal Central Railway.

*Abstract of principal commodities carried over the Eastern Bengal State Railway during the month of July 1887, as compared with the same month of the previous year.\**

| STAPLES.                               | 1887. |       | 1886. |       | Total. |       | Increase. | Decrease. |
|--|-------|-------|-------|-------|--------|-------|-----------|-----------|
|  | Up.   | Down. | Up.   | Down. | 1887.  | 1886. |           |           |
|  | Tons. | Tons. | Tons. | Tons. | Tons.  | Tons. | Tons.     | Tons.     |
| Coal ... ..                            | 1,097 | 1     | 759   | ..... | 1,098  | 759   | 339       | .....     |
| Cotton, raw ... ..                     | ..... | 6     | ..... | 4     | 6      | 4     | 2         | .....     |
| Cotton twist and yarn—                 |       |       |       |       |        |       |           |           |
| 1.—European ... ..                     |       |       |       |       |        |       |           |           |
| 2.—Indian ... ..                       |       |       |       |       |        |       |           |           |
| Cotton piece-goods—                    |       |       |       |       |        |       |           |           |
| 1.—European—                           |       |       |       |       |        |       |           |           |
| a.—In bales and bundles ... ..         | 195   | 2     | 107   | 1     | 197    | 108   | 89        | .....     |
| b.—In boxes ... ..                     |       |       |       |       |        |       |           |           |
| 2.—Indian—                             |       |       |       |       |        |       |           |           |
| a.—In bales and bundles ... ..         |       |       |       |       |        |       |           |           |
| b.—In boxes ... ..                     |       |       |       |       |        |       |           |           |
| Grains—                                |       |       |       |       |        |       |           |           |
| 3.—Rice ... ..                         | 3     | 115   | 3     | 27    | 118    | 30    | 88        | .....     |
| 5.—Others ... ..                       | 27    | 340   | 28    | 60    | 370    | 97    | 279       | .....     |
| Hides and Skins—                       |       |       |       |       |        |       |           |           |
| 1.—Hides of cattle—                    |       |       |       |       |        |       |           |           |
| a.—Dressed ... ..                      |       |       |       |       |        |       |           |           |
| b.—Undressed ... ..                    |       |       |       |       |        |       |           |           |
| 3.—Skins of sheep, &c.—                |       | 19    |       | 22    | 19     | 22    | .....     | 3         |
| a.—Dressed ... ..                      |       |       |       |       |        |       |           |           |
| b.—Undressed ... ..                    |       |       |       |       |        |       |           |           |
| Horns ... ..                           |       |       |       |       |        |       |           |           |
| Jute—                                  |       |       |       |       |        |       |           |           |
| 1.—Raw—                                |       |       |       |       |        |       |           |           |
| a.—Screwed ... ..                      | ..... | ..... | ..... | 1     | .....  | 1     | .....     | 1         |
| b.—Unscrewed ... ..                    | ..... | 573   | ..... | 17    | 573    | 17    | 556       | .....     |
| 2.—Gunny-bags and cloth ... ..         | 10    | 24    | 8     | 2     | 34     | 10    | 24        | .....     |
| Metals—                                |       |       |       |       |        |       |           |           |
| 1.—Copper, unwrought ... ..            |       |       |       |       |        |       |           |           |
| 2.—Brass, unwrought ... ..             |       |       |       |       |        |       |           |           |
| 3.—Brass and copper, wrought ... ..    |       |       |       |       |        |       |           |           |
| 4.—Iron ... ..                         | 65    | 14    | 30    | 14    | 79     | 43    | 26        | .....     |
| 5.—Tin ... ..                          |       |       |       |       |        |       |           |           |
| 6.—Others ... ..                       |       |       |       |       |        |       |           |           |
| Oils—                                  |       |       |       |       |        |       |           |           |
| 2.—Kerosine ... ..                     | 60    | ..... | ..... | ..... | 60     | ..... | 60        | .....     |
| 3.—Others ... ..                       | 110   | ..... | 83    | ..... | 110    | 83    | 27        | .....     |
| Seeds—                                 |       |       |       |       |        |       |           |           |
| 1.—Linseed ... ..                      |       |       |       |       |        |       |           |           |
| 2.—Rape and mustard ... ..             |       |       |       |       |        |       |           |           |
| 3.—Til or gingelly ... ..              |       |       |       |       |        |       |           |           |
| 4.—Niger ... ..                        |       |       |       |       |        |       |           |           |
| 5.—Castor ... ..                       | 216   | 406   | 231   | 132   | 642    | 363   | 319       | .....     |
| 6.—Poppy ... ..                        |       |       |       |       |        |       |           |           |
| 7.—Others ... ..                       |       |       |       |       |        |       |           |           |
| Provisions—                            |       |       |       |       |        |       |           |           |
| 2.—Betelnuts ... ..                    | 1     | 75    | ..... | 37    | 76     | 37    | 39        | .....     |
| 3.—Others ... ..                       | 28    | 30    | 15    | 37    | 67     | 53    | 15        | .....     |
| Railway plant and rolling-stock ... .. | 104   | 143   | 16    | 24    | 246    | 40    | 206       | .....     |
| Salt ... ..                            | 234   | ..... | 191   | ..... | 234    | 191   | 43        | .....     |
| Sugar—                                 |       |       |       |       |        |       |           |           |
| 1.—Drained ... ..                      | 29    | 434   | 55    | 225   | 463    | 280   | 183       | .....     |
| 2.—Undrained ... ..                    |       |       |       |       |        |       |           |           |
| Tee—                                   |       |       |       |       |        |       |           |           |
| 1.—Foreign ... ..                      |       |       |       |       |        |       |           |           |
| 2.—Indian ... ..                       |       |       |       |       |        |       |           |           |
| Wood—                                  |       |       |       |       |        |       |           |           |
| 1.—Timber ... ..                       | 32    | 1     | 35    | 5     | 33     | 40    | .....     | 7         |
| 2.—Firewood ... ..                     |       |       |       |       |        |       |           |           |
| Tobacco ... ..                         | 37    | 11    | 36    | 6     | 48     | 42    | 6         | .....     |
| All other articles of merchandise—     |       |       |       |       |        |       |           |           |
| 1.—Unmanufactured ... ..               | 412   | 219   | 172   | 140   | 630    | 312   | 318       | .....     |
| 2.—Manufactured ... ..                 |       |       |       |       |        |       |           |           |
| Total ... ..                           | 2,660 | 2,480 | 1,778 | 763   | 5,158  | 2,541 | 2,628     | 11        |

## INCREASES.

|   | Tons. |
|---|-------|
| Coal ... ..   | 339   |
| For Railway and Flotilla purposes. ... ..   |       |
| Grains ... ..   | 279   |
| Favorable crops and a firm market. ... ..   |       |
| Jute ... ..   | 556   |
| Principally from Khoolna which station alone despatched 15,930 maunds during the month. ... ..                          |       |
| Seeds ... ..  | 319   |
| The increase is not against any particular description of seeds, but against oilseeds of different descriptions. ... .. |       |
| The principal business done during the month being in castor and linseed. ... ..  |       |
| Sugar ... ..  | 183   |
| Notwithstanding a stagnant market throughout the month. ... ..  |       |

## DECREASES.

The aggregate decrease under all commodities stand at 11 tons and call for no remark.

CALCUTTA the 28th November 1887.

F. P. QUINLAN, Examiner of Accounts.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 19th November 1887, on 1,613½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                  | Other earnings (estimated). | Total earnings.  | TRAFFIC TRAIN-MILES RUN. |              |            |
|---|-----------------------|--------------------|----------------------------------|------------------|-----------------------------|------------------|--------------------------|--------------|------------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.        |                             |                  | Coaching.                | Merchandise. | Total.     |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.        | Rs. A. P.                   | Rs. A. P.        |                          |              |            |
| Total traffic for the week ...                              | 224,460               | 2,65,690 13 0      | 26,06,320 30                     | 6,78,336 15 0    | 17,441 9 9                  | 9,61,469 5 9     | 66,001½                  | 89,629½      | 154,739½   |
| Or per mile of railway ...                                  | .....                 | 175 8 2            | .....                            | 448 1 11         | 11 8 4                      | 635 3 5          | .....                    | .....        | .....      |
| For previous 19 weeks of half-year ...                      | 4,640,077             | 48,50,493 0 0      | 4,11,80,746 30                   | 90,61,517 14 11  | 3,76,024 5 0                | 1,42,28,035 1 11 | 1,343,033½               | 1,547,794½   | 2,790,828½ |
| Total for 20 weeks ...                                      | 4,864,537             | 51,16,173 13 0     | 4,37,86,976 10                   | 97,39,854 13 11  | 3,33,465 13 9               | 1,61,89,464 7 8  | 1,308,125                | 1,637,423½   | 2,945,548½ |
| COMPARISON.   |                       |                    |                                  |                  |                             |                  |                          |              |            |
| Total for corresponding week of previous year ...           | 227,819½              | 2,71,399 4 0       | 24,59,310 20                     | 6,58,797 9 11    | 24,531 6 7                  | 9,54,938 4 6     | 66,079                   | 99,830       | 165,909    |
| Per mile of railway corresponding week of previous year ... | .....                 | 179 2 3            | .....                            | 434 13 7         | 16 4 2                      | 630 4 0          | .....                    | .....        | .....      |
| Total to corresponding date of previous year ...            | 4,080,128             | 52,69,442 6 9      | 4,42,61,710 0                    | 1,05,40,533 5 11 | 3,31,689 14 4               | 1,61,41,365 11 0 | 1,361,713                | 1,631,984    | 3,013,696  |

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 1,515  | 9,54,923  | 630              | 1,513½                                       | 9,61,459  | 635              | 1,515   | 2,80,25,148     | 579              | 1,517½  | 2,75,07,041     | 551              | .....                   | 13,23,107               |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 19th November 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 10,683                | 5,243 0 0          | 50,126 30                        | 3,165 15 0  | 34 8 0                      | 8,453 7 0       | 1,801                    | 563          | 2,364  |
| Or per mile of railway ...                                  | 187                   | 91 10 7            | 876 20                           | 55 5 7      | 0 6 10                      | 147 7 0         | .....                    | .....        | .....  |
| For previous 19 weeks of half-year ...                      | 283,659*              | 1,53,390 10 0*     | 6,82,820 20†                     | 45,117 1 0† | 644 10 0‡                   | 1,99,053 5 0    | 34,919½                  | 12,914½      | 47,834 |
| Total for 20 weeks ...                                      | 294,342               | 1,58,633 10 0      | 7,32,947 20                      | 48,383 0 0  | 649 2 0                     | 2,07,485 12 0   | 36,720½                  | 13,507½      | 50,228 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 12,403                | 6,273 12 0         | 38,072 10                        | 2,978 12 0  | 26 11 0                     | 9,278 3 9       | 1,831                    | 563          | 2,394  |
| Per mile of railway corresponding week of previous year ... | 217                   | 109 10 7           | 676 0                            | 52 1 4      | 0 7 5                       | 162 3 4         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 302,934               | 1,70,718 10 7      | 8,21,262 10§                     | 53,111 6 0§ | 11,216 5 9§                 | 2,28,046 6 4    | 36,676                   | 15,293       | 51,969 |

\* Added No. of passengers 2,467 and Rs. 2,783 0 0 }  
 † Ditto mds. 219 and " 219 0 0 } on account of differences between the approximate and audited returns to week ended 16th October 1887.  
 ‡ Deducted " 33 0 0 }  
 § Added mds. 5,000 and deducted " 19 14 0 from merchandise } on account of supplemental returns to quarter ended 30th September 1888.  
 Ditto " 466 5 0 to other earnings }

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 5½   | 9,278     | 162              | 57½  | 8,453     | 147              | 57½   | 3,51,734*       | 186              | 57½   | 3,26,743†       | 173              | .....                   | 24,989                  |

\* Added Rs. 448 on account of supplemental returns for the quarter ended 30th September 1886.  
 † Do. " 2,984 on account of difference between the approximate and audited figures to week ended 16th October 1887.

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 19th November 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |              | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|--------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.    |                             |                 | Coaching.                | Merchandise. | Total. |
| Total traffic for the week ...                              | 3,488                 | Rs. 402 12 0       | Mds. 23,824 20                   | Rs. 631 14 0 | Rs. 8 7 0                   | Rs. 1,031 1 0   | 370½                     | 123          | 493½   |
| Or per mile of railway ...                                  | .....                 | 33 9 0             | .....                            | 51 13 2      | 0 8 7                       | 85 14 9         | .....                    | .....        | .....  |
| For previous 19 weeks of half-year ...                      | 54,055*               | 9,000 11 0*        | 1,89,501 0†                      | 3,909 10 0†  | 131 14 0‡                   | 13,043 3 0      | 7,580½                   | 1,937        | 9,517½ |
| Total for 20 weeks ...                                      | 56,503                | 9,403 7 0          | 2,13,325 20                      | 4,531 8 0    | 138 5 0                     | 14,073 4 0      | 7,951                    | 2,000        | 10,011 |
| COMPARISON.   |                       |                    |                                  |              |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,811                 | 471 1 2            | 6,243 20                         | 162 0 0      | 9 0 0                       | 632 1 2         | 386                      | 107          | 493    |
| Per mile of railway corresponding week of previous year ... | .....                 | 39 4 1             | .....                            | 12 10 8      | 0 12 0                      | 52 10 9         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 53,084                | 8,956 2 4          | 1,80,778 10                      | 3,802 15 0§  | 176 5 0§                    | 12,933 7 1      | 8,080                    | 2,243        | 10,443 |

\* Deducted number of passengers 677 and Rs. 120 }  
 † Added mds. 11,360 and " 8 } on account of differences between the approximate and audited returns to week ended 15th October 1887.  
 ‡ Ditto " 10 }  
 § Ditto annas 8 to merchandise and " 2 to other earnings on account of supplemental returns to quarter ended 30th September 1886.

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 12   | Rs. 632   | Rs. 53           | 12   | Rs. 1,031 | Rs. 86           | 12  | Rs. 30,207*     | Rs. 76           | 12  | Rs. 28,073†     | Rs. 72           | .....                   | 1,534                   |

\* Added Rs. 8 on account of supplemental returns for the quarter ended 30th September 1886.  
 † Deducted Rs. 111 on account of differences between the approximate and audited figures to week ended 15th October 1887.

## SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 19th November 1887, on 74½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.  |
| Total traffic for the week ...                              | 4,749                 | Rs. 3,336 6 0      | Mds. 1,30,805 30                 | Rs. 7,178 4 0 | Rs. 83 6 0                  | Rs. 10,508 0 0  | 715                      | 2,353½       | 3,068½  |
| Or per mile of railway ...                                  | .....                 | 44 9 8             | .....                            | 95 15 5       | 1 1 10                      | 141 10 1        | .....                    | .....        | .....   |
| For previous 19 weeks of half-year ...                      | 100,900*              | 76,738 15 0*       | 18,50,838 20†                    | 77,023 9 0†   | 1,828 10 0‡                 | 1,53,485 2 9    | 13,340                   | 29,141       | 42,487  |
| Total for 20 weeks ...                                      | 105,649               | 79,009 5 9         | 19,90,734 10                     | 85,101 13 0   | 1,913 0 0                   | 1,60,083 2 9    | 14,061                   | 31,404½      | 45,555½ |
| COMPARISON.   |                       |                    |                                  |               |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 4,355½                | 3,386 0 2          | 1,51,859 0                       | 5,901 7 0     | 115 13 0                    | 7,403 5 2       | 733                      | 1,704        | 2,437   |
| Per mile of railway corresponding week of previous year ... | .....                 | 45 4 3             | .....                            | 52 2 7        | 1 8 9                       | 98 15 7         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 107,221               | 77,626 3 4         | 17,98,743 30§                    | 59,067 2 9§   | 2,280 11 6§                 | 1,30,544 1 7    | 14,417                   | 22,890       | 37,307  |

\* Added number of passengers 682 and Rs. 1,704 }  
 † Ditto mds. 99,333 and " 1,442 } on account of differences between the approximate and audited returns to week ended 15th October 1887.  
 ‡ Deducted " 132 }  
 § { Deducted mds. 2,756 and Rs. 11-11-0 from merchandise } on account of supplemental returns to quarter ended 30th September 1886.  
 { Added " 248-14-0 to other earnings }

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |            |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|------------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts.  | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 74½  | Rs. 7,403 | Rs. 99           | 74½  | Rs. 10,508 | Rs. 142          | 74½   | Rs. 2,35,918*   | Rs. 96           | 74½   | Rs. 2,80,083†   | Rs. 113          | 44,167                  | .....                   |

\* Added Rs. 237 on account of supplemental returns for the quarter ended 30th September 1886.  
 † Added Rs. 4,084 on account of differences between the approximate and audited figures to week ended 15th October 1887.

## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 19th November 1887, on 2½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 14,732                | 3,943 8 0          | 6,796 0                          | 278 2 0    | 8 0 0                       | 4,229 10 0      | 907                      | 61           | 968    |
| Or per mile of railway ...                                  | 177 3 0               | .....              | .....                            | 12 8 0     | 0 5 0                       | 190 1 6         | .....                    | .....        | .....  |
| For previous 19 weeks of half-year ...                      | 330,961*              | 81,943 2 0*        | 63,175 10†                       | 3,113 8 0† | 110 7 0‡                    | 65,187 1 0      | 17,902‡                  | 951‡         | 18,854 |
| Total for 20 weeks ...                                      | 345,693               | 83,886 10 0        | 69,971 10                        | 3,391 10 0 | 118 7 0                     | 69,396 11 0     | 18,809‡                  | 1,012‡       | 19,822 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 14,891                | 3,798 6 8          | 5,322 30                         | 319 1 0    | 11 10 0                     | 4,029 1 8       | 925                      | 45           | 968    |
| Per mile of railway corresponding week of previous year ... | .....                 | 170 11 0           | .....                            | 9 13 0     | 0 8 4                       | 181 1 4         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 321,491‡              | 80,214 13 11       | 63,981 20                        | 2,381 8 0  | 125 2 0                     | 62,721 7 11     | 19,416                   | 480          | 19,896 |

\* Added number of passengers 13,824 and Rs. 10

† Ditto mds. 67 and .. 50

‡ Ditto .. 11

on account of difference between the approximate and audited returns to week ended 15th October 1887.

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
| 22½  | Rs. 4,029 | Rs. 181          | 22½  | Rs. 4,230 | Rs. 190          | 22½   | Rs. 1,55,456    | Rs. 212          | 22½   | Rs. 1,66,409*   | Rs. 237          | Rs. 11,013              | Rs. ....                |

\* Added Rs. 71 on account of difference between the approximate and audited figures to week ended 15th October 1887.

## INDIAN MIDLAND RAILWAY.

Approximate Return of Traffic for week ended 19th November 1887, on 42 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,025                 | 1,008 4 0          | 20,104 20                        | 1,467 2 0   | 16 7 0                      | 2,473 13 0      | 105                      | 363          | 468    |
| Or per mile of railway ...                                  | 23 13 1               | .....              | .....                            | 34 11 1     | 0 6 3                       | 59 14 5         | .....                    | .....        | .....  |
| For previous 19 weeks of half-year ...                      | 41,819*               | 18,269 9 6*        | 5,07,543 30†                     | 34,110 4 0† | 368 4 0‡                    | 52,746 1 6      | 6,404                    | 5,904        | 12,308 |
| Total for 20 weeks ...                                      | 43,844                | 19,299 13 0        | 5,27,648 10                      | 36,667 6 0  | 382 11 0                    | 53,219 14 6     | 6,509                    | 7,887        | 14,396 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,860                 | 1,165 13 9         | 66,025 30                        | 4,336 12 0  | 34 0 0                      | 5,576 9 0       | 211                      | 629          | 840    |
| Per mile of railway corresponding week of previous year ... | .....                 | 27 12 2            | .....                            | 103 4 1     | 0 12 11                     | 131 13 2        | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 50,703                | 21,921 2 6         | 3,25,286 10                      | 27,334 5 0‡ | 537 12 0‡                   | 49,791 4 0      | 5,798                    | 6,801        | 12,599 |

\* Added number of passengers 236 and Rs. 94

† Ditto mds. 42,631 and .. 2,711

‡ Ditto .. 40

on account of difference between the approximate and audited returns to week ended 15th October 1887.

Ditto Rs. 5-13-0 to merchandise and annas 8 to other earnings on account of supplemental returns to quarter ended 30th September 1886.

Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
| 42   | Rs. 5,587 | Rs. 132          | 42   | Rs. 2,474 | Rs. 59           | 42  | Rs. 75,903*     | Rs. 55           | 42  | Rs. 1,03,012†   | Rs. 74           | Rs. 27,109              | .....                   |

\* Added Rs. 4 on account of supplemental returns for the quarter ended 30th September 1886.

† Ditto .. 2,845 on account of difference between the approximate and audited figures to week ended 15th October 1887.

**EASTERN BENGAL STATE RAILWAY.**  
(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BRAH SECTIONS).  
*Approximate Return of Traffic for week ended 12th November 1887, on 645 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|---|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |   |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P.     | Rs. A. P.   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                | 114,202               | 56,896 0 0         | 7,15,876 0                       | 1,81,343 0 0  | 11,268 0 0  | 2,49,824 0 0    | 20,500                   | 27,067       | 47,567  |
| Or per mile of railway ...                                    | 177                   | 88 0 0             | 1,110 0                          | 281 0 0       | *2 0 0  | 371 0 0         | .....                    | .....        | .....   |
| For previous 18 weeks of half-year ...                        | 2,165,665             | 9,45,532 0 0       | 1,18,14,488 0                    | 23,85,834 0 0 | 2,30,902 0 0                                      | 35,65,399 0 0   | 365,981                  | 443,834      | 814,815 |
| Total for 19 weeks ...  | 2,279,867             | 10,02,423 0 0      | 1,25,30,164 0                    | 25,70,196 0 0 | 2,42,168 0 0                                      | 38,14,702 0 0   | 386,481                  | 476,891      | 863,372 |
| <b>COMPARISON.</b>  |                       |                    |                                  |               |   |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 142,444               | 68,797 0 0         | 6,48,375 0                       | 1,40,851 0 0  | 15,307 0 0  | 2,24,745 0 0    | 19,187                   | 27,641       | 46,828  |
| Per mile of railway corresponding period of previous year ... | 235                   | 114 0 0            | 1,670 0                          | 232 0 0       | .....   | 346 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 2,227,779             | 9,84,782 0 0       | 99,73,259 0                      | 19,37,214 0 0 | 2,21,235 0 0                                      | 31,43,231 0 0   | 346,001                  | 492,185      | 748,186 |

\* Rs. 10,000 excluded from calculation.  
† Audited up to week ending 1st October 1887.

**FINANCIAL YEAR.**  
*Approximate Statement of gross receipts of the Eastern Bengal State Railway.*

| RECEIPTS FOR WEEK ENDING 15TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 15TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 15TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 606  | 2,24,745  | 371              | 645  | 2,40,524  | 367              | 606   | 40,80,672       | 267              | 645   | *50,10,415      | 272              | 6,23,718                | .....                   |

\* Audited up to 1st October 1887.

**BENGAL CENTRAL RAILWAY.**  
*Approximate Return of Traffic for week ended 12th November 1887, on 125 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | MDS. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                | 24,489                | 9,155 0 0          | 44,852 0                         | 2,737 0 0  | 23 0 0                      | 11,917 0 0      | 3,786                    | 1,424        | 5,210   |
| Or per mile of railway ...                                    | 196                   | 73 0 0             | 359 0                            | 22 0 0     | .....                       | 95 0 0          | .....                    | .....        | .....   |
| For previous 18 weeks of half-year ...                        | 434,050               | 1,48,432 0 0       | 8,15,403 0                       | 67,060 0 0 | 1,721 0 0                   | 2,18,113 0 0    | 63,766                   | 33,229       | 96,995  |
| Total for 19 weeks ...  | 458,539               | 1,57,587 0 0       | 8,60,255 0                       | 70,697 0 0 | 1,744 0 0                   | 2,30,030 0 0    | 69,552                   | 34,653       | 104,205 |
| <b>COMPARISON.</b>  |                       |                    |                                  |            |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 31,243                | 10,913 0 0         | 21,801 0                         | 1,730 0 0  | 50 0 0                      | 12,693 0 0      | 4,014                    | 1,196        | 5,210   |
| Per mile of railway corresponding period of previous year ... | 250                   | 87 0 0             | 174 0                            | 14 0 0     | .....                       | 101 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 441,095               | 1,47,711 0 0       | 3,63,832 0                       | 28,501 0 0 | 480 0 0                     | 1,76,693 0 0    | 75,506                   | 25,787       | 101,293 |

\* Audited up to week ending 1st October 1887.

**FINANCIAL YEAR.**  
*Approximate Statement of gross receipts of the Bengal Central Railway.*

| RECEIPTS FOR WEEK ENDING 15TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 15TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 15TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125  | 12,008    | 102              | 125  | 11,017    | 95               | 125   | 3,52,230        | 88               | 125   | 3,95,006*       | 99               | 42,815                  | .....                   |

\* Audited up to week ending 1st October 1887.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 12th November 1887, on '86 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 13,772                | 4,787 0 0          | 42,956 0                         | 4,200 0 0  | 30 0 0                      | 9,017 0 0       | 2,161                    | 803          | 2,964  |
| Or per mile of railway ...                                    | 160                   | 88 0 0             | 499 0                            | 49 0 0     | .....                       | 105 0 0         | .....                    | .....        | .. ..  |
| For previous 18 weeks of half-year ...                        | 202,941               | 67,517 0 0         | 3,76,270 0                       | 26,109 0 0 | 2,089 0 0                   | 92,715 0 0      | 20,685                   | 18,851       | 39,536 |
| Total for 19 weeks ...  | 216,713               | 72,304 0 0         | 4,19,240 0                       | 30,309 0 0 | 2,119 0 0                   | 1,04,732 0 0    | 41,816                   | 19,654       | 61,470 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 13,034                | 4,159 0 0          | 17,157 0                         | 1,459 0 0  | 761 0 0                     | 6,378 0 0       | 2,283                    | 714          | 2,997  |
| Per mile of railway corresponding period of previous year ... | 152                   | 48 0 0             | 204 0                            | 17 0 0     | .....                       | 63 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | 191,933               | 62,47 0 0          | 1,79,401 0                       | 18,724 0 0 | 6,089 0 0                   | 87,209 0 0      | 32,370                   | 13,834       | 46,213 |

\* Audited up to week ending 1st October 1887.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

| RECEIPTS FOR WEEK ENDING 13TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 13TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 12TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 86   | 6,378     | 74               | 86   | 9,017     | 105              | 86  | 1,53,609        | 56               | 86  | *1,60,128       | 62               | 15,849                  | .. ..                   |

\* Audited up to week ending 1st October 1887.

ASSAM-BEHAR STATE RAILWAY.

(PURNEAH SECTION.)

Approximate Return of Traffic for week ended 12th November 1887, on 39 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,551                 | 996 0 0            | 6,397 0                          | 650 0 0    | 13 0 0                      | 1,640 0 0       | 729                      | 304          | 1,033  |
| Or per mile of railway ...                                    | 65                    | 25 0 0             | 163 0                            | 16 0 0     | .....                       | 42 0 0          | .....                    | .....        | .....  |
| For previous 18 weeks of half-year ...                        | 53,853                | 19,857 0 0         | 1,79,569 0                       | 11,224 0 0 | 619 0 0                     | *31,700 0 0     | 12,664                   | 7,152        | 19,796 |
| Total for 19 weeks ...  | 56,404                | 20,853 0 0         | 1,77,066 0                       | 11,864 0 0 | 632 0 0                     | 33,340 0 0      | 13,392                   | 7,456        | 20,848 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

\* Audited up to week ending 1st October 1887.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Assam-Bihar State Railway.

| RECEIPTS FOR WEEK ENDING 13TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 12TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 13TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 12TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| .....  | .....     | .....            | 39   | 1,640     | 42               | .....   | .....           | .....            | 39  | *73,584         | 59               | 73,584                  | .....                   |

\* Audited up to week ending 1st October 1887.



## NALHATI STATE RAILWAY.

*Approximate Return of Traffic for the week ending 19th November 1887, on 27½ miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 2,612                 | 971 0 1            | 5,539 0                          | 386 1 0     | 18 8 0                      | 1,375 9 10      | 500                      | 254          | 753     |
| Or per mile of railway ...                                  | 96                    | 35 10 0            | 203 0                            | 14 5 0      | 0 11 0                      | 50 8 0          | .....                    | .....        | .....   |
| For previous 19 weeks of half-year ...                      | 60,237                | 20,830 15 11       | 1,04,047 0                       | 10,185 15 0 | 297 7 3                     | 31,514 6 2      | 9,853                    | 5,996½       | 15,849½ |
| Total for 20 weeks ...                                      | 61,849                | 21,802 0 0         | 1,70,186 0                       | 10,572 0 0  | 316 0 0                     | 32,090 0 0      | 10,363                   | 6,249½       | 16,611½ |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 2,466                 | 1,000 15 0         | 7,059 10                         | 480 10 0    | 17 2 0                      | 1,408 11 9      | 500                      | 254          | 753     |
| Per mile of railway corresponding week of previous year ... | 90                    | 36 12 0            | 259 0                            | 17 10 0     | 0 10 0                      | 55 0 0          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 49,164½               | 18,959 10 6        | 1,21,649 20                      | 9,308 2 0   | 290 12 6                    | 28,558 9 0      | 10,398                   | 5,296        | 15,696  |

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Nalhati State Railway.*

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         | Rs.                     |
| 27½  | 1,499     | 55               | 2½   | 1,376     | 51               | 2½  | 52,894          | 89               | 2½  | 58,178          | 65               | 5,284                   | .....                   |

## TIRHOOT STATE RAILWAY.

*Approximate Return of Traffic for week ended 19th November 1887, on 259½ miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week on 259 miles open ...                    | 88,482½               | 13,767 1 2         | 1,72,313 20                      | 16,465 8 6    | 3,505 9 4                   | 31,737 14 0     | 5,799                    | 6,207        | 12,006  |
| Or per mile of railway ...  | 149                   | 53 2 0             | 665 0                            | 63 9 0        | 2 13 0                      | 119 7 0*        | .....                    | .....        | .....   |
| For previous 19 weeks of half-year ...                              | 709,301               | 2,91,384 14 10     | 22,21,919 20                     | 2,04,637 12 0 | 61,058 6 8                  | 5,59,081 2 0    | 11,896                   | 88,584       | 212,499 |
| Total for 20 weeks ...  | 877,863               | 3,05,153 0 0       | 23,94,133 0                      | 2,23,103 0 0  | 64,564 0 0                  | 5,92,819 0 0    | 129,695                  | 94,801       | 224,496 |
| COMPARISON.   |                       |                    |                                  |               |                             |                 |                          |              |         |
| Total for corresponding week of previous year on 246 miles open ... | 36,701                | 14,673 14 1        | 1,38,552 20                      | 14,465 4 0    | 4,098 2 10                  | 33,707 4 11     | 5,476                    | 4,557        | 10,032  |
| Per mile of railway corresponding week of previous year ...         | 149                   | 59 8 0             | 563 0                            | 58 13 0       | 8 0 0                       | 126 5 0*        | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...                    | 694,397               | 2,42,122 6 5       | 22,51,069 10                     | 2,26,614 1 9  | 63,181 0 0                  | 5,31,917 8 2    | 105,609                  | 86,253       | 191,861 |

\* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

† 10 miles from Nirmali to Bhadrachal, on the Eastern Branch, opened for goods traffic only from the 16th November 1887.

## FINANCIAL YEAR.

*Approximate Statement of Gross Receipts of the Tirhoot State Railway.*

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              |                         |                         |
| 246  | 33,707    | 137              | 25,614                                       | 33,728    | 132              | 24½   | 9,80,074        | 121              | 248*91  | 10,86,832       | 132              | 1,06,778                | .....                   |

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

|   |     |     |     |     |     |     |           |
|---|-----|-----|-----|-----|-----|-----|-----------|
|   |     |     |     |     |     |     | Rs.       |
| Approximate earnings for week ending 12th November 1887 | ... | ... | ... | ... | ... | ... | 11,483    |
| Corresponding week last year                            | ... | ... | ... | ... | ... | ... | 12,427    |
| Decrease  | ... | ... | ... | ... | ... | ... | 944       |
|   |     |     |     |     |     |     |           |
| Receipts from 1st July to 12th November 1887            | ... | ... | ... | ... | ... | ... | 1,86,039  |
| From 1st July to 13th November 1886                     | ... | ... | ... | ... | ... | ... | 1,91,602  |
| Decrease  | ... | ... | ... | ... | ... | ... | 5,563     |
|   |     |     |     |     |     |     |           |
|   |     |     |     |     |     |     | Miles.    |
| Miles open, week ending 12th November 1887              | ... | ... | ... | ... | ... | ... | 51        |
| Corresponding week last year                            | ... | ... | ... | ... | ... | ... | 51        |
|   |     |     |     |     |     |     |           |
|   |     |     |     |     |     |     | Rs. A. P. |
| Receipts for mile open, week ending 12th November 1887  | ... | ... | ... | ... | ... | ... | 225 2 6   |
| Corresponding week last year                            | ... | ... | ... | ... | ... | ... | 243 10 10 |
| Decrease  | ... | ... | ... | ... | ... | ... | 18 7 4    |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 25th November 1887.

W. STEVENSON, Acting Manager.



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, DECEMBER 7, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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### Abstract of the Proceedings of the Council of the Lieutenant-Governor of Bengal, assembled for the purpose of making Laws and Regulations under the provisions of the Act of Parliament 24 and 25 Vic., Cap. 67.

*The Council met at the Bengal Council Chamber on Saturday, the 3rd December 1887.*

#### Present:

The HON. SIR STEUART COLVIN BAYLEY, K.C.S.I., C.I.E., Lieutenant-Governor of Bengal, *presiding*.  
 The HON. G. C. PAUL, C.I.E., Advocate-General of Bengal.  
 The HON. H. J. REYNOLDS, C.S.I.  
 The HON. C. P. L. MACAULAY, C.I.E.  
 The HON. T. T. ALLEN.  
 The HON. SIR HENRY HARRISON, K.C.I.E.  
 The HON. SIR ALFRED CROFT, K.C.I.E.  
 The HON. MOULVIE ABDUL JUBBAR.  
 The HON. G. IRVING.  
 The HON. ANUNDO MOHUN BOSE.  
 The HON. BABU KALI NATH MITTER.  
 The HON. DR. MOHENDRALAL SIRCAR, C.I.E.

#### STATEMENT OF THE COURSE OF LEGISLATION.

THE HON. THE PRESIDENT said—Gentlemen, it has been usual, I believe, for the Lieutenant-Governor at the beginning of each Session to lay

before the Council a statement of the course of legislation likely to occupy their attention during the coming Session. On this occasion the list is not a long one, but I cannot on that account promise you that your labours will be light or of an unimportant character. The main item in the programme, the Bill concerning the Municipality of Calcutta and the Suburbs, is one which must under any circumstances take up a large measure of your time and occupy a great deal of your anxious care and attention. The Select Committee, as you are aware, sent in their report on this Bill at the end of the last Session, and I was in hopes that we should be able to set to work upon the Bill in Council at the beginning of this Session. But the Bill, as was natural from its character, excited a great deal of interest, and from various quarters we have received reports and suggestions, and we have still to expect more of them. In the first place the Government of India have sent us a letter containing a score or so of suggestions, most of them on small matters, but one or two on important matters of principle; and to these are added a series of minor proposals connected with the drafting of the Bill. We have received a report from the Port Commissioners. Again I understand that the Trades' Association have also sent in a report which I have not yet seen, but which I am told objects strongly on some points to the principle of the Bill as at present adopted. Similarly, the European Defence Association have sent in a report in which they also take exception on some points to the constitution of the Corporation as proposed in the Bill. I am also informed that we are to expect within a very brief time reports from various important bodies, especially from the British Indian Association, from the Calcutta Municipality itself, from the Chamber of Commerce, from the Health Society, and possibly from other people. And finally Sir Henry Harrison informs me that in what may be called the adjective part of the Bill, that part which deals not with the constitution of the Corporation, but with the machinery and procedure for working the Act after the Corporation is constituted, in that part of the Bill he himself has a great number of small suggestions to make for amending the working of the law. Well, gentlemen, no one who has read the report of the Select Committee of last year can doubt that they devoted with all possible diligence their utmost care and attention to making the Bill a success. At the same time I think the members of that Committee themselves will agree with me in thinking that all these detailed suggestions that I have mentioned will best be considered in Committee, discussing them across the table in the first instance, rather than under the formal rules of debate which govern us in this Council. I have spoken to my hon. friend Sir Henry Harrison who quite agrees with my suggestion, and therefore it is that you will find upon to-day's motion paper his proposal to ask that the Bill be referred to the Select Committee of last year. It is not proposed to add a rider giving instructions as to the date within which the Committee is to report, but I may express my own hope that the Committee will be able to complete their work within six weeks, or at the very utmost two months, so as to give this Council time to discuss fully and to pass this Bill before the Session is over. The Session of course may go on for a long time, but still it is a great object not to keep a question of this kind open longer than is necessary, and I shall do my utmost with your assistance to get it passed through the Council before we separate altogether. So much for the Municipal Bill.

I wish I could tell you that my projects for legislation ended here, but there is one small point which it is my duty to bring before you to-day. I have received from the Government of India a letter requesting me to lay before the Council a proposal for the amendment of the Bengal Municipal Law in one particular point. That Act, as you are aware, lays it down that the limits of municipalities may not be varied, except upon the initiative of the municipality itself. Well, gentlemen, the Government of India are anxious that I should ask you to amend the law on this point so as to bring it into line with the municipal laws in Northern India and elsewhere, so far as they empower the Local Government to withdraw from a municipality lands or premises in the occupation of Government for State purposes. The question, if I understand rightly, is not one primarily or at all events wholly of taxation; for we have already in Act XI of 1881 power sufficient to enable the Government to deal with taxation whenever they think that taxation is improperly imposed upon them. But the recommendation appears to be one based upon general considerations.

The question, I may mention, came before the Government of India in two instances—one in which a reserved forest—a sort of property which you would not ordinarily expect to find included within a municipality, is included within the municipality of Darjeeling; and the other was in reference to the Ichapore gun foundry and the magazine connected with it. The question there was primarily one of the right of the municipality to enter the premises and inspect the drainage. The Government of India very properly instructed their officers in charge of the factory that he was to act according to law, and to give the municipality the facilities which the law required to enter the premises. But when they come to look into the matter further, it seems to have occurred to them, both in this instance and in the case of Darjeeling, that the Government ought to have the power to withdraw its own premises under special circumstances from the control of a municipality in such matters. In both of these cases the Government of Bengal expressed their unwillingness to disturb the principle which had recently been accepted by the Legislature, though in both cases they admitted that under the circumstances it would have been well that the premises in question had never been included within the municipality. The Government of India, however, considered that the principle itself was a mistaken one, and they have accordingly desired me to bring before you a proposal to amend the law. We are not yet prepared with this Bill, and therefore the question is not ripe for discussion, but when my hon. friend Mr. Macaulay asks you for leave to introduce a Bill, the whole matter will be fully gone into. At present I merely mention it because it is right I should inform you that your attention is likely to be drawn to the subject during the present Session.

#### CALCUTTA AND SUBURBAN MUNICIPALITIES AMALGAMATION BILL.

THE HON. SIR HENRY HARRISON moved that the "Bill to amend and consolidate the law relating to the municipal affairs of the town and suburbs of Calcutta" be again referred to a Select Committee. In doing so he said that perhaps he might take the opportunity of adding a few remarks to what the Hon. the President had already said as regards the position of this Bill. The Bill had now been before the Council for two Sessions, but there was considerable difference as regards what His Honour had described as the substantive and the adjective portions of it. The substantive portion of the Bill had been placed before the Council two years ago, and had now been for two seasons before the public; but the adjective portion of it, which it was obvious required the utmost care and attention in matters of detail, was not put into shape until the Select Committee submitted its report last year, and therefore that portion of the Bill had really been before the public in a shape in which they could consider and discuss it for this past season only; and it was perfectly correct to say, much as the Committee took pains to settle it last year, that it still remained in a form which he thought was susceptible of improvement both by re-arrangement and by amendment in many matters of detail. As regards that portion of the Bill, therefore, it seemed very desirable that it should again have the attention of the Select Committee, who of course would consider it with reference to all the remarks and recommendations which several public bodies had been so good as to send in or were going to send in to the Council. At the same time, whilst that portion of the Bill specially required care and attention, it was naturally not the portion which attracted the greatest amount of attention and criticism. It was the substantive portion of the Bill which prescribed the proposed constitution of the new municipality in which public bodies took most interest, although some of them undoubtedly, especially the Health Society, paid very considerable attention to matters of detail. As regards that portion of the Bill, it was a material question for the consideration of the Committee whether they would think it right or not to reconsider in any way the constitution of the Corporation which they adopted last season with reference to the criticisms and recommendations which had been received. The matter was one of extreme difficulty, because it was evident, from the reports which had come in, that the Committee would receive suggestions materially to modify the proposed

constitution of the Corporation. What chiefly struck him in reading over these suggestions, and the Council would excuse him if he troubled them with a few words on this point, was not that the critics did not clearly see the defects, but that they did not clearly see the difficulty of applying the remedies, or the precise nature of the remedies to be applied. As he had on many occasions stated, the greatest defect in the present constitution of the municipality was the impossibility of securing the co-operation of the commercial element in Calcutta, especially of experienced men of business at the head of large mercantile firms. It was no secret that every Lieutenant-Governor had tried to obtain the co-operation of some of the leading members of the mercantile community, and it was equally no secret that they had almost invariably replied that they had not the time to spare. The difficulty was not solely that they were afraid of being outnumbered. The real difficulty was that, whereas native gentlemen who serve on the Corporation could devote a large amount of their leisure to familiarising themselves with the details of municipal work, obviously the leading men amongst the mercantile community had not the same leisure at their disposal, and it was difficult to get men without leisure to participate in work with men who had leisure. He believed the system of work which had gradually developed itself in the municipality was eminently advantageous and reasonable. Of course the greatest part of the work must be done by the executive officers, but that portion which the members of the Corporation were able to look into was chiefly done by Committees. Committees had no final power of their own, and were entirely subordinate to the Commissioners in meeting. The result was that the whole work of the Corporation was done by these Committees; but any single member of the Corporation, and the Chairman especially, who often availed himself of the power, could virtually appeal from the decision of a Committee, if he chose, to the great body of the Commissioners. Therefore the Corporation, as a whole, had practically fallen into the position of a court of appeal on every great question of interest. In 19 out of 20 cases the decisions of Committees on minor questions were passed without discussion on the assumption that the work was done well; it was only the twentieth case that was fought out over again. It might appear, therefore, at first sight, as if a man without leisure might participate in this work of an appellate tribunal, where of course he would have the opportunity of practically directing the whole policy of the municipality in that way. Here again, however, a fresh difficulty arose. When large questions of principle came up for final discussion in general meeting, it could not but be expected that the men of leisure who naturally took an interest in the work which they had helped to complete would also naturally be prepared to discuss at length the questions which were under consideration; but the men of business would not like to sit for two or three hours to discuss them. It was unreasonable to suppose that this could be otherwise, and when European gentlemen did take an interest in such matters they themselves fell into the habit of making as long speeches as Native gentlemen. Some of the longest speeches he had ever listened to were made by European gentlemen in debates in which they were taking a great interest. It seemed, therefore, impossible to expect that men to whom time was of the utmost value could sit out such discussions. It was not, he thought, so much a question of numbers. He did not think that was the real difficulty. The difficulty was that the business of the Corporation must be managed in a way which involved the possession of a certain amount of leisure; and as regards the element most needed, broad views of important questions affecting the commercial welfare of the town, the men who would be of the greatest service to the Corporation could not afford the time required. That was the problem which, so far as he could see, it was necessary to solve. He did suggest at one time paying the members of the Town Council, because then it might be hoped that though such men would not care for the fee itself, they would see that there was an obligation upon them to go through with a sitting; men who were paid for their attendance would feel that they were bound not to be impatient. But that proposal, although approved in some quarters, did not meet with strong approval, and the suggestion was not adopted. As far as he could see, whatever the number might be, the difficulty would be this, that the only Europeans who could be got to assist in the affairs of the municipality were a few men who were either retired Government pensioners, or

others who, for some particular reason, happened to have the necessary amount of leisure. Consequently, he was bound to say that he had little doubt that in the new Corporation, as in the old, those gentlemen who could afford the time would be those who would most generally settle its affairs.

For the rest, the great aim of the Select Committee should be to see if they could make the Corporation consist of the most varied kind of Commissioners. One objection he had to the present system of election was that its tendency was to give just the same type of men for most of the wards. In each case the ward elected the same type of Commissioner, some one who would give attention to its affairs. Hence the large amount of attention which was now given to the small wants of the inhabitants. In that respect he must say that the amount of good work done by the Corporation had been enormous. They were always being plied with suggestions for small improvements, which affected perhaps the convenience of a few hundred persons residing in the ward, such as making a path here, rounding off an awkward corner there, constructing a bathing platform in a third place, and small matters of that kind. The local convenience of the inhabitants had been studied a great deal, and as the result, it was hardly too much to say that various parts of Calcutta had in that way been improved in the course of the last few years to such an extent that the value of land had been at least doubled. Whilst on the one hand the Commissioners had done what their constituents expected them to do, viz., look after their own small wants, there was, he feared, no doubt that the spirit of the Corporation had been too parochial. That had been the difficulty. If a person had studied the constitution of the municipality scientifically, *a priori*, he would have anticipated the very defect which experience had revealed, viz., that whereas all small matters of local interest would receive the greatest possible attention and the greatest possible encouragement, on the other hand the larger requirements of the town would not receive equal attention. That was a result which must be expected if the Council could not see their way to get men to represent anything but small local areas, who would mainly look after their own local interests, and when elected would consider that they best discharged their duties by looking to the special wants of their wards. He at one time suggested that the town should be divided into larger wards, with a larger number of members to each ward. This suggestion met with but little support. It was curious to see how the same view prevailed in other places. In Bombay, where they had larger wards, the executive were most anxious to retain them in the new Bill; but one of the recommendations of the Corporation was to divide the town into smaller wards, so that each Commissioner should represent the wants of a small body. That showed a natural feeling that they preferred to have more clearly defined wants of small bodies to represent, and be brought nearer their constituents—a very natural wish and very good up to a certain point. It showed the same feeling there also on the part of the officers of the Corporation, who wished to obtain Commissioners with wider and broader views. Probably or possibly something between the two might be done which would be an improvement—a certain number of members to represent local wants and a certain number to represent metropolitan wants. This was a matter on which it was impossible for him to do more than to express a general opinion, and he presumed the Select Committee would take care to consider whether any improvement could be made, or whether, looking at all the difficulties and objections to any other course, they would think it best to leave the constitution of the Corporation as it was at present framed.

THE HON. BABU KALI NATH MITTER said he did not know whether he would be out of order, but he thought a few words from him on the present occasion would not be out of place. The Hon. Mover of the Bill had pointed out the difficulty of getting gentlemen belonging to the mercantile community to serve on the Municipal Commission. That was a difficulty which, to the speaker's mind, was insurmountable, unless merchants themselves would come forward to offer their services. It was quite possible that by means of election, pure and simple, several members of that community might be elected if any interest was taken in returning members from it. He thought it was a mistake to ground a complaint on the fact that commercial interests were not represented; because we know that as a matter of fact persons representing those interests did not take such an

amount of interest in the affairs of the Municipality as would induce them to offer themselves for election. If the election returns were examined, it would be seen that hardly any eminent persons belonging to the mercantile community ever came forward to be elected, and very few of them registered themselves as voters. The consequence was that other communities were able to return a larger number of representatives. He quite admitted everything that Sir Henry Harrison had said with reference to the local wants of the inhabitants being attended to by the Commissioners; but Sir Henry Harrison was not correct in saying that the same amount of interest was not taken in the consideration of larger questions which did not concern particular wards. Those were matters in respect of which the members of the Corporation who were nominated by the Government might be supposed to take interest, as they were nominated by the Government and did not represent the interests of any particular ward; and it would naturally be within their province to interest themselves in the consideration of those larger questions concerning improvements of a general character. He put it to Sir Henry Harrison to say whether the nominated members of the Corporation had taken such an amount of interest in the affairs of the Corporation as might be expected. If they had not done so, he thought it was a very strong argument against the system of nomination. If, on the other hand, the nominated Commissioners had taken a keen interest in the work of the Corporation, and had done good work, that would be in favour of preserving the system of nomination. But he believed it would be admitted that on the whole the same amount of interest had not been taken by the nominated members as by the elected Commissioners in the affairs of the Corporation. It was very difficult to say how persons could be compelled to serve on the municipality who were unwilling to do so. He did not admit that the elected Commissioners had not taken the same amount of interest in large questions as they did in small matters. On the contrary, he believed they had taken the greatest interest in some of the largest measures which had come before the Commissioners. Take the water-supply extension scheme for instance. The special Committee for the consideration of that question was composed mostly of elected Commissioners and though there were some nominated members upon it, still if the records of the Corporation were searched, it would be seen that it was the elected Commissioners who gave their time and attention to the matter, and that in fact the scheme was the scheme of the elected Commissioners. He could well understand his hon. friend not quite approving of the present system of election as it must not be forgotten that he, as Chairman of the Corporation, did not in some instances meet with the support which he expected. That would be the case under any constitution, and it could not be controlled in any way.

The motion was put and agreed to, and the Bill was again referred to the Select Committee consisting of the Hon. Mr. Reynolds, the Hon. Mr. Macaulay, the Hon. Mr. Allen, the Hon. Moulvie Abdul Jubbar, the Hon. Mr. Irving, the Hon. Babu Kali Nath Mitter, and the Mover, the Hon. Sir Henry Harrison.

The Council was adjourned to Saturday, the 17th December 1887.

GORDON LEITH,

*Offg. Assist. Secy. to the Govt. of Bengal,  
Legislative Department.*

CALCUTTA,

*The 6th December 1887.*



# RESOLUTION ON THE REPORT OF THE CALCUTTA MEDICAL INSTITUTIONS FOR THE YEAR 1886.

## RESOLUTION.

### MEDICAL.

*Calcutta, the 3rd December 1887.*

#### READ—

The Report on the Calcutta Medical Institutions for the year 1886.

#### Read also—

The Report for the year 1885, and the Resolution recorded upon it.

The public health of Calcutta was much better in 1886 than in any one of the eleven preceding years. There was a remarkable decrease in the number of deaths from small-pox, and fevers; diarrhoea and dysentery proved less fatal. The general death-rate of the town from all causes was 26·42 per mille, the lowest on record during the past twelve years, and smaller by nearly three per mille than last year.

2. The following table shows the extent to which the public resorted to the hospitals as patients during the past two years:—

| MEDICAL INSTITUTIONS.              | 1886.          |           |         |                            | 1885.          |           |         |                            |
|------------------------------------|----------------|-----------|---------|----------------------------|----------------|-----------|---------|----------------------------|
|                                    | TOTAL TREATED. |           |         | Died per mille of treated. | TOTAL TREATED. |           |         | Died per mille of treated. |
|                                    | In door.       | Out-door. | Total.  |                            | Indoor.        | Out-door. | Total.  |                            |
| Medical College Hospital ...       | 5,880          | 40,085    | 55,965  | 101·7*                     | 5,897          | 47,149    | 53,046  | 101·41*                    |
| General Hospital ...               | 3,406          | ...       | 3,406   | 38·69                      | 3,417          | ...       | 3,417   | 31·02                      |
| Mayo Hospital and dispensaries ... | 2,197          | 177,817   | 180,014 | 104·5                      | 2,564          | 179,308   | 181,772 | 110·37                     |
| Campbell Hospital ...              | 7,313          | ...       | 7,313   | 195·68                     | 7,611          | ...       | 7,611   | 212·06                     |
| Municipal Police Hospital ...      | 2,390          | ...       | 2,390   | 12·1                       | 2,329          | ...       | 2,329   | 12·08                      |
| Voluntary Lock Hospitals ...       | 484            | 1,029     | 2,113   | 47·52                      | 414            | 1,580     | 2,393   | 43·47                      |
| Total Calcutta Hospitals ...       | 22,466         | 229,431   | 251,897 | 110·65*                    | 22,232         | 228,246   | 250,478 | 120·33*                    |
| Howrah General Hospital ...        | 1,615          | 10,949    | 12,564  | 167·8                      | 1,631          | 11,618    | 13,249  | 199·87                     |
| GRAND TOTAL ...                    | 24,081         | 240,380   | 264,461 | 110·40*                    | 23,863         | 239,764   | 263,627 | 125·79*                    |

\* Reckoned on cases treated, exclusive of ophthalmic cases.

An increase is shown in the number of in-door patients at all except the Medical College and Campbell Hospitals. In only one of the three Calcutta hospitals which receive out-door patients, viz., the Medical College, was there an increase in attendance. The general death-rate of the Calcutta hospitals was 110·65 per mille against 120·23 in 1885. If the Howrah figures are included, the rate was 116·49 against 125·79, a figure lower than any year since 1879. A decrease in the death-rate is shown at all except the General and the Voluntary Lock Hospitals, where the rate rose from 31·02 and 43·47 to 38·69 and 47·52, respectively. If cholera deaths are excluded, the general death-rate among all races was 101 per mille against 113 in the previous year. If moribund and cholera cases are both excluded from the list of deaths among natives, the true native death-rate was 112·7 against 118·07 in 1885.

3. Of the total number (264,461) of persons treated during the year, 157,851 were adult males, 39,448 were females, and 67,162 were children. The proportion of male to female adults was therefore about 4 to 1. The numbers according to race were 10,239 Europeans, 28,427 Eurasians, 93,517 Mahomedans, 122,564 Hindus, and 9,714 of other races. These figures differ in a very small degree from those recorded in 1885, the number of Hindus, who visited the hospitals, having slightly decreased, while for all other races, the number of patients is rather larger than in the previous year.

4. The number of important surgical operations performed during the year was 1,561 against 1,505 in the previous year. The number of minor operations undertaken was 19,040 against 18,042 in 1885.

The following figures exhibit the working of the Dental dispensary at the Medical College during the past three years:—

|                         | 1884. | 1885. | 1886. |
|-------------------------|-------|-------|-------|
| Extractions ...         | 1,352 | 1,396 | 1,673 |
| Stoppings ...           | 105   | 112   | 130   |
| Miscellaneous cases ... | 254   | 240   | 359   |
| Total ...               | 1,711 | 1,748 | 2,162 |

In the Eden Hospital nearly the same number of cases were treated by the Obstetric Physician in 1886 and in 1885, there being rather fewer European and rather more native patients, and one more death than in 1885. The results of the treatment of confinement cases are very satisfactory. The death-rate in these cases was only 3·82 per cent., and this although some of the patients appeared for the first time when they had reached a hopeless condition.

The results of major operations at the Medical College Hospital were not so successful as in the year 1885. There were 53 deaths out of a total of 487 cases. In the Ophthalmic wards 423 in-door and 6,605 out-door patients were treated against 524 and 6,436 respectively in the previous year. The percentage of successful cases in operations for cataract was greater than last year.

Enteric fever presented itself during the year only, in the Medical College and Presidency General Hospitals. The number of cases in both the hospitals was the same as in the previous year. The number of cases of remittent fever treated in 1886 (706) is the lowest on record since 1873. The Inspector-General makes the following observations regarding the difficulty experienced in the correct classification of these diseases:—

“The same uncertainty obtains in the correct classification of the severer form of remittent fever, typhoid in type, and the true enteric fever of cold and semi-tropical climates; and nothing has been elicited during the year in elucidation of the difficulty experienced in this country in defining the diagnostic line between the two diseases. Seventeen cases of enteric fever were treated in the General Hospital in the year under report, and six died. One case only was admitted into the Medical College Hospital. The subject was a boy aged 9 years. He completely recovered. From the uncertainty in the nomenclature and smallness in the numbers presented in this table, no general or useful inferences are justifiable.”

An important improvement was effected during the year in the opening of a children's ward in the Medical College Hospital. Formerly children used to be treated in the female wards of the Medical College and Presidency General Hospitals. Now one of the female wards of the former institution has been divided, and the portion thus cut off has been furnished throughout with the assistance of charity for the accommodation of European and Eurasian children.

10. The system of nursing which has been established at the Medical College, Presidency General, and Eden Hospitals continues to afford the highest satisfaction. Everybody concerned has borne grateful testimony to the benefits which have accrued from the trained skill of the nurses, and the Lieutenant-Governor desires again to place on record his recognition and high appreciation of the good work which is being done by them.

11. The circumstances of the Police Hospital are exceptional and admit of no comparison with those of other hospitals. The proportion of admission per 1,000 of the total strength was 802·10 against 767·61 in 1885. The daily average number of sick was 94·09 against 89·18 in 1885. As in 1885, ague, dysentery and venereal diseases prevailed during the year. The total number of deaths was 29 against 28 in 1885.

12. During the year 484 in-patients were treated in the voluntary Lock-hospitals (viz. 89 in the Sealdah Lock-hospital and 395 in the Alipore Lock-hospital) against 414 in 1885. The daily average number of patients treated was 103·4 against 90 in 1885. The deaths among in-patients numbered twenty-three against 18 in 1885. The number of out-door patients was 1,629 against 1,889 in 1885. Of these, 38 were treated in the Sealdah Lock-hospital and 1,591 in the Alipore Lock-hospital. The daily average number was 6·2 against 6·5 in the previous year. Ague, rheumatism, dysentery and splenitis formed the chief diseases. Cholera and small-pox were absent from the hospitals. The following statement shows the number of patients treated for venereal diseases in the other hospitals:—

| Hospitals.                      | Number of in-door patients treated in 1886. | Number of out-door patients treated in 1886. | Total. |
|---------------------------------|---|--|--------|
| Medical College Hospital ...    | 210   | 2,578  | 2,788  |
| Presidency General Hospital ... | 436   | .....  | 436    |
| Campbell Hospital ..            | 733   | ... ..                                       | 733    |
| Mayo Hospital ...               | 41  | 7,140  | 7,181  |
| Howrah Hospital ...             | 136   | 473  | 609    |

It is observed that out of the 368 patients admitted to the Alipore Lock-hospital only 74 were received on transfer from other hospitals, while in 1885 100 patients were received on transfer. The Inspector-General remarks that he considers that only certain forms of venereal disease should be admitted into a lock-hospital; he will be requested to bear in mind, as pointed out in the Resolution of last year, that it is desirable that cases of venereal disease should be treated as little as possible in General Hospitals.

13. The amount of invested capital belonging to the hospitals fell from Rs. 5,54,300 at the beginning of the year to Rs. 5,49,300 at its close. This is due to the sale of Government paper of the value of Rs. 5,000 belonging to the Howrah General Hospital during the year. The total income was Rs. 4,51,981 against Rs. 4,43,679 in the previous year, and the expenditure Rs. 4,37,670 against Rs. 4,24,229. This increase in expenditure is noticeable under the heads of Diet, Miscellaneous charges and Buildings and repairs. There was a decrease of Rs. 28,604 in the expenditure incurred at the Medical College, Presidency General and Campbell Hospitals, and a total increase of Rs. 8,610 in the Police, Howrah and Voluntary Lock-hospitals. The total income from local sources of all kinds was Rs. 1,81,174 against Rs. 1,52,446 in the previous year. The closing balance for 1886 amounted to Rs. 14,310 against Rs. 19,449 in 1885. The net cost to Government of all hospitals amounted to Rs. 2,51,355, which was less by Rs. 19,994 than the amount expended by Government in the previous year.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

*Chief Secretary to the Govt. of Bengal.*

# RESOLUTION ON THE REPORT ON THE ADMINISTRATION OF THE CUSTOMS DEPARTMENT FOR THE YEAR 1886-87.

## FINANCIAL DEPARTMENT—CUSTOMS.

*Calcutta, the 4th December 1887.*

### RESOLUTION.

#### READ—

The Report on the Administration of the Customs Department for the year 1886-87.

The year was marked by a very satisfactory increase in the sea-borne trade of the Province, and the aggregate value, which had fallen from Rs. 73,62,56,3-8 in 1883-84, to Rs. 68,72,16,029 in 1885-86, rose again to Rs. 73,19,10,281. The most striking features in the import trade of Calcutta were an increase from rather more than 10 $\frac{3}{4}$  crores to a little less than 13 $\frac{1}{2}$  crores in cotton goods, the latter figure being the highest ever yet reached; a considerable increase in silk piece-goods, woollen piece-goods and shawls, apparel, umbrellas, mineral oil, corals and agricultural implements; a small falling off in metals and liquors and a considerable falling off in spices and raw silk. In the export trade jute, gunny-bags, tea, oilseeds, opium, paddy, gram, wheat, indigo, myrobolams, raw cotton and raw silk show an increase. The increase in gram, raw cotton and wheat, was no less than 93, 85, and 68 per cent. respectively. On the other hand, there was a decline in rice, hides and skins, silk piece-goods, lac, sugar and tobacco. The most marked variations in the distribution of the trade were an increase from 64.48 to 65.94 per cent. with the United Kingdom, and a decrease from 12.6 to 9.6 per cent. with China. There was an increase in the trade with the United States, France, Mauritius, Italy, Austria and "other countries," and a decrease in that with Ceylon, the Straits Settlements, and Australia. No explanation has been offered of the falling off in the imports of treasure from China, Hong-Kong showing a decrease from Rs. 1,11,56,804 to Rs. 25,24,797 simultaneously with an increase of Rs. 16,32,281 in the value of Indian merchandize received; but the Lieutenant-Governor understands it to be an incident in the method of adjusting a circular trade which is regulated by fluctuations in exchange and in specie shipments.

2. The following statement shows the gross and net customs revenue collected in Bengal during the past five years:—

|   | 1882-83.    | 1883-84.    | 1884-85.    | 1885-86.    | 1886-87.    |
|---|-------------|-------------|-------------|-------------|-------------|
|   | Rs.         | Rs.         | Rs.         | Rs.         | Rs.         |
| Import duty (excluding duty on salt)... | 14,87,018   | 15,13,590   | 15,23,339   | 15,99,392   | 15,05,766   |
| Ditto on salt ...                       | 1,74,72,613 | 1,73,13,587 | 1,91,86,114 | 1,80,35,154 | 1,94,55,103 |
| Export duty ...                         | 31,28,462   | 19,02,100   | 16,24,288   | 16,10,631   | 15,50,540   |
| Total gross duty ...                    | 2,10,98,123 | 2,03,19,277 | 2,21,35,741 | 2,12,45,167 | 2,25,71,306 |
| Refunds and drawbacks—                  |             |             |             |             |             |
| Imports ...                             | 3,20,636    | 2,10,991    | 2,43,338    | 2,29,054    | 2,48,992    |
| Exports ...                             | 1,16,841    | 1,20,921    | 84,639      | 62,202      | 40,365      |
| Total ...                               | 4,37,477    | 3,31,912    | 3,27,977    | 2,91,256    | 2,89,357    |
| Total net duty ...                      | 2,06,60,646 | 2,04,87,365 | 2,18,07,764 | 2,09,53,901 | 2,22,81,949 |

The total receipts during the year under review show a marked improvement, the figures being higher than those of any other year under comparison. In the net duty an increase of Rs. 13,27,950, or 6·3 per cent., over the previous year is observed, owing principally to larger clearances of salt. Import duty, exclusive of salt, also advanced by Rs. 1,06,372, or 7·6, in consequence chiefly of heavy quantities of spirituous liquors having been cleared from bond immediately before the passing of Act II of 1887 in January last. The decline in the export duty of Rs. 2,30,281, or 12·7 per cent., follows from the falling off in the shipments of rice. From the returns of the several ports, it is seen that the net revenue of Calcutta has risen by 6·7 per cent., and that of Chittagong by 25 per cent., while the net receipts of all other ports have fallen off in varying proportions.

3. The total value of the imports into Bengal, exclusive of Government transactions, rose from Rs. 27,87,05,795 to Rs. 29,79,29,855. The improvement occurred chiefly in foreign merchandize, where it exceeded 3· crores and 35 lakhs. The imports of treasure, on the other hand, declined by more than 1 crore and 56 lakhs. In the coasting trade the imports of merchandize advanced by about 9 lakhs, and those of treasure by over 4 lakhs.

4. The value of the export trade of the year amounted to Rs. 43,39,80,426 against Rs. 40,85,10,234 in 1885-86. In the foreign trade there was an improvement of Rs. 2,52,27,147, consisting of an increase of Rs. 2,48,62,322 in the value of merchandize entirely of Indian produce, and of Rs. 3,64,825 in treasure. The total exports of the coasting trade advanced by Rs. 2,43,045 or 3 per cent.

5. Value of stores imported and exported on behalf of Government was Rs. 96,78,007 and Rs. 1,02,819 respectively. Exclusive of these stores, the imports of the foreign trade of Calcutta rose from Rs. 22,59,51,097 to Rs. 24,34,59,221, and the exports from Rs. 32,14,62,739 to Rs. 34,63,63,512. The percentage of the foreign trade of Calcutta carried through the Suez Canal rose from 62·6 in 1885-86 to 64 in 1886-87.

6. The figures of the imports of cotton goods, as has already been stated, are the highest yet recorded. One important feature in connection with this trade is the growth of direct transactions between Manchester and Native firms in Calcutta. Mr. Samuells, in his very interesting report, expresses doubt whether this movement will continue, and reasonably points to the difficulties of distance in regard to the selection of goods and the settlement of disputes. The import trade in metals has not recovered from the decline noticed in the last year's Resolution; the falling off amounted to Rs. 75,239 or 4 per cent., and occurred chiefly in copper and iron, wrought and unwrought. Machinery and mill work show an improvement of Rs. 4,68,340 or 12 per cent. The increasing area under tea cultivation, and the desire to substitute machinery for manual labour, account for the larger imports. The trade in mineral oil improved from 11,614,433 gallons to 17,053,241 gallons, in consequence of the extensive production in the United States and the low prices ruling throughout the year.

7. The imports of malt liquor rose from 560,223 gallons to 569,714 gallons, but the value decreased from Rs. 13,21,676 to Rs. 12,90,773. On the other hand, the quantity of spirits imported fell from 326,560 gallons to 311,856

gallons; but there was an increase in value from Rs. 24,45,744 to Rs. 25,05,083. Wines and liquors decreased both in quantity and value, and the decline amounted to 12,785 gallons or 10 per cent. The trade in corals advanced from 119,841lbs to 174,545lbs in quantity, and from Rs. 10,94,257 to Rs. 15,48,482 in value. The receipts were the highest ever reached and caused an accumulation of stock. The imports of agricultural implements exhibit an increase of 14 per cent., due to the expanding demand for these articles in tea gardens.

8. To the total value of goods of Indian produce exported from Calcutta, opium contributed  $17\frac{3}{4}$  per cent., jute 15 per cent., grain and pulse 14 per cent., tea  $13\frac{1}{2}$  per cent., oilseeds  $11\frac{1}{4}$  per cent., indigo  $7\frac{1}{2}$  per cent., hides and skins  $7\frac{1}{4}$  per cent., cotton raw  $4\frac{1}{2}$  per cent., silk, raw and manufactured, 2 per cent.; other exports, of which lac, saltpetre and castor-oil are the most important, made up the balance. With the slight improvement in the jute crop during the past year, the exports of raw fibre increased by 200,375 cwts., or nearly 3 per cent. The trade in gunny-bags advanced from 62,184,631 to 63,903,563 in number, and from Rs. 95,89,549 to Rs. 1,04,02,879 in value. The shipments of rice fell off by 424,369 cwts., with a corresponding decrease in value of Rs. 35,47,876. The exports of tea further improved in quantity from 67,851,749lbs. to 77,409,796lbs., and in value from Rs. 4,23,75,164 to Rs. 4,62,22,998. The United Kingdom took almost the whole of the increased outturn, nearly ten millions of pounds, but the increase was too much for the market to absorb at profitable rates, and the result was a fall in the average price per pound. It is satisfactory to observe that efforts are being made to introduce Indian tea in Italy.

9. The following table shows the exports of wheat from Calcutta for the last five years:—

| 1882-83.  |             | 1883-84.  |             | 1884-85.  |           | 1885-86.  |             | 1886-87.  |             |
|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-------------|-----------|-------------|
| Cwt.      | Rs.         | Cwt.      | Rs.         | Cwt.      | Rs.       | Cwt.      | Rs.         | Cwt.      | Rs.         |
| 4,438,503 | 1,79,38,850 | 7,611,416 | 3,04,27,244 | 2,501,677 | 99,91,067 | 4,180,531 | 1,52,96,583 | 7,035,276 | 2,62,81,636 |

The United Kingdom took 25 per cent. more during the past year. The transactions with Belgium and France revived, in spite of the increase in the rate of duty levied on wheat in the latter country. The exports to Italy were unusually large, being 328,071 cwts. against an average of 3,650 cwts. in the preceding four years. Mr. Samuella points out that whereas Bengal only exported 4,189,672 cwts. in 1885-86 against 16,849,697 exported by Bombay and Sindh, in 1886-87 it exported 7,037,957 cwts. against 15,219,920.

10. Among other articles of export, indigo shows an improvement of 15 per cent. in quantity, and 2.5 per cent. in value. The steady advance in the exports of raw hides and skins, observed in the last year's Resolution, received a check; under the former head the falling off was more than 9 per cent., and upwards of 14 per cent. in the latter. With the increase in the outturn of the cotton crop, the exports of the article developed remarkably, the quantity shipped being 770,940 cwts. against 416,759 cwts. in the previous year. The exports of raw silk improved by 10 per cent. The trade in lac diminished by 4,262 cwts. in weight, and by Rs. 6,87,876 in value. The transactions in refined sugar dwindled from 4,229 cwts. to 1,199 cwts.

11. The imports of gold declined from Rs. 49,35,489 to Rs. 23,46,135, or 52 per cent. The exports fell off from Rs. 7,04,055 to Rs. 6,18,980. In the imports of silver there was also a heavy decrease from Rs. 2,14,42,295 to Rs. 83,96,317, while the exports, on the other hand, rose from Rs. 2,90,500 to Rs. 7,40,400.

12. The total value of the imports of the coasting trade of Calcutta fell off from Rs. 3,13,83,717 to Rs. 3,11,69,029, while the value of exports rose from Rs. 4,65,40,221 to Rs. 5,51,28,596. In 1885-86, there was a decrease in quantity with an increase in value, but in 1886-87, while the imports of cotton twist and yarn advanced in quantity by 279,810lbs., they diminished in value by Rs. 4,07,851.

13. The foreign trade of Chittagong shows signs of improvement. The total value has risen from Rs. 82,94,672 to Rs. 96,95,506, comprising increases of Rs. 3,51,465.

Chittagong Port.

in imports and of Rs. 10,49,369 in exports. The total coasting trade of the port has also improved by Rs. 8,61,438.

14. A downward tendency is observed in the trade of the Orissa ports; the total value again fell off from Rs. 1,70,33,061 to Rs. 1,31,08,614. The decline was shared by the foreign as well as the coasting trade of all the ports.

15. The trade of Naraingunge, which is a port of coasting trade only, covered from the decline noticed last year. The imports rose from Rs. 3,43,663 to Rs. 3,62,688, in consequence of the increase in the quantity of salt under bond brought from Chittagong. The increase in exports, from Rs. 65,57,373 to Rs. 87,96,605, occurred mainly in the articles of Indian produce.

16. The Lieutenant-Governor's acknowledgments are due to the Board for their efficient supervision of the work of the department during the year, and to Mr. Samuells for his very interesting and complete report. The names of the officers favourably spoken of by the Board will be communicated to the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

*Secretary to the Government of Bengal.*

## RESOLUTION ON THE BOARD'S REPORT ON THE ADMINISTRATION OF THE EXCISE DEPARTMENT FOR 1886-87.

### FINANCIAL DEPARTMENT—EXCISE.

*Calcutta, the 5th December 1887.*

#### RESOLUTION.

#### READ—

The Board's Report on the Administration of the Excise Department for 1886-87.

1. The financial results of the administration of the Excise Department in Bengal during the year 1886-87 show an increase of Rs. 5,41,557 in the revenue, and an increase also of Rs. 50,893 in the charges. Increases in revenue occurred in most of the districts; the most marked decreases being in Chittagong (Rs. 35,984), Dacca (Rs. 14,830), Mozufferpore (Rs. 9,092), Tipperah (Rs. 7,677). In Calcutta, where there was a large falling off of Rs. 97,841 during the year 1885-86, there was an increase of Rs. 96,617 during the year under review. The increase in the charges was due to the fact that during the year under report larger excise establishments were sanctioned in most of the districts in order to enable district officers to carry out the proposals made by the Excise Commission. The variations in each division and the incidence of the revenue were:—

| 1                                 | 2         | 3         | 4                                |
|-----------------------------------|-----------|-----------|----------------------------------|
| DIVISION.                         | Increase. | Decrease. | Incidence per 100 of population. |
|                                   | Rs.       | Rs.       |                                  |
| Burdwan (without Howrah town) ... | 68,434    | .....     | 14                               |
| Presidency without Suburbs) ...   | 45,087    | .....     | 10                               |
| Calcutta, Suburbs and Howrah ...  | 96,617    | .....     | 240                              |
| Rajshahye ...                     | 49,604    | .....     | 8                                |
| Dacca ...                         | 3,727     | .....     | 8                                |
| Chittagong ...                    | .....     | 43,191    | 6                                |
| Patna ...                         | 1,75,051  | .. ..     | 16                               |
| Bhagulpore ...                    | 85,026    | .....     | 13                               |
| Orissa ...                        | 13,288    | .. ..     | 14                               |
| Chota Nagpore ...                 | 47,914    | .....     | 14                               |

2. The fluctuations in the revenue under the different heads are shown in the following table:—

| ARTICLES.                    | REVENUE.                       |             |             | IN 1886-87 COMPARED WITH 1885-86. |           | IN 1886-87 COMPARED WITH 1881 TO 1886. |           |
|------------------------------|--------------------------------|-------------|-------------|-----------------------------------|-----------|--|-----------|
|                              | 2a.                            | 2b.         | 2c.         | 3a.                               | 3b.       | 4a.                                    | 4b.       |
|                              | Average of 1881-82 to 1886-86. | In 1885-86. | In 1886-87. | Increase.                         | Decrease. | Increase.                              | Decrease. |
|                              | Rs.                            | Rs.         | Rs.         | Rs.                               | Rs.       | Rs.                                    | Rs.       |
| Country spirits ... ..       | 48,39,328                      | 46,10,228   | 47,91,249   | 2,81,021                          | .....     | .....                                  | 48,079    |
| Rum ... ..                   | 1,04,809                       | 77,091      | 1,08,111    | 31,020                            | .....     | 3,602                                  | .....     |
| Imported wines ... ..        | 2,05,379                       | 2,18,468    | 2,09,854    | .....                             | 8,612     | 4,475                                  | .....     |
| Tari ... ..                  | 6,64,969                       | 6,58,552    | 6,89,312    | 30,760                            | .....     | 24,353                                 | .....     |
| Pachwai ... ..               | 1,60,887                       | 1,50,544    | 1,78,203    | 27,719                            | .....     | 11,576                                 | .....     |
| Oharus ... ..                | 3,675                          | 1,666       | 1,963       | 816                               | .....     | .....                                  | 7,713     |
| Sidhi, saizi or bhang ... .. | 33,164                         | 34,423      | 37,927      | 3,504                             | .....     | 6,773                                  | .....     |
| Majun ... ..                 | 2,370                          | 2,347       | 2,458       | 108                               | .....     | 83                                     | .....     |
| Madut ... ..                 | 87,864                         | 86,703      | 83,649      | .....                             | 3,063     | .....                                  | 6,205     |
| Ohundoo ... ..               | 27,870                         | 30,889      | 30,746      | .....                             | 1,145     | 1,876                                  | .....     |
| Spirits used for arts ... .. | 552                            | 320         | 189         | .....                             | 132       | .....                                  | 364       |
| Ganja ... ..                 | 18,98,861                      | 19,46,027   | 20,75,435   | 1,28,808                          | .....     | 1,78,574                               | .....     |
| Opium ... ..                 | 18,43,707                      | 18,57,968   | 19,05,761   | 47,783                            | .....     | 62,044                                 | .....     |
| Miscellaneous ... ..         | 4,956                          | 5,770       | 9,230       | 3,480                             | .....     | 6,274                                  | .....     |
| Total ... ..                 | 98,83,861                      | 95,81,573   | 1,01,23,130 | 5,44,497                          | 12,940    | 2,03,630                               | 54,361    |

The settlements of excise shops for the current year show a net increase of Rs. 3,94,070 as compared with 1886-87 the year under review. This increase is due to better management and to the breaking down of combinations of abkars, and especially to the systematic efforts, now for the first time made, to fix upset prices with reference to the ascertained profits of various kinds of shops.

3. The total number of shops licensed for the sale of country spirits was 4,280 against 4,204 in 1885-86. There was an increase of 82 shops licensed under the sudder distillery system, and a decrease of six shops under the outstill system. The net revenue derived from country spirits during the year amounted to Rs. 46,91,299 against Rs. 44,38,237 in the previous year, showing an increase of Rs. 2,53,062 in favour of the year under review. There were increases of revenue in almost all the districts, the only decreases of any importance having occurred in the districts of Hooghly (Rs. 19,665), and Dacca (Rs. 19,574). The decrease in Hooghly is due largely to the decrease in the consumption of duty-paid liquor to the extent of 2,074 gallons. This was owing partly to the discontinuance of a practice under which a shop in the 24-Pergunnahs district was supplied with liquor from the Hooghly distillery, but mainly to general causes. One of these is said to have been the reduction in the number of workmen employed in the jute mills; another the smuggling of outstill liquor into the distillery area. The decrease in Dacca is mainly due to an absence of adequate competition owing to the failure of the vendors to reap the profits they had expected in the previous year, and to the want of confidence caused by the introduction of new rules and restrictions. The sudder distillery system was in force during the year in the town of Burdwan; the district of Hooghly, except the outlying sub-division of Jehanabad; Calcutta, and parts of 24-Pergunnahs adjoining the city; the town of Dacca and its neighbourhood; the towns of Patna, Gya, Durbhunga, Chupra, Bettiah, Arrah, Monghyr, Jamalpore, and Bhagulpore; the entire district of the Sonthal Pergunnahs; the head-quarter stations in the Orissa Division, and a limited area around them, and at Giridhi in the district of Hazaribagh. The outstill system continued in force in the rest of the province. Though no change was made during the year, the outstill system was, on the strong representation of the local officers and the Board, extended from 1st April to the rural portion of the Hooghly (including Howrah) district, under Government orders of 3rd November 1886. A special Deputy Collector, Baboo Gyanendra Nath Pal, was employed to visit all parts of the district and carefully revise the system of distribution of liquor shops. The result has been that the number of distillery shops has been reduced from 139 to 47, while it has only been necessary to increase the number of outstill shops from 30 to 52. Though the total number of shops has thus been reduced from 169 to 76 there has been an increase of Rs. 35,937 in the license



fees under the new settlement. The Board report that the capacities of all the stills and the number and size of the fermenting vats allowed to them have been carefully restricted according to the ascertained local demand for spirits.

4. Important changes were introduced during the year under review into the Excise system in the district of Patna, with a view to carrying out the recommendations of the Excise Commission. The capacities of stills and fermenting vats were limited to the size in each locality ascertained to be capable of supplying the local demand. The system at the outset did not produce favourable results but now the abkars are satisfied, while the consumption of liquor and the number of cases of prosecution for drunkenness have decreased, and the revenue has been more than maintained. In the current year the Patna system was introduced in ten other districts, where reliable statistics of the local demand had been obtained. It must be borne in mind, however, that in large towns the difficulties which stand in the way of discovery of illicit distillation are very great. The fixing of a minimum price for liquor and the limiting of the capacities of stills and vats, bring with them temptations to evade the law, and necessitate increased vigilance on the part of the Police and Excise staff.

5. During the year 1886-87 the number of licenses issued for the wholesale vend of rum was the same as that issued during the previous year, viz. 20. The number of licenses issued for the retail sale, however, fell from 86 to 81. The revenue from rum rose from Rs. 77,091 in 1885-86 to Rs. 1,08,111 in 1886-87. The increase was chiefly in Calcutta, where there was an advance both in license fees and duty, that in fees being the result of favourable settlements. The total quantity of rum of country manufacture passed for consumption amounted to 15,160 gallons against 9,845 gallons passed in the previous year. The increase in consumption was due to Messrs. Ahmuty and Company having cleared a larger quantity of rum than usual in anticipation of enhanced duty, and also to a considerable quantity of Madras spirit having paid duty through the Excise Superintendent of Calcutta, in accordance with the orders of Government under which duty realized under section 148 of the Sea Customs Act VIII of 1878 is now credited as excise duty. There was a decrease in revenue of Rs. 1,236 in the district of Hooghly.

6. The revenue from the sale of licenses for the sale of imported wines amounted to Rs. 2,09,854, or Rs. 8,612 below the revenue of the previous year, the number of licenses falling off by 19. There were decreases in all the divisions, except Chittagong, Bhagulpore, and Orissa.

7. The number of licenses issued for the sale of tari amounted to 19,501 against 19,555 issued in 1885-86. The revenue from license fees amounted to Rs. 6,59,312, showing an increase of Rs. 30,760 in comparison with the fees realized in the previous year. The increase was contributed by most of the districts. The only decrease of importance (Rs. 3,469) was in the district of Hooghly, and of it three-fourths occurred in Howrah, where a combination of tari vendors consequent on the raising of the upset prices of the shops caused many shops to remain unlet.

8. Pachwai was sold during the year in 26 districts against 27 districts in the previous year, the number of licenses taken out being 2,196 against 2,162 taken out in 1885-86. The revenue realized from license fees rose from Rs. 1,50,544 in 1885-86 to Rs. 1,78,263 in the year under review, the average realizations of the previous five years being Rs. 1,66,687. The net results of the year, after adjustment of advance collections, show an increase at Rs. 26,289 due to good harvests.

9. The quantity of ganja estimated to have been produced during the year was 7,926 maunds against 3,887 maunds produced in the previous year. The result was a fall in the wholesale price per maund of flat ganja from Rs. 15 to Rs. 40 in 1885-86 to Rs. 10 to Rs. 40 in 1886-87.

quantity of the drug consumed. The revenue from license fees increased from Rs. 8,60,991 to Rs. 8,90,402, and the revenue from duty from Rs. 10,85,636 to Rs. 11,85,033. There were 13 petty cases of ganja smuggling detected during the year against 8 in the previous year. All the cases were tried in the Nowgong sub-division, where it is believed that the number of cases detected give no true indication of the amount of smuggling which goes on.



The strengthening of the ganja establishment which took place in March of this year will, it is hoped, check this practice. The duty on ganja in Orissa has been raised since the close of the year.

10. During the year 1886-87 as compared with 1885-86 there was a decrease of 81 in the number of licenses issued for the sale of excise opium, an increase of 46 maunds in the consumption, and an increase of Rs. 47,783 in the revenue realized. The increase was under both "license fees" and "sale proceeds," and amounted to Rs. 13,048 and Rs. 34,735, respectively. In Chittagong only was there a decrease in revenue under this head, a limit having been put to the quantity of opium permitted to be sold, in order to check the illegitimate trade with Burma. Since the close of the year the fixed selling price of Excise Opium has been raised in Midnapore from Rs. 29 to Rs. 30 per seer to prevent smuggling from Midnapore into Balasore.

11. The action taken by the Board under the orders of Government towards carrying into practice the suggestions made by the Excise Commission is detailed in chapter XIII of their report. Some of the measures carried out during the year have been noticed above. As the subject is an important one, it will be well to enumerate the chief of those that have not been mentioned. There has been a general reduction of the capacity of outstills throughout the province. The aggregate number of stills has, during the year under review, been reduced by 38, and the aggregate working capacity of all the stills in the province has been reduced by 42 per cent. With a view to check consumption, the duty on distillery liquor has been increased in 10 out of the 20 districts in which the sudder distillery is in force, while to prevent smuggling of outstill liquor into distillery areas, a zone round the limits of each has been fixed within which no outstills have been allowed. There can be no question that this measure will make it harder to smuggle outstill liquor into sudder distillery limits, as such liquor can now be confiscated anywhere within the zone, before it reaches the crowded distillery area where it is more difficult to detect it. Further to check the importation of outstill liquor, the number and size of the fermenting vessels allowed to the outstills bordering on this zone have been strictly limited according to the ascertained figures of local demand. With the purpose of enhancing the selling price, and thereby reducing the consumption of liquor, it has been ordered that the upset price of outstills at auctions shall be fixed at half the gross monthly profits, and in order to ensure the thorough working of the various changes and improvements introduced, an increase in establishment has been sanctioned, and great care has been taken to place competent officers in charge. Finally the sale of outstill liquor to children under 12 years has been unconditionally prohibited under penalty of fine and forfeiture of license.

12. There were prosecutions in every district during the year for offences against the excise laws. The number of arrests was 4,372 against 4,122 in 1885-86, and the number of persons convicted 3,873 against 3,533. Of the persons arrested, 3,923 were other than licensed vendors, 448 were vendors who had committed breaches of license, and one was an employé of the Excise Department.

13. The names of the officers selected by the Board for special mention will be communicated to the Appointment Department. The Lieutenant-Governor desires to thank the Board for their very careful and efficient administration of the Excise Department, during the year under review.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

*Secretary to the Government of Bengal.*

## Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 3rd December 1887.

| No.                       | District and date of return.           | Rainfall at Sudder Station in inches. | Character of the weather and state and prospects of the crops.  |
|---------------------------|--|---------------------------------------|---|
| <b>BENGAL.</b>            |  |                                       |   |
| <i>Western Districts.</i> |  |                                       |   |
| <b>BURDWAN DIVN.</b>      | 1 Burdwan, Dec. 3, '87                 | Nil                                   | Weather—seasonable. Rice harvest will not be up to the average. Prospects of other crops fair. Common rice about 21 seers per rupee.  |
|                           | 2 Bankoora „ 3, '87                    | Nil                                   | Weather—seasonable. Harvesting of <i>amun</i> has commenced. <i>Rabbi</i> crops and sugarcane thriving and promise a 10-anna outturn. The drought of September and October more or less affected all these crops, especially in thana Gungajulghatti, including its outposts, where the former will hardly yield a 7-anna and the latter ( <i>rabbi</i> ) a little above an 8-anna crop. New rice is selling at the Bankura market at 25 seers per rupee. |
|                           | 3 Beerbhoom „ 3, '87                   | Nil                                   | Bright, cool weather with heavy nightly dews. Harvesting of <i>amun</i> rice actively proceeding. Outturn generally good, except where irrigation has not been adopted. Sugarcane ripening and promises well. <i>Rabbi</i> crops are being sown.  |
|                           | 4 Midnapur „ 3, '87                    | Nil                                   | Weather—cool and seasonable. Winter rice is being harvested, outturn in the Ghatal sub-division expected to be 10 annas; elsewhere prospects are good. Prospects of <i>rabbi</i> crops are also good.   |
|                           | 5 Hooghly „ 3, '87                     | Nil                                   | Weather—seasonable. Harvesting of winter rice now going on everywhere outturn will be below the average. Spring crops promising well.   |
| <b>PRESIDENCY DIVN.</b>   | Howrah „ 5, '87                        | Nil                                   | Ordinary cold weather. <i>Amun</i> rice harvest in progress. Prospects favourable.  |
|                           | <i>Central Districts.</i>              |                                       |   |
|                           | 6 24-Pergha, Dec 6, '87                | Nil                                   | Weather—cool and seasonable. Prospects of crops continue good. Harvesting of <i>amun</i> paddy going on   |
|                           | 7 Nuddea „ 3, '87                      | Nil                                   | Weather—seasonable and dry. <i>Amun</i> harvest has commenced; so far outturn fair. Sugarcane in the north good. Cold-weather crops good, though they would be better for rain.   |
|                           | 8 Khoolna „ 3, '87                     | Nil                                   | Weather—seasonable. State and prospects of winter rice and other crops good.  |
| <b>RAJSHAHY DIVN.</b>     | 9 Jessore „ 3, '87                     | Nil                                   | Weather—seasonable. <i>Amun</i> harvesting continues; outturn good. Winter crops still being sown in places.  |
|                           | 10 Moorshedabad „ 3, '87               | Nil                                   | Weather—cool and seasonable. <i>Amun</i> paddy is being cut. <i>Kalai</i> and <i>moong</i> still being harvested. <i>Til</i> and <i>rahar</i> progressing.  |
|                           | 11 Dinagepur Dec. 3, '87               | Nil                                   | Weather—seasonable. Standing crops doing well. About one anna of winter rice has been harvested.  |
|                           | 12 Rajshahye „ 3, '87                  | Nil                                   | Weather—seasonable. Crops excellent.  |
|                           | 13 Rungpur „ 3, '87                    | Nil                                   | Weather—seasonable. Harvesting of <i>amun</i> has commenced. Prospects of mustard and tobacco good.   |
| <b>DACCA DIVISION.</b>    | 14 Bogra „ 3, '87                      | Nil                                   | Weather—seasonable. State and prospects of crops continue good.   |
|                           | 15 Pubna „ 3, '87                      | Nil                                   | Weather—seasonable. <i>Amun</i> paddy nearly all harvested; outturn 14 annas, and in places a full average crop. Mustard, linseed, <i>kalai</i> and sugarcane doing well. Prospects generally good.   |
|                           | 16 Darjeeling „ 3, '87                 | Nil                                   | Weather—cold and bright. State and prospects of crops good.   |
|                           | 17 Julpigoree „ 3, '87                 | Nil                                   | Weather—seasonable. Harvesting of winter rice continues; outturn fair. Tobacco and other cold-weather crops doing well. Prices stationary. Common rice sells at 20 seers per rupee at the Sudder station.   |
|                           | <i>Eastern Districts.</i>              |                                       |   |
| <b>DACCA DIVISION.</b>    | 18 Dacca, Dec. 3, '87                  | Nil                                   | Weather—cool and fine. <i>Amun</i> paddy is being reaped. Winter crops doing well. Prospects continue good.   |
|                           | 19 Farreedpur „ 3, '87                 | Nil                                   | Weather—seasonable. <i>Amun</i> paddy being harvested with good outturn. Sugarcane and winter crops doing well.   |
|                           | 20 Backergunge „ 2, '87                | Nil                                   | Weather—days hot, nights comparatively cold. Prospects of crops very good.  |
|                           | 21 Mymensingh „ 2, '87                 | Nil                                   | Weather—seasonable. State and prospects of crops continue good.   |
| <b>CHITTAGONG DIVN.</b>   | 22 Chittagong Dec. 6, '87              | Nil                                   | Weather—seasonable. Prospects of <i>amun</i> and other crops good. Lands are being prepared for <i>rabbi</i> crops. Caterpillars have appeared. Prices steady.  |
|                           | 23 Noakholly „ 3, '87                  | Nil                                   | Weather—seasonable. <i>Amun</i> crop is being harvested; prospects good.  |
|                           | 24 Tipperah „ 1, '87                   | Nil                                   | Weather—seasonable; getting cold. <i>Amun</i> is being reaped with generally satisfactory outturn. <i>Kalai</i> and <i>ghesari</i> promise good crops.  |
|                           | 25 Chittagong Hill Tracts. Nov 29, '87 | Nil                                   | Weather—cold and foggy in the morning and hot at noon throughout the week. Harvesting of cotton still continues. Plough-paddy is in ear and doing well. Lands are being prepared for mustard, tobacco and other cold-weather crops.   |
|                           | Hill Tipperah „ 30, '87                | Nil                                   | Weather—getting colder. <i>Amun</i> paddy is being reaped. Sugarcane and mustard doing well. Tobacco is being transplanted. Cotton and <i>til</i> are being gathered.   |

| No.                                | District and date of return. | Rainfall at Sudder Station in inches | Character of the weather and state and prospects of the crops.  |
|------------------------------------|------------------------------|--------------------------------------|---|
| <b>BEHAR.</b>                      |                              |                                      |   |
| <b>PATNA DIVN.</b>                 | 26 Patna Dec. 3, '87         | Nil                                  | Weather—cool and seasonable. Harvesting of paddy has commenced. <i>Rubbi</i> and poppy crops coming on well. <i>Zakur</i> , cotton and castor promising.  |
|                                    | 27 Gya „ 3, '87              | Nil                                  | Weather—cool. Paddy is being harvested. <i>Rubbi</i> coming on well, but being injured in places by insects. Sowing of poppy nearly finished.   |
|                                    | 28 Shahabad „ 3, '87         | Nil                                  | Weather—cool and clear. Harvesting of paddy is in progress. <i>Rubbi</i> crop continues promising; prospect favourable. Poppy has grown above ground and promises well; on account of high temperature the weather has not been favourable for this crop, but a change is expected. |
|                                    | 29 Durbhanga „ 3, '87        | Nil                                  | Weather—getting cold. Harvesting of rice in progress. Prospects of <i>rubbi</i> continue favourable. Mustard in flower. Poppy sowings nearly completed. Price of common rice averages 20 seers per rupee.   |
|                                    | 30 Mozufferpur „ 3, '87      | Nil                                  | Prospects of rice excellent. Prospects of <i>rubbi</i> on the whole favourable. Young poppy is promising.   |
|                                    | 31 Saran „ 3, '87            | Nil                                  | Weather—fair and seasonable. <i>Aghani</i> paddy is being harvested and promises an average outturn. <i>Rubbi</i> and poppy crops coming on well. Prospects continue fair.  |
|                                    | 32 Champaran „ 3, '87        | Nil                                  | Weather—cold. Foggy in the morning and fair in the day. Paddy is being harvested with fair yield. In places it is still ripening. <i>Rubbi</i> thriving well. Poppy looks promising. Early mustard putting forth ear. Prospects of all crops continue satisfactory.                 |
| <b>BRAGULPORE DIVN.</b>            | 33 Monghyi Dec. 3, '87       | Nil                                  | Weather—cool and seasonable. Harvesting of winter rice has commenced in places. Prospects of <i>rubbi</i> and poppy promising.  |
|                                    | 34 Bhagulpur „ 3, '87        | Nil                                  | Weather—seasonable. Harvesting of late rice going on; an average outturn of 12 annas is expected in the Sudder. <i>Rubbi</i> crops doing well.  |
|                                    | 35 Purneah „ 3, '87          | Nil                                  | Weather—fair and hot for the time of year. <i>Aghani</i> harvest commenced. Sugarcane being cut. Potatoes, tobacco, <i>kurthi</i> , mustard, <i>musuri</i> doing well.  |
|                                    | 36 Malda „ 3, '87            | Nil                                  | Weather—seasonable. Harvesting of winter rice progressing. <i>Rubbi</i> crops doing well. Common rice selling at an average of 23½ seers per rupee.   |
|                                    | 37 Sonthal Pergah „ 3, '87   | Nil                                  | Weather—seasonable. Rice crop is being harvested; outturn 8 to 12 annas. Prospects of <i>rubbi</i> crops excellent.   |
| <b>ORISSA.</b>                     |                              |                                      |   |
| <b>ORISSA DIVN.</b>                | 38 Cuttack Dec. 2, '87       | Nil                                  | Weather—cool and fair. <i>Sarad</i> is ripening. <i>Laghu sarad</i> is being cut with moderate outturn. Common rice sells at 18 to 20 seers per rupee in the town.  |
|                                    | 39 Pooree „ 1, '87           | Nil                                  | Weather—seasonable. <i>Sarad</i> is ripening. <i>Laghu sarad</i> is being harvested. <i>Dakra</i> is being sown. Common rice at 23 seers 13 chittacks per rupee in the Sudder Sub-division and 22 seers 6 chittacks in the Khorda sub-division.                                     |
|                                    | 40 Balasore „ 2, '87         | Nil                                  | Weather—seasonable. Rice crop is being harvested. <i>Rubbi</i> is flowering.  |
| <b>CHOTA NAGPORE.</b>              |                              |                                      |   |
| <i>South-West Frontier Agency.</i> |                              |                                      |   |
| <b>CHOTA NAGPORE DIVN.</b>         | 41 Hazaribagh Dec. 2, '87    | Nil                                  | Weather—seasonable and cold. Rice being harvested; outturn from 8 to 12 annas. Rain wanted for the <i>rubbi</i> crops. Poppy doing well.  |
|                                    | 42 Lonardaga „ 3, '87        | Nil                                  | Weather—bright and clear. Harvesting of rice continues. Prospect of <i>rubbi</i> not bad. Prices steady.  |
|                                    | 43 Singbhum „ 2, '87         | Nil                                  | Weather—seasonable. No rain in any part of the district. Crops on high lands harvested with an outturn of 8 to 12 annas. Harvesting of paddy crops on low lands in progress; expected outturn 12 annas. <i>Rubbi</i> crops still favourably reported on.                            |
|                                    | 44 Manbhoom „ 3, '87         | Nil                                  | Weather—cold and clear. Paddy is being harvested; outturn is about 10 annas, except in Govindpore and the north-east of the district. New rice selling at from 20 to 26 seers per rupee.  |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 6th December 1887.P. NOLAN,  
Secy. to the Govt. of Bengal.

## STATEMENT SHOWING THE STOCKS OF RICE IN AND AROUND CALCUTTA.

| NAMES OF MARKS.   | STOCK IN HAND AS COMPILED ON—      |                                      |  |   |                                       |                                     |                                      |                                      |  |   |   |                                      |                                      |
|---|------------------------------------|--------------------------------------|--|---|---------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|--|---|---|--------------------------------------|--------------------------------------|
|   | 1st week<br>of Dec. 1886.          | 1st week<br>of Jan. 1887.            | 1st week<br>of Feb. 1887.              | 1st week<br>of Mar. 1887.               | 1st week<br>of April 1887.            | 1st week<br>of May 1887.            | 1st week<br>of June 1887.            | 1st week<br>of July 1887.            | 1st week<br>of August 1887.            | 1st week<br>of Sept. 1887.              | 1st week<br>of Oct. 1887.               | 1st week<br>of Nov. 1887.            | 1st week<br>of Dec. 1887.            |
| Bala-chatta ... ..  | Mds. 3,11,000                      | Mds. 2,89,000                        | Mds. 4,15,500                          | Mds. 4,73,000                           | Mds. 14,01,000                        | Mds. 12,67,000                      | Mds. 10,38,700                       | Mds. 7,61,000                        | Mds. 6,73,000                          | Mds. 5,51,000                           | Mds. 5,13,000                           | Mds. 4,68,000                        | Mds. 3,42,000                        |
| Ootcadanga ... ..   | " 29,900                           | " 47,700                             | " 53,900                               | " 61,300                                | " 72,400                              | " 63,800                            | " 42,800                             | " 73,000                             | " 83,600                               | " 67,000                                | " 66,100                                | " 63,900                             | " 70,400                             |
| Chitmore, Golabara, Coomer-<br>toor, Hakthola, and Ouliy<br>Ghat. | " 8,48,100                         | " 7,78,900                           | " 7,68,700                             | " 5,82,700                              | " 7,47,100                            | " 6,65,200                          | " 6,16,600                           | " 6,65,000                           | " 6,17,200                             | " 5,39,500                              | " 6,14,500                              | " 6,12,100                           | " 6,37,800                           |
| Pethurichatta, Posta, and<br>Jorabagan.                           | " 4,000                            | " 6,000                              | " 8,000                                | " 4,000                                 | " 5,200                               | " 5,000                             | " 8,000                              | " 8,000                              | " 2,000                                | " 2,500                                 | " 2,000                                 | " 4,000                              | " 5,000                              |
| Tallyganje, Chittish, Kilderpore,<br>and Moonahingunge.           | " 1,46,400                         | " 1,52,800                           | " 1,55,400                             | " 1,39,500                              | " 1,79,900                            | " 1,56,000                          | " 1,26,800                           | " 1,11,700                           | " 1,07,800                             | " 1,07,100                              | " 1,09,500                              | " 99,400                             | " 88,100                             |
| 21 Minor Razars (estimated) ...                                   | " 2,48,000                         | " 2,40,000                           | " 2,40,000                             | " 2,40,000                              | " 2,40,000                            | " 2,40,000                          | " 2,40,000                           | " 2,40,000                           | " 2,40,000                             | " 2,40,000                              | " 2,40,000                              | " 2,40,000                           | " 2,40,000                           |
| Other retail shops, 2,129 in<br>number (estimated).               | " 2,50,000                         | " 2,50,000                           | " 2,50,000                             | " 2,50,000                              | " 2,50,000                            | " 2,50,000                          | " 2,50,000                           | " 2,50,000                           | " 2,50,000                             | " 2,50,000                              | " 2,50,000                              | " 2,50,000                           | " 2,50,000                           |
| Boldyabatty, Newabunge,<br>Shundressur, and Chander-<br>sawore.   | " 7,200                            | " 6,039                              | " 5,139                                | " 5,243                                 | " 6,142                               | " 6,645                             | " 8,775                              | " 6,430                              | " 34,740                               | " 51,538                                | " 40,759                                | " 39,816                             | " 31,031                             |
| Total ...   | 19,35,600                          | 17,37,459                            | 18,93,639                              | 17,55,743                               | 29,01,749                             | 26,49,648                           | 23,22,475                            | 29,30,130                            | 19,77,940                              | 17,99,383                               | 18,36,859                               | 17,66,016                            | 16,44,331                            |
| On Railway premises on both<br>sides of the river.                | 7,218<br>(on 4th<br>Dec. 86.)      | 21,250<br>(on 4th<br>Jan. 87.)       | 16,353<br>(on 5th<br>Feb. 1887.)       | 17,893<br>(on 4th<br>Mar. 1887.)        | 9,833<br>(on 4th<br>April 1887.)      | 12,914<br>(on 4th<br>May 1887.)     | 9,491<br>(on 4th<br>June 87.)        | 6,196<br>(on 4th<br>July 87.)        | 4,244<br>(on 4th<br>August 87.)        | 13,930<br>(on 3rd<br>September 87.)     | 6,723<br>(On 10th<br>October 87.)       | 7,616<br>(on 4th<br>Nov. 1887.)      | 4,388<br>(on 8th<br>Dec. 1887.)      |
| On boats ... { By Port Com-<br>missioners' re-<br>turns.          | 30,278<br>(3rd to 5th<br>Dec. 86.) | 73,583<br>(2nd to 4th<br>Jan. 1887.) | 81,461<br>(1st to 3rd<br>Feb. 1887.)   | 78,898<br>(1st to 3rd<br>Mar. 1887.)    | 54,877<br>(1st to 3rd<br>April 1887.) | 18,510<br>(1st to 3rd<br>May 1887.) | 15,523<br>(1st to 3rd<br>June 1887.) | 21,270<br>(1st to 3rd<br>July 1887.) | 79,980<br>(1st to 3rd<br>August 1887.) | 54,919<br>(1st to 3rd<br>September 87.) | 43,466<br>(4th to 6th<br>October 1887.) | 93,645<br>(1st to 3rd<br>Nov. 1887.) | 43,466<br>(1st to 3rd<br>Dec. 1887.) |
| { By Canal returns  | 21,411<br>(3rd to 5th<br>Dec. 86.) | 79,253<br>(2nd to 4th<br>Jan. 1887.) | 1,51,101<br>(1st to 3rd<br>Feb. 1887.) | 1,77,080<br>(1st to 3rd<br>March 1887.) | 81,375<br>(1st to 3rd<br>April 1887.) | 34,233<br>(1st to 3rd<br>May 1887.) | 17,539<br>(1st to 3rd<br>June 1887.) | 24,701<br>(1st to 3rd<br>July 1887.) | 23,344<br>(1st to 3rd<br>August 1887.) | 51,107<br>(1st to 3rd<br>September 87.) | 89,320<br>(1st to 3rd<br>October 1887.) | 45,191<br>(1st to 3rd<br>Nov. 87.)   | 51,327<br>(1st to 3rd<br>Dec. 87.)   |
| Grand Total of Stocks ...   | 18,97,507                          | 19,16,045                            | 21,42,569                              | 20,29,919                               | 30,47,937                             | 27,17,307                           | 23,75,350                            | 29,95,287                            | 20,99,908                              | 19,13,218                               | 19,39,387                               | 18,44,469                            | 17,46,066                            |
| Probable stock available for<br>exportation by sea.               | 8½ lakhs                           | 8½ lakhs                             | 11 lakhs                               | 9½ lakhs                                | 20 lakhs                              | 16½ lakhs                           | 13½ lakhs                            | 10½ lakhs                            | 10½ lakhs                              | 8½ lakhs                                | 8½ lakhs                                | 8 lakhs                              | 7½ lakhs                             |

STATISTICAL DEPARTMENT.

The 5th December 1887.

P. NOLAN,  
Secretary to the Govt. of Bengal.

**PRICES-CURRENT (*RETAIL*) OF FOOD-GRAINS, FIREWOOD AND SALT IN THE  
DISTRICTS OF BENGAL DURING THE FORTNIGHT ENDING THE  
30TH NOVEMBER 1887**

## PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

| Number.                        | DISTRICTS.              | QUANTITIES PER RUPEE IN |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |  |  |  |
|--------------------------------|-------------------------|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|---------------------------------------|------------------------|------------------------------------|--|--|--|
|                                |                         | WHEAT.                  |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR OR CHOLU.<br>(Sorghum Vulgare.) |                        |                                    |  |  |  |
|                                |                         | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                       | Next preceding return. | Corresponding return of last year. |  |  |  |
|                                |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |  |  |  |
| Eastern Districts—enclined.    |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |  |  |  |
| 22                             | Chittagong ...          | 14 0                    | 14 0                   | 16 0                               | ...             | ...                    | ...                                | 18 0             | 14 0                   | 10 0                               | 23 0            | 21 0                   | 17 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 23                             | Noakholly* ...          | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 19 0             | 20 0                   | 15 5                               | 21 0            | 22 0                   | 18 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 24                             | Tipperah ...            | 13 5                    | 14 4                   | 13 5                               | ...             | ...                    | ...                                | 16 15            | 13 8                   | 15 3                               | 23 15           | 23 10                  | 18 4                               | ...                                   | ...                    | ...                                |  |  |  |
| 25                             | Chittagong Hill Tracts. | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 13 5             | 14 0                   | 10 10                              | 16 0            | 15 0                   | 11 13                              | ...                                   | ...                    | ...                                |  |  |  |
|                                | Hill Tipperah ...       | 19 0                    | 12 0                   | 12 0                               | ...             | ...                    | ...                                | 12 0             | 13 0                   | 12 0                               | 26 0            | 20 0                   | 16 0                               | ...                                   | ...                    | ...                                |  |  |  |
| BEHAR.                         |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |  |  |  |
| 26                             | Patna ...               | 20 0                    | 20 0                   | 21 0                               | 30 0            | 31 0                   | 34 0                               | 12 0             | 12 0                   | 11 8                               | 23 0            | 22 0                   | 21 8                               | 28 0                                  | 24 0                   | 26 0                               |  |  |  |
| 27                             | Gya ...                 | 15 0                    | 16 0                   | 19 0                               | 31 0            | 30 0                   | 27 0                               | 10 0             | 10 0                   | 10 0                               | 17 0            | 17 0                   | 22 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 28                             | Shahabad ...            | 16 0                    | 16 0                   | 18 0                               | 20 0            | 20 0                   | 32 0                               | 9 0              | 9 0                    | 8 0                                | 16 0            | 16 0                   | 18 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 29                             | Darbhanga ...           | 17 8                    | 18 0                   | 18 0                               | 35 0            | 35 0                   | 26 0                               | 14 8             | 14 0                   | 13 0                               | 22 0            | 16 0                   | 20 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 30                             | Mounseerpore ...        | 20 0                    | 22 0                   | 20 0                               | 35 0            | 30 0                   | 30 0                               | 12 0             | 12 0                   | 11 0                               | 24 0            | 22 0                   | 24 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 31                             | Saran ...               | 15 0                    | 15 8                   | 18 8                               | 28 0            | 29 0                   | 29 8                               | 9 0              | 9 0                    | 8 4                                | 21 0            | 21 0                   | 22 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 32                             | Chumparun ...           | 18 0                    | 19 0                   | 21 0                               | 40 0            | 34 0                   | 35 0                               | 8 0              | 8 0                    | 7 8                                | 17 0            | 18 0                   | 19 4                               | ...                                   | ...                    | ...                                |  |  |  |
| 33                             | Monghyr ...             | 20 0                    | 21 0                   | 21 0                               | 31 8            | 33 9                   | 38 0                               | 13 14            | 13 14                  | 13 4                               | 16 0            | 16 12                  | 18 8                               | ...                                   | ...                    | 42 0                               |  |  |  |
| 34                             | Bhagulpore ...          | 17 10                   | 16 6                   | 20 3                               | 32 12           | 30 5                   | 35 5                               | 15 2             | 15 2                   | 15 2                               | 18 15           | 17 10                  | 20 8                               | ...                                   | ...                    | ...                                |  |  |  |
| 35                             | Purneah ...             | 20 0                    | 21 0                   | 17 0                               | 40 0            | 28 0                   | ...                                | 13 0             | 13 0                   | 20 0                               | 18 0            | 18 0                   | 21 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 36                             | Maldah ...              | 20 0                    | 20 0                   | 17 0                               | ...             | ...                    | ...                                | 14 0             | 14 0                   | 20 0                               | 22 13           | 24 0                   | 24 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 37                             | Southal Pergah.         | 14 0                    | 16 0                   | 14 8                               | ...             | ...                    | ...                                | 16 0             | 16 0                   | 16 0                               | 21 0            | 22 0                   | 29 0                               | ...                                   | ...                    | ...                                |  |  |  |
| ORISSA.                        |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |  |  |  |
| 38                             | Cuttack ...             | 17 1                    | 15 12                  | 14 7                               | ...             | ...                    | ...                                | 10 8             | 10 8                   | 10 8                               | 18 6            | 18 6                   | 18 6                               | ...                                   | ...                    | ...                                |  |  |  |
| 39                             | Pooree ...              | 14 7                    | 11 13                  | 14 7                               | ...             | ...                    | ...                                | 11 18            | 11 13                  | 13 2                               | 18 6            | 18 6                   | 21 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 40                             | Balasore ...            | 15 0                    | 13 0                   | 14 0                               | 18 0            | 13 0                   | 13 0                               | 13 0             | 14 0                   | 13 0                               | 27 0            | 27 0                   | 25 0                               | ...                                   | ...                    | ...                                |  |  |  |
| CHOTA NAGPORE.                 |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |  |  |  |
| South-Western Frontier Agency. |                         |                         |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                       |                        |                                    |  |  |  |
| 41                             | Hazareebagh* ...        | 17 0                    | 19 0                   | 20 0                               | 21 0            | 21 0                   | 21 0                               | 10 0             | 9 0                    | 12 0                               | 19 0            | 19 0                   | 21 0                               | Not procurable.                       |                        |                                    |  |  |  |
| 42                             | Lohardugga ...          | 17 0                    | 20 0                   | 24 0                               | 20 0            | 21 0                   | 18 0                               | 16 0             | 16 0                   | 20 0                               | 20 0            | 22 0<br>(now)          | 28 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 43                             | Singbhoom ...           | 20 0                    | 20 0                   | 24 0                               | 38 0            | 32 0                   | 24 0                               | 20 0             | 20 0                   | 28 0                               | 24 0            | 24 0                   | 32 0                               | ...                                   | ...                    | ...                                |  |  |  |
| 44                             | Manbhoom ...            | 16 0                    | 16 0                   | 16 0                               | 30 0            | ...                    | ...                                | 15 0             | 16 0                   | 16 0                               | 24 0            | 25 0                   | 32 0                               | ...                                   | ...                    | ...                                |  |  |  |

S At Cox's Bazar retail price of salt 11 seers per rupee.

T At Panchatchia in the Fenny sub-division retail price of salt 10 seers per rupee.

U At Chandpur retail price of salt 11½ seers per rupee.

V In sub-divisions retail prices of salt per rupee were:—Bansaram 12 seers, Buxar 12½ seers.

W In sub-divisions retail prices of salt per rupee were:—Malikubani 11 seers and Tajpore 12 seers.

X In sub-divisions retail prices of salt per rupee were:—Hajipore 12 seers, and Nitamurhi 11 seers.

Y In sub-divisions retail prices of salt per rupee were:—Sewari 12 seers and Gopalgunge 12½ seers.

Z At Bettiah retail price of salt 11½ seers per rupee.

Published for general information.

CALCUTTA,  
The 6th December 1887.

*Districts of Bengal during the Fortnight ending 30th November 1887—(concluded.)*

|   |                        |                                       |   |                        |                                       |                 |                        |                                       |                 |                        |                                       | WHOLESALE PRICES<br>PER MAUND OF 40<br>SEERS. |                        |                                       | DISTRICTS. |
|---|------------------------|---------------------------------------|---|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|-----------------|------------------------|---------------------------------------|---|------------------------|---------------------------------------|------------|
| INDIAN-CORN OR<br>MAISE.<br>(Zea Mays.) |                        |                                       | ARHAR OR TRUE.<br>CADJAN PEA.<br>(Cajanus indicus.) |                        |                                       | FERNWOOD.       |                        |                                       | SALT.           |                        |                                       | SALT.   |                        |                                       |            |
| Present return.                         | Next preceding return. | Corresponding return<br>of last year. | Present return.                                     | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return. | Next preceding return. | Corresponding return<br>of last year. | Present return.                               | Next preceding return. | Corresponding return<br>of last year. |            |

*Eastern Districts—concluded.*

| S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | S. Ch. | Rs. A. P. | Rs. A. P. | Rs. A. P. |                         |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|-----------|-------------------------|
| ...    | ...    | ...    | 11 0   | 8 0    | 9 0    | 75 0   | 80 0   | 75 0   | 13 0   | 11 0   | 12 0   | 3 4 0  | 3 4 0  | 3 2 0  |           |           |           | Chittagong.             |
| ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | ...    | 10 0   | 10 0   | 9 0    | 3 8 0  | 3 8 0  | 4 4 0  |           |           |           | Noakholly.              |
| ...    | ...    | ...    | 8 13 1 | 10 1   | 11 13  | ...    | ...    | ...    | 12 0   | 13 0   | ...    | 3 3 0  | 3 3 0  | .....  |           |           |           | Tipperah.               |
| ...    | ...    | ...    | ...    | ...    | ...    | 320 0  | 320 0  | 320 0  | 8 0    | 8 0    | 8 0    | 4 8 0  | 4 8 0  | 4 8 0  |           |           |           | Chittagong Hill Tracts. |
| ...    | ...    | ...    | 16 0   | 16 0   | 16 0   | ...    | ...    | ...    | 11 0   | 11 0   | 11 0   | 3 4 0  | 3 4 0  | 3 4 0  |           |           |           | Hill Tipperah.          |

## BEHAR.

|      |      |      |      |      |       |       |       |       |       |       |       |        |        |       |  |  |  |                 |
|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|--|--|--|-----------------|
| 32 0 | 32 0 | 32 0 | 23 0 | 24 0 | 26 0  | 120 0 | 120 0 | 110 0 | 13 0  | 13 0  | 11 8  | 3 0 0  | 3 0 0  | 3 1 6 |  |  |  | Patna.          |
| ...  | ...  | ...  | 22 0 | 20 0 | 25 0  | 140 0 | 160 0 | 120 0 | 11 0  | 11 0  | 11 0  | 3 5 0  | 3 5 0  | 3 5 0 |  |  |  | Gya.            |
| ...  | ...  | ...  | 16 0 | 16 0 | 16 0  | 120 0 | 120 0 | 160 0 | 12 8  | 12 8  | 13 0  | 3 3 0  | 3 3 0  | 3 5 0 |  |  |  | Shahabad.       |
| 32 8 | 33 0 | 28 0 | 17 0 | 17 0 | 20 0  | 160 0 | 160 0 | 160 0 | 12 4  | 13 8  | 11 8  | 2 15 0 | 2 15 0 | 3 4 0 |  |  |  | Darbhanga.      |
| 33 0 | 35 0 | 30 0 | 19 0 | 0 0  | 21 8  | 100 0 | 120 0 | 140 0 | 12 0  | 12 0  | 12 0  | 3 3 0  | 3 4 0  | 3 4 0 |  |  |  | Muzafferpore.   |
| 30 8 | 29 0 | 23 8 | 23 0 | 22 0 | 21 0  | 160 0 | 160 0 | 140 0 | 12 0  | 12 0  | 11 12 | 3 2 0  | 3 2 0  | 3 3 6 |  |  |  | Saran.          |
| 31 0 | ...  | 30 8 | 20 0 | 0 0  | 24 8  | ...   | ...   | ...   | 12 0  | 12 0  | 12 4  | 3 4 0  | 3 4 0  | ..... |  |  |  | Chumparan.      |
| 33 8 | 31 8 | 42 0 | 20 0 | 21 0 | 21 0  | 126 0 | 126 0 | 126 0 | 12 9  | 12 9  | 12 9  | 2 14 6 | 2 14 0 | ..... |  |  |  | Monghyr.        |
| 30 5 | 30 5 | 40 6 | 21 7 | 21 7 | 18 15 | 151 8 | 164 0 | 170 0 | 12 10 | 12 10 | 12 0  | 3 0 0  | 2 15 6 | ..... |  |  |  | Bhagalpore.     |
| ...  | ...  | ...  | 16 0 | 16 0 | 30 0  | 160 0 | 160 0 | 98 0  | 10 8  | 11 0  | 11 0  | 3 5 0  | 3 7 6  | 3 5 8 |  |  |  | Purneah.        |
| ...  | ...  | ...  | ...  | ...  | ...   | 160 0 | 120 0 | 180 0 | 11 12 | 12 0  | 11 8  | 3 5 0  | 3 4 0  | 3 6 0 |  |  |  | Maldah.         |
| 40 0 | 40 0 | 50 0 | 21 0 | 24 0 | 20 0  | 200 0 | 200 0 | 200 0 | 11 8  | 11 8  | 12 0  | 3 4 6  | 3 4 6  | 3 3 3 |  |  |  | Sonthal Pergna. |

## ORISSA.

|     |     |     |      |      |       |       |       |       |      |      |      |        |        |        |  |  |  |           |
|-----|-----|-----|------|------|-------|-------|-------|-------|------|------|------|--------|--------|--------|--|--|--|-----------|
| ... | ... | ... | 17 1 | 17 1 | ...   | 80 0  | 80 0  | 80 0  | 14 0 | 14 0 | 14 0 | 2 12 0 | 2 12 0 | 2 12 0 |  |  |  | Cuttack.  |
| ... | ... | ... | 13 2 | 13 2 | 15 12 | 70 0  | 70 0  | 80 0  | 13 2 | 13 2 | 14 7 | 2 12 0 | 2 12 0 | 2 10 0 |  |  |  | Pooroo.   |
| ... | ... | ... | 12 0 | 13 0 | 13 0  | 160 0 | 160 0 | 160 0 | 11 0 | 10 8 | 10 0 | 3 4 0  | 3 4 0  | 3 13 0 |  |  |  | Balasore. |

## CHOTA NAGPORE.

*South-Western Frontier Agency.*

|      |      |      |      |      |      |       |       |       |       |       |      |       |       |        |  |  |  |             |
|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|-------|--------|--|--|--|-------------|
| 27 0 | 28 0 | 40 0 | 24 0 | 23 0 | 19 0 | 320 0 | 320 0 | 256 0 | 10 0  | 10 0  | 10 0 | 3 5 0 | 3 9 0 | 3 10 0 |  |  |  | Manasbaga.  |
| 32 0 | 35 0 | 36 0 | 23 0 | 23 0 | 20 0 | 120 0 | 120 0 | 120 0 | 10 8  | 10 8  | 10 0 | 3 8 0 | 3 8 0 | 3 12 0 |  |  |  | Lohardugga. |
| ...  | ...  | ...  | 20 0 | 20 0 | 21 0 | 320 0 | 320 0 | 320 0 | 9 0   | 9 0   | 9 0  | 4 0 0 | 4 0 0 | 4 0 0  |  |  |  | Singbhoom.  |
| ...  | ...  | 40 0 | 23 0 | 23 0 | 22 0 | ...   | ...   | 240 0 | 10 10 | 10 10 | 10 8 | 3 6 0 | 3 0 0 | 3 8 0  |  |  |  | Manbhoom.   |

Z1 In sub-divisions retail prices of salt per rupee were:—Begusrai 11 seers and Jamui 11½ seers.

Z2 In Banka, Mudhepore and Soopole sub-divisions retail price of salt 11 seers per rupee.

Z3 In sub-divisions retail prices of salt per rupee were:—Kishengunge 10 seers and Arracah (at Ranigunge) 10 seers.

Z4 In sub-divisions retail prices of salt per rupee were:—Deoghur 13 seers, Godda 11 seers, Pakour 12 seers.

Z5 At Bhuddruck retail price of salt 9½ seers per rupee.

Z6 At Kharagdiha in the Giridih sub-division retail price of salt 12 seers per rupee.

Z7 At Govindpore retail price of salt 12 seers per rupee.

P. NOLAN,  
Secy. to the Govt. of Bengal.

*PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt in the*

| Number. | MARKS.           |                 |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |
|---------|------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|         |                  | WHEAT.          |                        |                                    | BARLEY.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    |
|         |                  | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
|         |                  | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.         | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |
| 1       | Calcutta ...     | 2 11 0          | 2 11 3                 | 2 7 9                              | 1 11 0          | 1 11 0                 | 1 10 3                             | 3 12 0           | 3 12 6                 | 3 5 0                              | 1 15 6          | 1 15 9                 | 2 1 0                              |
| 2       | Beragunge ...    | 1 12 0          | 1 10 0                 | 2 0 0                              | ...             | ...                    | ...                                | 3 8 0            | 3 0 0                  | 3 8 0                              | 1 14 0          | 1 10 0                 | 1 10 6                             |
| 3       | Dacca ...        | 2 6 0           | 2 6 0                  | 2 6 0                              | 1 8 0           | 1 8 0                  | 1 8 0                              | 2 6 0            | 2 6 0                  | 2 13 0                             | 1 15 0          | 1 15 0                 | 2 3 0                              |
| 4       | Naralingunge ... | ...             | ...                    | ...                                | ...             | ...                    | ...                                | 2 4 0            | 2 4 0                  | 2 9 0                              | 2 0 0           | 2 0 0                  | 2 1 0                              |
| 5       | Chittagong ...   | 2 12 0          | 2 12 0                 | 2 6 0                              | ...             | ...                    | ...                                | 3 4 0            | 2 12 0                 | 3 12 0                             | 1 12 0          | 1 14 0                 | 2 3 0                              |
| 6       | Patna ...        | 1 15 0          | 1 15 0                 | 1 12 0                             | 1 5 0           | 1 4 0                  | 1 2 6                              | 2 14 6           | 2 14 6                 | 2 0 0                              | 1 11 0          | 1 12 0                 | 1 13 0                             |
| 7       | Balasore ...     | 2 10 0          | 3 0 0                  | 2 8 0                              | 3 0 0           | 3 0 0                  | 3 0 0                              | 3 0 0            | 2 12 0                 | 3 0 0                              | 1 6 0           | 1 6 0                  | 1 7 0                              |
| 8       | Pooree ...       | ...             | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | 2 0 6           | 2 0 6                  | 1 14 0                             |
| 9       | Cuttack ...      | 2 2 0           | 2 5 0                  | 2 10 0                             | ...             | ...                    | ...                                | 3 10 0           | 3 10 0                 | 3 10 0                             | 2 2 0           | 2 2 0                  | 2 2 0                              |

Calcutta,  
The 6th December 1887.



*undermentioned Mats of Bengal during the fortnight ending 30th November 1887.*

| GRAM, CHANA, ONHOLA,<br>KADALAY OR SUBAGA.<br>( <i>Oicer Arislinum.</i> ) |                        |                                    | INDIAN-CORN OR MAIZE.<br>( <i>Zea Mays.</i> ) |                        |                                    | ARHAR OR THUR<br>CADJAN PEA.<br>( <i>Cajanus indicus.</i> ) |                        |                                    | FERNWOOD.       |                        |                                    | SALR.           |                        |                                    | MATS.        |
|---|------------------------|------------------------------------|---|------------------------|------------------------------------|---|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|--------------|
| Present return.   | Next preceding return. | Corresponding return of last year. | Present return.                               | Next preceding return. | Corresponding return of last year. | Present return.   | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |              |
| R. A. P.  | R. A. P.               | R. A. P.                           | R. A. P.                                      | R. A. P.               | R. A. P.                           | R. A. P.  | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           | R. A. P.        | R. A. P.               | R. A. P.                           |              |
| 1 12 0  | 1 12 0                 | 1 12 0                             | 1 6 6   | 1 7 6                  | 1 5 0                              | 2 4 0   | 2 3 0                  | 1 15 6                             | 0 6 9           | 0 6 9                  | 0 6 9                              | 0 6 9           | 2 12 0                 | 2 12 0                             | Calcutta.    |
| 2 4 0   | 2 2 0                  | 1 15 6                             | ...   | ...                    | ...                                | ...   | ...                    | ...                                | ...             | ...                    | ...                                | ...             | 3 1 0                  | 3 0 0                              | Serajgunge.  |
| 2 0 0   | 2 0 0                  | 2 4 0                              | ...   | ...                    | ...                                | 2 0 0   | 2 0 0                  | ...                                | 0 5 0           | 0 5 0                  | 0 5 0                              | 0 5 0           | 3 3 0                  | 3 3 0                              | Dacca.       |
| 2 0 0   | 2 0 0                  | 2 3 0                              | ...   | ...                    | ...                                | 2 8 0   | 2 4 0                  | ...                                | 0 8 0           | 0 8 0                  | 0 6 0                              | 0 6 0           | 3 2 0                  | 2 14 0                             | Narsingunge. |
| 2 7 0   | 2 6 0                  | 3 0 0                              | ...   | ...                    | ...                                | 3 8 0   | 4 8 0                  | 4 2 0                              | 0 8 0           | 0 8 0                  | 0 8 0                              | 0 8 0           | 3 4 0                  | 3 4 0                              | Chittagong.  |
| 1 5 0   | 1 3 0                  | 1 5 6                              | 1 3 6   | 1 3 0                  | 1 3 6                              | 1 11 0  | 1 9 6                  | 1 6 0                              | 0 5 0           | 0 5 0                  | 0 5 3                              | 0 5 3           | 3 0 0                  | 3 0 0                              | Patna.       |
| 2 6 0   | 2 6 0                  | 2 8 0                              | ...   | ...                    | ...                                | 3 2 0   | 3 0 0                  | 3 0 0                              | 0 4 6           | 0 4 6                  | 0 5 0                              | 0 5 0           | 3 4 0                  | 3 4 0                              | Balnora.     |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                | ...   | ...                    | ...                                | ...             | ...                    | ...                                | ...             | 2 12 0                 | 2 12 0                             | Pooras.      |
| 2 2 0   | (kalan) 2 2 0          | 2 2 0                              | ...   | ...                    | ...                                | 2 2 0   | 2 2 0                  | ...                                | 0 8 0           | 0 8 0                  | 0 8 0                              | 0 8 0           | 2 12 0                 | 2 12 0                             | Cuttack.     |

Published for general information.

P. NOLAN,  
Secy. to the Govt. of Bengal.

| WARCA OR RAGI.<br>( <i>Kleusine Corocana.</i> ) |                        |                                    | KANGNI OR KAKUN<br>ITALIAN MILLET.<br>( <i>Setaria italica.</i> ) |                        |                                    |
|---|------------------------|------------------------------------|---|------------------------|------------------------------------|
| Present return.                                 | Next preceding return. | Corresponding return of last year. | Present return.   | Next preceding return. | Corresponding return of last year. |
| R. A. P.  | R. A. P.               | R. A. P.                           | R. A. P.  | R. A. P.               | R. A. P.                           |
| 2 3 0   | 2 3 0                  | ...                                | 3 8 0   | 3 8 0                  | 2 4 0                              |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |
| 1 3 0   | 1 7 0                  | 1 6 0                              | 1 4 0   | 1 5 0                  | 1 14 0                             |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |
| ...   | ...                    | ...                                | ...   | ...                    | ...                                |

## Meteorological Report of the Province of Bengal

| METEOROLOGICAL DIVISION. | DISTRICT.                  | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                           |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
|--------------------------|----------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|---------------------------|------------------------|---------------------|------------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|---------------------------|--|
|                          |                            |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.              |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
|                          |                            |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week.      | Date.                  | Lowest during week. | Date.                  | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean 10 A.M. temperature. |  |
|                          |                            |                         |                                 |                            |                      |                       |                     |                           |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
| Ganges.                  | Pooree ...                 | Gopalpore ...           | 30°046"                         | 30°090"                    | +022                 | NNW                   | 106°0               | 81°3                      | 20th Nov.              | 61°9                | 23th Nov.              | 80°3                      | 64°0                              | 72°1                            | +1°8                                | 76°                       |  |
|                          | False Point ...            | False Point ...         | 30°060                          | 30°091                     | +005                 | N                     | 168°0               | 80°4                      | 28, 29, 30, & 1st Dec. | 56°0                | 26th "                 | 80°0                      | 57°9                              | 69°0                            | -1°7                                | 75°                       |  |
|                          | Cuttack ...                | Cuttack ...             | 30°015                          | 30°098                     | +018                 | SE                    | 24°0                | 80°4                      | 1st "                  | 53°3                | 2nd Dec.               | 84°6                      | 60°0                              | 72°3                            | -0°4                                | 77°                       |  |
|                          | Balasore ...               | Balasore ...            | 30°042                          | 30°102                     | +013                 | Northerly             | 77°5                | 83°4                      | 29 & 30 Nov.           | 52°5                | 26th Nov.              | 82°1                      | 56°3                              | 69°2                            | +1°7                                | 76°                       |  |
| Ganges.                  | South-West Midnapore ...   | Saugor Island ...       | 30°069                          | 30°096                     | +008                 | NNE                   | 200°0               | 83°2                      | 30th "                 | 59°4                | 2nd Dec.               | 80°3                      | 63°7                              | 71°5                            | +0°1                                | 74°                       |  |
|                          | Midnapore ...              | Midnapore ...           | 29°970                          | 30°125                     | +032                 | N                     | 93°2                | 83°3                      | 30th "                 | 55°2                | 26th Nov.              | 83°6                      | 57°3                              | 70°1                            | +2°6                                | 75°                       |  |
|                          | 24-Pergunnahs ...          |                         |                                 |                            |                      |                       |                     |                           |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
|                          | Howrah ...                 | Calcutta ...            | 30°072                          | 30°094                     | +010                 | N                     | 82°0                | 81°5                      | 30th "                 | 60°3                | 29th Nov. & 2nd Dec.   | 70°8                      | 61°9                              | 70°9                            | +1°3                                | 73°                       |  |
| Ganges.                  | Hooghly ...                |                         |                                 |                            |                      |                       |                     |                           |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
|                          | Burdwan ...                | Burdwan ...             | 30°006                          | 30°103                     | +013                 | N, NW                 | 60°4                | 81°3                      | 30th "                 | 51°3                | 2nd "                  | 83°1                      | 59°0                              | 70°5                            | +0°0                                | 74°                       |  |
|                          | Bankoora ...               | Bankoora ...            | 29°780                          | —                          | —                    | Northerly             | 9°3                 | 84°6                      | 30th "                 | 55°3                | 2nd "                  | 82°4                      | 57°5                              | 70°0                            | —                                   | 76°                       |  |
|                          | Beerbhoom ...              | Raneegunge ...          | 29°775                          | 30°092                     | +038                 | N, NW                 | 112°7               | 84°5                      | 30th "                 | 55°5                | 2nd "                  | 83°0                      | 57°3                              | 70°1                            | +2°3                                | 75°                       |  |
| Ganges.                  | West Burdwan ...           |                         |                                 |                            |                      |                       |                     |                           |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
|                          | Moorshedabad ...           | Berhampore ...          | 30°034                          | 30°107                     | +025                 | N                     | 54°5                | 81°8                      | 29th "                 | 51°2                | 2nd "                  | 80°1                      | 59°3                              | 69°7                            | 0                                   | 72°                       |  |
|                          | Nudga ...                  | Krishnagur ...          | 30°012"                         | 30°086"                    | —                    | NNW                   | 65°1                | 83°1                      | 30th "                 | 55°9                | 2nd "                  | 81°8                      | 58°6                              | 70°2                            | —                                   | 75°                       |  |
|                          | Jessore ...                | Jessore ...             | 30°054                          | 30°089                     | +078                 | N, NW                 | 42°3                | 84°7                      | 20th & 30th Nov.       | 53°5                | 23th Nov.              | 83°3                      | 59°3                              | 71°3                            | +1°9                                | 75°                       |  |
| Ganges.                  | Khoolna ...                |                         |                                 |                            |                      |                       |                     |                           |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
|                          | Chittagong ...             | Chittagong ...          | 29°953                          | 30°050                     | +001                 | NE                    | 27°0                | 84°6                      | 29th "                 | 60°1                | 26th "                 | 82°5                      | 68°5                              | 72°0                            | +0°3                                | 75°                       |  |
|                          | Chittagong Hill Tracts ... | Demasiri ...            |                                 |                            |                      |                       |                     | Observations not received |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
|                          | Backergunge ...            | Barrisal ...            | 30°043                          | 30°055                     | +020                 | N                     | 54°3                | 83°3                      | 29th & 30th Nov.       | 58°6                | 1st Dec.               | 81°7                      | 61°9                              | 71°8                            | +2°1                                | 76°                       |  |
| Ganges.                  | Noakholly ...              | Noakholly ...           | 30°066"                         | 30°050"                    | +018                 | NNW                   | ?                   | 85°5                      | 29th "                 | 57°5                | 1st & 2nd Dec.         | 83°2                      | 59°1                              | 71°2                            | +1°7                                | 77°                       |  |
|                          | Furzedpore ...             | Furzedpore ...          | 30°087                          | 30°077                     | +043                 | N                     | 39°0                | 83°3                      | 29th "                 | 58°5                | 2nd "                  | 80°9                      | 60°3                              | 70°6                            | +2°3                                | 74°                       |  |
|                          | Dacca ...                  | Dacca ...               | 30°050                          | 30°073                     | +024                 | Northerly             | 45°0                | 85°1                      | 29th & 30th Nov.       | 57°0                | 2nd "                  | 83°7                      | 61°4                              | 72°6                            | +1°4                                | 77°                       |  |
|                          | Commillah ...              | Commillah ...           | 30°032                          | 30°063                     | +016                 | NW                    | 28°5                | 85°4                      | 29th & 30th Nov.       | 56°0                | 1st & 2nd Dec.         | 83°8                      | 58°5                              | 71°2                            | +1°8                                | 74°                       |  |
| Ganges.                  | Mymensingh ...             | Mymensingh ...          | 30°037                          | 30°067                     | +060                 | E                     | 37°4                | 83°4                      | 25th & 30th Nov.       | 54°1                | 2nd "                  | 82°5                      | 58°3                              | 70°6                            | +1°7                                | 75°                       |  |
|                          | Bogra ...                  | Bogra ...               | 29°998                          | 30°063                     | —                    | N                     | 23°8                | 84°1                      | 29th "                 | 54°4                | 2nd "                  | 82°1                      | 56°0                              | 69°1                            | —                                   | 71°                       |  |
|                          | Pabna ...                  | Seraingunge ...         | 30°033                          | 30°081                     | +023                 | NNH                   | 24°7                | 84°3                      | 29th "                 | 54°7                | 1st "                  | 82°4                      | 59°3                              | 70°9                            | +3°0                                | 73°                       |  |
|                          | Rajshahye ...              | Rampore Beaulah ...     | 30°032                          | 30°102                     | +061                 | N                     | 106°1               | 82°2                      | 29th & 30th Nov.       | 52°7                | 2nd "                  | 80°8                      | 60°0                              | 68°4                            | +2°2                                | 74°                       |  |
| Ganges.                  | Maldah ...                 | Maldah ...              | 29°935                          | —                          | —                    | NW                    | 45°4                | 80°4                      | 26th "                 | 54°7                | 1st "                  | 79°8                      | 57°5                              | 69°7                            | —                                   | 72°                       |  |
|                          | Dinapore ...               | Dinapore ...            | 29°967                          | 30°090                     | +043                 | WNW                   | 178°0               | 83°1                      | 29th "                 | 51°2                | 2nd "                  | 81°2                      | 55°7                              | 68°5                            | +1°7                                | 75°                       |  |
|                          | Rungpore ...               | Rungpore ...            | 29°979                          | 30°108                     | +003                 | NE                    | 44°0                | 82°6                      | 27th "                 | 52°1                | 2nd "                  | 81°1                      | 60°1                              | 68°6                            | +2°4                                | 73°                       |  |
|                          | Julpigore ...              | Julpigore ...           | 29°838                          | 30°136                     | +050                 | NE                    | 14°0                | 81°9                      | 26th "                 | 52°9                | 2nd "                  | 80°3                      | 55°3                              | 67°8                            | +0°7                                | 71°                       |  |
| Ganges.                  | Cooch Behar ...            |                         |                                 |                            |                      |                       |                     |                           |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
|                          | Darjeeling Hill Tracts ... | Darjeeling ...          | 23°121                          | —                          | +040                 | NE                    | 18°4                | 67°0                      | 29th "                 | 39°7                | 26, 27 Nov. & 1st Dec. | 51°6                      | 40°9                              | 47°8                            | +3°0                                | 63°                       |  |
|                          | Purneah ...                | Purneah ...             | 29°909                          | 30°131                     | +046                 | Calm                  | 1°7                 | 70°2                      | 28th to 30th Nov.      | 50°8                | 2nd "                  | 78°5                      | 54°1                              | 66°3                            | -0°6                                | 70°                       |  |
|                          | North Bhagulpore ...       |                         |                                 |                            |                      |                       |                     | Observations suspended.   |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
| Ganges.                  | Mozufferpore ...           | Mozufferpore ...        | 29°986                          | 30°140                     | +060                 | NW                    | 17°7                | 80°9                      | 28th & 29th Nov.       | 56°4                | 1st "                  | 79°4                      | 57°5                              | 68°5                            | +0°8                                | 70°                       |  |
|                          | Durbhunga ...              | Durbhunga ...           | 29°952                          | 30°085                     | +021                 | W                     | 117°6               | 81°7                      | 29th "                 | 47°9                | 2nd "                  | 79°0                      | 52°2                              | 66°0                            | +1°8                                | 75°                       |  |
|                          | Chumpanan ...              | Motihari ...            | 29°923                          | 30°134                     | +041                 | WNW                   | ?                   | 81°0                      | 29th "                 | 53°5                | 26th Nov.              | 77°9                      | 54°5                              | 66°4                            | +0°8                                | 74°                       |  |
|                          | Saran ...                  | Chupra ...              | 29°779                          | 30°149                     | +053                 | SSW                   | 102°7               | 70°5                      | 30th "                 | 54°0                | 26th "                 | 78°1                      | 56°3                              | 66°2                            | +2°4                                | 69°                       |  |
| Ganges.                  | Shahabad ...               | Dehroo ...              | 29°901                          | 30°153                     | +061                 | WNW                   | 76°0                | 82°9                      | 29th "                 | 51°4                | 26th "                 | 79°8                      | 54°0                              | 66°9                            | +2°2                                | 73°                       |  |
|                          | Buxar ...                  | Buxar ...               | 29°910                          | 30°124                     | +045                 | NW                    | 28°1                | 81°1                      | 29th "                 | 49°0                | 26th "                 | 79°3                      | 52°8                              | 66°1                            | +1°0                                | 70°                       |  |
|                          | Gya ...                    | Gya ...                 | 29°735                          | 30°130                     | +041                 | Calm                  | 21°5                | 81°6                      | 30th "                 | 51°8                | 2nd Dec.               | 80°3                      | 53°5                              | 66°9                            | +0°2                                | 73°                       |  |
|                          | Patna ...                  | Bankipore ...           | 29°967                          | 30°155                     | +048                 | WNW                   | 56°1                | 81°5                      | 26th "                 | 53°8                | 26th Nov.              | 79°8                      | 56°3                              | 68°6                            | +2°4                                | 72°                       |  |
| Ganges.                  | South Bhagulpore ...       | Bhagulpore ...          | 29°955                          | 30°123                     | +049                 | NW                    | 30°0                | 79°4                      | 29th & 30th Nov.       | 51°9                | 2nd Dec.               | 78°4                      | 53°6                              | 66°0                            | +1°3                                | 73°                       |  |
|                          | Monghyr ...                |                         |                                 |                            |                      |                       |                     |                           |                        |                     |                        |                           |                                   |                                 |                                     |                           |  |
|                          | South Pargunnahs ...       | Doomka ...              | 29°595                          | —                          | +007                 | Northerly             | 28°4                | 82°5                      | 30th "                 | 51°1                | 2nd "                  | 80°8                      | 55°1                              | 68°0                            | +2°7                                | 74°                       |  |
|                          | Hasaribagh ...             | Hasaribagh ...          | 28°078                          | 30°133                     | +040                 | NNW                   | 152°4               | 76°9                      | 30th "                 | 51°3                | 2nd "                  | 74°9                      | 54°1                              | 61°5                            | +0°5                                | 69°                       |  |
| Ganges.                  | Lohardugga ...             | Ranchee ...             | 27°951                          | 30°106                     | +027                 | N                     | 116°1               | 75°9                      | 30th "                 | 49°8                | 2nd "                  | 74°4                      | 52°5                              | 63°5                            | +2°6                                | 69°                       |  |
|                          | Chyabassam ...             | Chyabassam ...          | 29°314                          | —                          | +028                 | NE                    | 28°7                | 81°3                      | 30th "                 | 53°5                | 26th Nov. & 2nd Dec.   | 80°4                      | 54°5                              | 67°5                            | +1°4                                | 74°                       |  |

\* Mean of 6 days.

† Mean of 5 days.

**Summary.**—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the last 10 years. The humidity of the atmosphere is expressed as percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The mean of the numerical means or average of the rainfall in this district determined from the returns sent in by the sub-divisional stations for the period in question during the past season in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

for the week ending Friday, the 2nd December 1887.

| DISTRICT OBSERVATIONS.      |   |  |                    |              |                        |              |            |                    |              |            |                               |                              | Representative station. | DISTRICT.              |
|-----------------------------|---|--|--------------------|--------------|------------------------|--------------|------------|--------------------|--------------|------------|-------------------------------|------------------------------|-------------------------|------------------------|
| Average humidity at 10 A.M. | Average cloud amount at 10 A.M. for week. | Rainfall of week at observing station. | OF WEEK.           |              | RAINFALL.              |              |            |                    |              |            |                               |                              |                         |                        |
|                             |   |  | Mean for district. | Normal mean. | Since 1st of November. |              |            | Since May 15th.    |              |            | Average number of rainy days. | Normal number of rainy days. |                         |                        |
|                             |   |  |                    |              | Mean for district.     | Normal mean. | Variation. | Mean for district. | Normal mean. | Variation. |                               |                              |                         |                        |
| 57                          | 1.0                                       | Nil                                    | —                  | —            | —                      | —            | —          | —                  | —            | —          | —                             | —                            | Gopalpore               | Pooree                 |
| 58                          | 0.9                                       | Nil                                    | Nil                | 0.30         | 1.20                   | 2.06         | -0.16      | 43.97              | 53.34        | -11.37     | 0.0                           | 0.5                          | False Point             | Cuttack                |
| 59                          | 0.7                                       | Nil                                    | Nil                | 0.10         | 0.56                   | 1.02         | -0.46      | 44.87              | 51.68        | -8.81      | 0.0                           | 0.4                          | Cuttack                 | Cuttack                |
| 61                          | 0   | Nil                                    | Nil                | 0.09         | 0.19                   | 0.87         | -0.68      | 41.84              | 53.30        | -11.55     | 0.0                           | 0.3                          | Balsore                 | Balsore                |
| 65                          | 1.3                                       | Nil                                    | Nil                | 0.03         | 1.35                   | 0.50         | +0.79      | 58.28              | 61.79        | -3.51      | 0.0                           | 0.1                          | Saugor Island           | South-West Midnapore   |
| 66                          | 0.1                                       | Nil                                    | Nil                | 0.02         | 0.05                   | 0.24         | -0.19      | 50.48              | 50.81        | -0.33      | 0.0                           | 0.1                          | Midnapore               | South 24-Pergunnahs    |
| 67                          | 0   | Nil                                    | Nil                | 0.03         | 0.04                   | 0.33         | -0.29      | 40.50              | 51.53        | -11.03     | 0.0                           | 0.1                          | Calcutta                | 24-Pergunnahs          |
| 68                          | 0   | Nil                                    | Nil                | 0.01         | 0.33                   | 0.30         | +0.03      | 45.04              | 46.19        | -1.15      | 0.0                           | 0.1                          | Burdwan                 | Howrah                 |
| 69                          | 0   | Nil                                    | Nil                | 0.03         | Nil                    | 0.35         | -0.35      | 49.54              | 51.71        | -2.37      | 0.0                           | 0.1                          | Bankoora                | Hooghly                |
| 70                          | 0.3                                       | Nil                                    | Nil                | 0.02         | Nil                    | 0.16         | -0.16      | 47.59              | 51.85        | -4.26      | 0.0                           | 0.1                          | Raneegunge              | Burdwan                |
| 71                          | 0   | Nil                                    | Nil                | 0.01         | Nil                    | 0.26         | -0.26      | 58.51              | 49.19        | +9.32      | 0.0                           | 0.1                          | Berhampore              | Beerbhoom              |
| 72                          | 0.1                                       | Nil                                    | Nil                | 0.02         | 0.01                   | 0.33         | -0.32      | 42.78              | 48.97        | -6.19      | 0.0                           | 0.1                          | Krishnaghar             | West Burdwan           |
| 73                          | 0.3                                       | Nil                                    | Nil                | 0.02         | 0.42                   | 0.39         | +0.03      | 41.50              | 53.20        | -11.70     | 0.0                           | 0.1                          | Jessore                 | Moorshedabad           |
| 76                          | 0.7                                       | Nil                                    | Nil                | 0.08         | 8.70                   | 1.76         | +7.00      | 96.08              | 113.58       | -17.55     | 0.0                           | 0.4                          | Chittagong              | Nudda                  |
| 77                          | 0   | Nil                                    | Nil                | 0.10         | 3.98                   | 1.97         | +2.01      | 61.50              | 81.24        | -19.74     | 0.0                           | 0.5                          | Demagiri                | Jessore                |
| 78                          | 0   | Nil                                    | Nil                | 0.02         | 4.56                   | 1.14         | +3.42      | 59.32              | 77.24        | -17.92     | 0.0                           | 0.1                          | Barrisal                | Khoolna                |
| 79                          | 0   | Nil                                    | Nil                | 0.06         | 4.82                   | 2.36         | +2.46      | 72.67              | 103.30       | -30.63     | 0.0                           | 0.2                          | Noakholly               | Chittagong Hill Tracts |
| 80                          | 0   | Nil                                    | Nil                | 0.02         | 0.41                   | 0.40         | +0.01      | 35.91              | 53.84        | -17.93     | 0.0                           | 0.1                          | Furzedpore              | Backergunge            |
| 85                          | 1.0                                       | Nil                                    | Nil                | 0.01         | 1.09                   | 0.52         | +0.36      | 40.29              | 60.49        | -20.20     | 0.0                           | 0.1                          | Dacca                   | Noakholly              |
| 71                          | 0   | Nil                                    | Nil                | 0.02         | 1.12                   | 0.72         | +0.40      | 42.01              | 70.47        | -28.46     | 0.0                           | 0.1                          | Commillah               | Furzedpore             |
| 69                          | 1.0                                       | Nil                                    | Nil                | 0.01         | 0.12                   | 0.25         | -0.13      | 60.53              | 67.05        | -6.52      | 0.0                           | 0.1                          | Mymensingh              | Dacca                  |
| 70                          | 0   | Nil                                    | Nil                | 0.03         | Nil                    | 0.38         | -0.38      | 60.48              | 56.58        | +3.90      | 0.0                           | 0.1                          | Bogra                   | Commillah              |
| 74                          | 0.3                                       | Nil                                    | Nil                | 0.01         | 0.03                   | 0.28         | -0.23      | 44.00              | 53.39        | -9.39      | 0.0                           | 0.1                          | Serajunge               | Mymensingh             |
| 59                          | 0   | Nil                                    | Nil                | Nil          | 0.15                   | 0.20         | -0.05      | 49.57              | 53.52        | -3.95      | 0.0                           | 0.0                          | Rampore Beaulah         | Bogra                  |
| 67                          | 0   | Nil                                    | Nil                | 0.01         | Nil                    | 0.18         | -0.18      | 46.61              | 54.26        | -7.65      | 0.0                           | 0.1                          | Maldah                  | Pubna                  |
| 60                          | 0.1                                       | Nil                                    | Nil                | 0.02         | Nil                    | 0.06         | -0.06      | 60.06              | 55.53        | +4.53      | 0.0                           | 0.1                          | Dinapore                | Rajshahye              |
| 66                          | 0   | Nil                                    | Nil                | 0.01         | Nil                    | 0.09         | -0.09      | 80.60              | 72.77        | +7.83      | 0.0                           | 0.1                          | Rungpore                | Maldah                 |
| 68                          | 0   | Nil                                    | Nil                | 0.03         | Nil                    | 0.07         | -0.07      | 117.42             | 106.47       | +10.95     | 0.0                           | 0.2                          | Jalpigoree              | Dinapore               |
| 56                          | 0   | Nil                                    | 0.07               | 0.05         | 0.07                   | 0.28         | -0.21      | 117.17             | 119.85       | -2.68      | 0.0                           | 0.2                          | Darjeeling              | Rungpore               |
| 70                          | 0   | Nil                                    | Nil                | 0.03         | Nil                    | 0.06         | -0.06      | 65.04              | 57.42        | +7.62      | 0.0                           | 0.1                          | Purneah                 | Jalpigoree             |
|                             |   |  | Nil                | 0.01         | Nil                    | 0.10         | -0.10      | 46.90              | 42.54        | +4.36      | 0.0                           | 0.2                          | Mozufferpore            | Cooch Behar            |
| 77                          | 0   | Nil                                    | Nil                | 0.03         | Nil                    | 0.06         | -0.06      | 49.02              | 43.63        | +5.39      | 0.0                           | 0.1                          | Durbhunga               | Darjeeling Hill Tracts |
| 45                          | 0.4                                       | Nil                                    | Nil                | Nil          | Nil                    | 0.01         | -0.01      | 49.38              | 45.63        | +3.75      | 0.0                           | 0.0                          | Motihari                | Purneah                |
| 65                          | 0   | Nil                                    | Nil                | 0.09         | Nil                    | 0.18         | -0.18      | 39.35              | 42.33        | -2.98      | 0.0                           | 0.2                          | Chupra                  | North Bhagulpore       |
| 59                          | 0   | Nil                                    |                    |              |                        |              |            |                    |              |            |                               |                              | Dehree                  | Mozufferpore           |
| 53                          | 0   | Nil                                    | Nil                | 0.09         | Nil                    | 0.27         | -0.27      | 37.25              | 39.40        | -2.15      | 0.0                           | 0.2                          | Buxar                   | Durbhunga              |
| 60                          | 0   | Nil                                    |                    |              |                        |              |            |                    |              |            |                               |                              | Arrah                   | Champurun              |
| 51                          | 0   | Nil                                    | Nil                | 0.07         | Nil                    | 0.24         | -0.24      | 38.00              | 40.81        | -2.81      | 0.0                           | 0.2                          | Gya                     | Chupra                 |
| 63                          | 0.6                                       | Nil                                    | Nil                | 0.08         | Nil                    | 0.20         | -0.20      | 36.04              | 40.92        | -4.78      | 0.0                           | 0.2                          | Bankipore               | Dehree                 |
| 58                          | 0   | Nil                                    | Nil                | 0.08         | Nil                    | 0.20         | -0.20      | 42.93              | 42.52        | +0.41      | 0.0                           | 0.2                          | Bhagulpore              | Buxar                  |
| 47                          | 0   | Nil                                    | Nil                | 0.03         | Nil                    | 0.16         | -0.16      | 52.40              | 50.02        | +2.38      | 0.0                           | 0.1                          | Dumka                   | Shahabad               |
| 44                          | 0   | Nil                                    | Nil                | 0.08         | Nil                    | 0.34         | -0.34      | 40.42              | 49.86        | -9.44      | 0.0                           | 0.2                          | Hazaribagh              | Shahabad               |
| 67                          | 0.3                                       | Nil                                    | Nil                | 0.05         | Nil                    | 0.33         | -0.33      | 44.34              | 40.61        | +3.73      | 0.0                           | 0.2                          | Ranchee                 | Shahabad               |
| 45                          | 0   | Nil                                    | Nil                | Nil          | Nil                    | 0.23         | -0.23      | 40.62              | 50.46        | -9.84      | 0.0                           | 0.0                          | Chyabansa               | Singbhoon              |

years. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.  
denoting cloud amount, represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means of the district are the numerical averages of the rainfall return received in the district, i.e., from the total rainfall at the sub-





## Statement of Rainfall in Bengal for the week ending Friday (6 p.m.) the 2nd of December 1887—con. 1d

| Meteorological Division. | District.         | Station.     | RAINFALL.                |                        |                        |                         |                           |                         |                       | TOTAL                 |                   | Total rainfall since 1st of November. | Average total rain fall from 1st of November. | Total rainfall since 15th May 1887. | Average rainfall from 15th May to date. |
|--------------------------|-------------------|--------------|--------------------------|------------------------|------------------------|-------------------------|---------------------------|-------------------------|-----------------------|-----------------------|-------------------|---------------------------------------|---|-------------------------------------|---|
|                          |                   |              | Saturday, 26th November. | Sunday, 27th November. | Monday, 28th November. | Tuesday, 29th November. | Wednesday, 30th November. | Thursday, 1st December. | Friday, 2nd December. | Number of rainy days. | of rainfall week. |                                       |   |                                     |   |
| NORTH BHAR —concluded.   | Harud             | Gopalgunge   | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.14                                  | 41.80   | 43.40                               |   |
| SOUTH BHAR               | Shahabad          | Sewan        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.12                                  | 38.94   | 43.47                               |   |
|                          |                   | Ohunrab      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.20                                  | 37.22   | 39.90                               |   |
|                          |                   | Buxar        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.17                                  | 35.85   | 37.95                               |   |
|                          |                   | Danree       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 37.30   | ?                                   |   |
|                          |                   | Bhuboah      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.22                                  | 40.75   | 39.75                               |   |
|                          |                   | Sameram      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.24                                  | 35.44   | 40.00                               |   |
|                          |                   | Arrah        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.17                                  | 40.35   | 39.32                               |   |
|                          |                   | Mohania      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | ?   | ?                                   |   |
|                          |                   | Q. a         | Aurangabad               | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | Nil                                   | 0.22  | 39.25                               | 42.30                                   |
|                          |                   |              | Gya                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | Nil                                   | 0.27  | 42.15                               | 41.74                                   |
|                          | Kowadah           |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.20                                  | 35.03   | 39.33                               |   |
|                          | Jehanabad         |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.28                                  | 45.51   | 39.00                               |   |
|                          | Arwal             |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 39.24   | ?                                   |   |
|                          | Daudnagar         |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 37.51   | ?                                   |   |
|                          | Patna             | Sherrghati   | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 36.75   | ?                                   |   |
|                          |                   | Kajauli      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 37.43   | ?                                   |   |
|                          |                   | Pakri Barwan | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 31.42   | ?                                   |   |
|                          |                   | Patna        | Patna                    | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | Nil                                   | 0.15  | 36.30                               | 41.50                                   |
|                          | Divapore          |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.13                                  | 37.50   | 40.95                               |   |
|                          | Behar             |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.24                                  | 34.50   | 41.44                               |   |
| Barh                     | Nil               |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | 0.23              | 38.71                                 | 38.51   |                                     |   |
| Monghyr                  | Bickram           | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 39.75                                 | ?   |                                     |   |
|                          | Hilsa             | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 31.54                                 | ?   |                                     |   |
|                          | South Bhagulpore. | Bagoosera    | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.32                                  | 48.86   | 38.03                               |   |
|                          |                   | Monghyr      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.13                                  | 40.04   | 45.90                               |   |
| Jamui                    |                   | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | 0.10              | 38.90                                 | 42.30   |                                     |   |
| Gopri                    |                   | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 42.03                                 | ?   |                                     |   |
| Sonthal Pergunnahs.      | Sheikhpura        | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 28.18                                 | ?   |                                     |   |
|                          | Bhagulpore        | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | 0.30              | 40.85                                 | 41.77   |                                     |   |
|                          | Hanza             | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | 0.13              | 39.34                                 | 43.45   |                                     |   |
|                          | Kolgaug           | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 43.27                                 | ?   |                                     |   |
| CHUTIA NAGPUR.           | Hasaribagh        | Rajmehal     | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.12                                  | 37.73   | 51.50                               |   |
|                          |                   | Godda        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.10                                  | 40.10   | 44.35                               |   |
|                          |                   | Fakour       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.08                                  | 37.75   | 53.03                               |   |
|                          |                   | Nya Doomka   | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.19                                  | 44.77   | 53.24                               |   |
|                          | Lohardugga        | Deogaon      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.15                                  | 40.71   | 49.90                               |   |
|                          |                   | Jamara       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.33                                  | 39.96   | 49.19                               |   |
|                          |                   | Simra        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | ?   | ?                                   |   |
|                          |                   | Namhat       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 36.54   | ?                                   |   |
|                          |                   | Singbhoom    | Paohamba (Girdi)         | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | Nil                                   | 0.22  | 40.07                               | 47.10                                   |
|                          |                   |              | Hasaribagh               | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | Nil                                   | ?   | ?                                   | ?                                       |
| Somnagar                 | Nil               |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | 0.27              | 45.43                                 | 45.33   |                                     |   |
| Amudi Hills              | Nil               |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | 0.20              | 38.92                                 | 45.16   |                                     |   |
| Joomrah Hills            | Nil               |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | 0.54              | 47.26                                 | 47.10   |                                     |   |
| Barhi                    | Nil               |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | 0.30              | 37.10                                 | 32.03   |                                     |   |
| Manbhoom                 | Chatra            | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 38.27                                 | ?   |                                     |   |
|                          | Karagdeha         | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 47.72                                 | ?   |                                     |   |
|                          | Kamgher           | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 72.10                                 | ?   |                                     |   |
|                          | Lohardugga        | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 50.34                                 | ?   |                                     |   |
| CHUTIA NAGPUR.           | Lohardugga        | Lohardugga   | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 53.07   | ?                                   |   |
|                          |                   | Kanchi       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.41                                  | 50.43   | 50.87                               |   |
|                          |                   | Paimow       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.48                                  | 48.26   | 43.08                               |   |
|                          |                   | Silli        | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 47.06   | ?                                   |   |
|                          | Singbhoom         | Baismat      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | ?   | ?                                   |   |
|                          |                   | Kosumat      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 31.08   | ?                                   |   |
|                          |                   | Kosumat      | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | ?   | ?                                   |   |
|                          |                   | Gorwah       | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | ?                                     | 52.79   | ?                                   |   |
|                          |                   | Manbhoom     | Chyemasa                 | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | Nil                                   | 0.23  | 40.63                               | 50.50                                   |
|                          |                   |              | Chakradhar-pore.         | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | Nil                                   | ?   | 30.00                               | ?                                       |
| Chatsilla                | Nil               |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 53.40                                 | ?   |                                     |   |
| Bukaragura               | Nil               |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 38.04                                 | ?   |                                     |   |
| Manbhoom                 | Puruli            |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.21                                  | 44.11   | 48.47                               |   |
|                          | Gobindpore        |              | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | Nil               | 0.15                                  | 38.53   | 45.04                               |   |
|                          | Baghunath-pore.   | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 30.86                                 | ?   |                                     |   |
|                          | Barrabhoon        | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | 40.92                                 | ?   |                                     |   |
|                          | Jhalda            | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | ?                                     | ?   |                                     |   |
|                          | Cass              | Nil          | Nil                      | Nil                    | Nil                    | Nil                     | Nil                       | Nil                     | Nil                   | Nil                   | ?                 | ?                                     | ?   |                                     |   |

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 6th December 1887

**SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS  
TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 2ND  
OF DECEMBER 1887.**

The previous week had been one of ordinary north-east monsoon or cold-weather conditions over the whole of Bengal, though these conditions had not been very strongly developed. Skies had been practically cloudless, temperature and humidity had been fairly low, pressure had been decidedly high, while rainfall had been entirely absent from the whole province. Almost precisely similar conditions have obtained throughout the present week, and no disturbances have occurred either over Upper India or in the Bay of Bengal, such as sometimes generate in December, to in any way alter or intensify the ordinary north-east monsoon conditions. Beyond the fact therefore that there have been the usual slight oscillations of barometric pressure and of temperature, and beyond slight and unimportant alterations in wind direction and force, there have been no points in the meteorology of the week which call for any notice whatever.

**Pressure**—Was during the previous week 0.061 inch in excess of the normal. Generally speaking pressure rose on 26th November and fell slowly on the 27th and 28th; it then rose again on the 29th and 30th, while at the close of the week it had again commenced to fall. Taking the mean of the pressures recorded at the stations which have been established for a considerable period, it is found that the average pressure of the province has been 0.025 inch in excess of the normal. The excess pressure has therefore diminished in amount rather rapidly during the week, but the same feature of rather large excess pressure in the northern districts of the province still obtains, and thus while pressure at such stations as False Point, Saugor Island, and Chittagong has been almost normal, at Durbhunga the excess has been 0.060 inch, at Purneah 0.046 inch, and at Bankipore 0.048 inch.

**Temperature**.—The mean temperature of the province for the week has again been in excess of the normal. In the previous week the general excess was no less than 2.7°, but in the present week the excess has been reduced to 1.3°. The largest excess is reported from North Bengal, where it has amounted to 2°; in South-West and East Bengal, in South Behar and in Chutia Nagpur the excess has varied from 1° to 2°, while in North Behar and Orissa the excess has been smaller than 1°.

The excess has been more pronounced in the day than in the night temperatures, for at eight out of nine typical stations in the different districts in the province contained in the table below, the mean day or maximum temperature of the week has been in excess of the normal, and the average excess has been 1.4°. On the other hand, at four out of the same nine stations the mean minimum or night temperatures have been below the normal, though the average minimum temperature of the nine stations has shown a slight excess of 0.6°. The lowest minimum temperature reported for the week at any plains station was 47.9° at Motihari; temperatures of between 49° and 50° were reported in South Behar and Chutia Nagpur, and of between 51° and 52° in South-West and North Bengal.

*Table showing the excess or defect of the actual temperature from the normal mean during the week ending 2nd December 1887.*

|                        | Normal<br>mean maxi-<br>mum tem-<br>perature for<br>the week<br>ending 2nd<br>December. | Actual<br>mean maxi-<br>mum tem-<br>perature for<br>the week<br>ending 2nd<br>December<br>1887. | Excess or<br>defect from<br>the normal<br>mean. | Normal<br>mean mini-<br>mum tem-<br>perature for<br>the week<br>ending 2nd<br>December. | Actual<br>mean mini-<br>mum tem-<br>perature for<br>the week<br>ending 2nd<br>December<br>1887. | Excess or<br>defect from<br>the normal<br>mean. | Normal<br>mean daily<br>tempera-<br>ture for<br>the week<br>ending the<br>2nd De-<br>cember. | Actual<br>mean daily<br>tempera-<br>ture for the<br>week end-<br>ing 2nd<br>December<br>1887. | Excess or<br>defect from<br>the normal<br>mean. |
|------------------------|---|---|---|---|---|---|--|---|---|
| Cuttack ...            | 83.6  | 84.6  | +1.0  | 61.8  | 60.0  | -1.8  | 72.7   | 72.3  | -0.4  |
| Calcutta (Alipore) ... | 79.1  | 79.8  | +0.7  | 60.4  | 61.9  | +1.5  | 69.7   | 70.9  | +1.2  |
| Dacca ...              | 81.1  | 83.7  | +2.6  | 61.3  | 61.4  | +0.1  | 71.2   | 72.6  | +1.4  |
| Burdwan ...            | 80.5  | 82.1  | +1.6  | 60.3  | 60.0  | -0.3  | 69.0   | 70.6  | +0.6  |
| Patna (Bankipore) ...  | 78.0  | 79.8  | +1.8  | 53.2  | 56.3  | +3.1  | 65.6   | 68.0  | +2.4  |
| Gya ...                | 79.2  | 80.3  | +1.1  | 54.1  | 53.5  | -0.6  | 66.7   | 66.9  | +0.2  |
| Purneah ...            | 79.5  | 78.5  | -1.0  | 54.2  | 54.1  | -0.1  | 66.0   | 66.3  | +0.3  |
| Hazribagh ...          | 74.3  | 74.9  | +0.6  | 53.0  | 54.1  | +0.6  | 64.0   | 64.5  | +0.5  |
| Darjeeling ...         | 61.5  | 64.6  | +3.1  | 38.0  | 40.9  | +2.9  | 44.8   | 47.8  | +3.0  |

**Rainfall**.—The whole province has again been rainless during the past week.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 2nd of December 1887:—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          | RAINFALL.       |            |                         |                                |            |                        |                 |                        |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|------------------------|-----------------|------------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of November. |                 | Since 1st of May 1897. |                 |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.               | Normal average. | Average.               | Normal average. |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                        |                 |                        |                 |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                        |                 |                        |                 |
| Orissa ... ..                | 80.4                          | 52.5                         | 81.7                    | 59.6                   | 70.7                  | +0.3   | Nil      | 0.15            | -0.15      | 0.0                     | 0.3                            | -0.3       | 0.77                   | 1.24            | 43.42                  | 53.33           |
| South-West Bengal ...        | 85.0                          | 51.2                         | 81.7                    | 59.3                   | 70.5                  | +1.3   | Nil      | 0.02            | -0.02      | 0.0                     | 0.1                            | -0.1       | 0.20                   | 0.32            | 40.71                  | 51.56           |
| East Bengal ... ..           | 85.5                          | 54.1                         | 82.0                    | 60.2                   | 71.4                  | +1.6   | Nil      | 0.03            | -0.03      | 0.0                     | 0.2                            | -0.2       | 2.46                   | 0.03            | 35.50                  | 73.73           |
| * North Bengal ... ..        | 81.3                          | 51.2                         | 81.1                    | 56.6                   | 68.9                  | +2.0   | Nil      | 0.03            | -0.03      | 0.0                     | 0.1                            | -0.1       | 0.03                   | 0.16            | 73.60                  | 89.45           |
| North Behar ... ..           | 81.7                          | 47.0                         | 78.9                    | 54.6                   | 63.8                  | +0.7   | Nil      | 0.04            | -0.04      | 0.0                     | 0.2                            | -0.2       | Nil                    | 0.09            | 53.07                  | 47.76           |
| South Behar ... ..           | 82.0                          | 49.9                         | 79.2                    | 54.5                   | 63.9                  | +1.7   | Nil      | 0.07            | -0.07      | 0.0                     | 0.2                            | -0.2       | Nil                    | 0.21            | 41.85                  | 43.34           |
| Chittia Nagpur ... ..        | 76.9                          | 40.8                         | 74.7                    | 53.3                   | 64.0                  | +1.6   | Nil      | 0.06            | -0.06      | 0.0                     | 0.2                            | -0.2       | Nil                    | 0.31            | 44.56                  | 45.61           |

\* Chyohasag not included.

METEOROLOGICAL OFFICE, BENGAL:

The 6th December 1887.

A. PEDIER,

Offg. Meteorological Reporter to the Govt. of Bengal.



**Abstract of the results of Meteorological Observations taken at the Alipore Observatory in the month of November 1887.**

|  | Inches.   | Date.            | Hour. |
|--|-----------|------------------|-------|
| The mean pressure of the month ... ..  | 29.967    |                  |       |
| The average pressure of November from 24 years' registers ...  | 29.970    |                  |       |
| The highest pressure in the month ... ..   | 30.127    | 23rd             | 10h.  |
| The lowest pressure in the month ... ..  | 29.812    | 1st              | 16h.  |
| The range of pressure ... ..   | 0.315     |                  |       |
|  | Hours.    |                  |       |
| The total number of hours of bright sunshine during the month  | 256.5     |                  |       |
| The maximum possible number of hours of sunshine ...   | 330.8     |                  |       |
|  | °         |                  |       |
| The mean temperature of the month ... ..   | 72.2      |                  |       |
| The average temperature of November from 24 years' registers   | 74.8      |                  |       |
| The highest temperature in the month ... ..  | 85.0      | 10th             |       |
| The lowest temperature in the month ... ..   | 59.8      | 25th             |       |
| The range of temperature during the month ... ..   | 25.2      |                  |       |
| The mean daily range of temperature ... ..   | 16.4      |                  |       |
| The greatest range of temperature in one day ... ..  | 21.1      | 29th             |       |
|  | Per cent. |                  |       |
| The mean humidity of the month ... ..  | 74        |                  |       |
| The average humidity of November from 24 years' registers ...  | 72        |                  |       |
|  | Inches.   |                  |       |
| The mean vapour tension of the month ... ..  | 0.581     |                  |       |
| The average vapour tension of November from 9 years' registers   | 0.616     |                  |       |
| The mean cloud proportion of the month ... ..  | 2.40      |                  |       |
| The average cloud proportion of November from 10 years' registers ... ..   | 2.51      |                  |       |
|  | Inches.   |                  |       |
| The total rainfall of the month ... ..   | 0.24      |                  |       |
| The total rainfall indicated by a Beckley's self-registering rain-gauge (mouth of the gauge about 52 feet above the ground)    | 0.25      |                  |       |
| The average fall of November from 48 years' registers ...  | 0.65      |                  |       |
| The greatest fall in 24 hours ... ..   | 0.24      |                  |       |
|  | Days.     |                  |       |
| The number of rainy days in the month ... ..   | 1         |                  |       |
| The average number of rainy days in November from 24 years' registers ... ..   | 2         |                  |       |
|  | °         |                  |       |
| The mean maximum equilibrium temperature of solar radiation during the month ... ..  | 132.1     |                  |       |
| The mean difference of sun and air temperatures ... ..   | 51.0      |                  |       |
| The greatest sun temperature ... ..  | 142.0     | 18th             |       |
| The greatest excess of sun over air temperature ... ..   | 59.0      | '8th             |       |
| The mean temperature of the nocturnal radiation thermometer on woollen cloth, ... ..   | 56.9      |                  |       |
| The mean depression of the nocturnal radiation thermometer below the minimum air temperature at 4 feet above the ground ... .. | 7.8       |                  |       |
| The greatest depression of the nocturnal radiation thermometer below the minimum air temperature ... ..                        | 10.9      | 26th             |       |
|  | Miles.    |                  |       |
| The mean movement of the wind per day ... ..   | 7.1       |                  |       |
| The greatest movement of the wind in one day ... ..  | 134.0     | 2nd              |       |
| The greatest movement of the wind in one hour ... ..   | 13.0      | 1st, 2 to 3 P.M. |       |

The number of hours with winds from each of the 8 points—

N. 284, NE. 61, E. 24, SE. 16, S. 0, SW. 9, W. 48, NW. 193, Calm 85.

\* The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park-street Observatory). The barometer is about 3 feet higher at Alipore, and, other things being equal, reads therefore .003 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently about 1.6° lower; and, finally, the thermometer which furnished the record of temperature at the Surveyor-General's Office during 20 years and upwards is found to read 0.6 higher than the Kew standard thermometer, which is the standard of reference at the present Observatory.

A. PEDLER,

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 5th December 1887.

*for Offg. Meteorological Reporter to the Govt. of India.*

# SUPPLEMENT TO THE CALCUTTA GAZETTE, DECEMBER 7, 1887.

Results of the Meteorological Observations taken at the Alipore Observatory from  
27th November to 3rd December 1887.

| Month. | Date. | Maximum in sun. | Number of hours of bright sunshine. | Mean pressure barometer at 55° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY.    |                 |            |           | WIND.                 |    | Miles recorded. | Rain. | WEATHER.          |
|--------|-------|-----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|-----------------------|----|-----------------|-------|-------------------|
|        |       |                 |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Mean wet bulb. | Vapour tension. | Dew point. | Humidity. | Prevailing direction. |    |                 |       |                   |
| 1887.  |       | O               |                                     | Inches.                              | O            | O        | O      | O        | O              | Inches.         | O          | %         |                       |    | Inches.         |       |                   |
| Nov.   | 27th  | 131.5           | 7.9                                 | 29.995                               | 70.4         | 80.7     | 18.4   | 62.3     | 63.8           | 0.507           | 59.4       | 68        | WNW, NNW and N        | 95 | Nil             |       | Chiefly clear, p. |
| "      | 28th  | 129.5           | 8.3                                 | .083                                 | 70.5         | 79.7     | 15.6   | 64.1     | 64.6           | .533            | 60.8       | 73        | N and calm            | 42 | "               |       | Chiefly clear, p. |
| "      | 29th  | 130.3           | 9.6                                 | 30.010                               | 70.1         | 81.5     | 21.1   | 60.4     | 63.8           | .513            | 59.7       | 71        | NNW and N by E        | 56 | "               |       | Clear, p.         |
| "      | 30th  | 131.2           | 9.3                                 | .028                                 | 70.7         | 79.5     | 17.1   | 62.4     | 63.2           | .477            | 57.0       | 65        | NNE and N by E        | 86 | "               |       | Clear, p.         |
| Dec.   | 1st   | 130.6           | 9.5                                 | .012                                 | 69.3         | 78.8     | 17.2   | 61.6     | 62.1           | .465            | 56.9       | 66        | N and NNE             | 95 | "               |       | Clear, p.         |
| "      | 2nd   | 131.3           | 9.8                                 | 29.993                               | 68.2         | 78.6     | 18.3   | 60.3     | 61.3           | .454            | 56.2       | 67        | NNE and N             | 97 | "               |       | Clear, p.         |
| "      | 3rd   | 132.5           | 9.6                                 | 30.019                               | 67.0         | 78.7     | 19.1   | 59.6     | 60.8           | .454            | 56.2       | 69        | NNE and NNW           | 66 | "               |       | Clear, p.         |

The mean pressure of the seven days ...

The average pressure of the corresponding period for 24 years, S. G.'s Office ...

The total number of hours of bright sunshine ...

The maximum possible number of hours of sunshine ...

The mean temperature of the seven days ...

The average temperature of the corresponding period for 24 years, S. G.'s Office ...

The extreme variation of temperature ...

The maximum temperature ...

The highest velocity of the wind in one hour ...

The highest pressure of wind on one square foot ...

The mean relative humidity ...

The average relative humidity of the corresponding period for 24 years, S. G.'s Office ...

The total fall of rain from 27th November to 3rd December 1887 ...

The average fall of the corresponding period for 24 years, S. G.'s Office ...

The total fall from 1st January to 3rd December 1887 ...

The average fall of the corresponding period for 24 years, S. G.'s Office ...

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The month of the rain-gauge is one foot above the ground.

— fog, — due

A. PEDLER,

For Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;

Calcutta, the 5th December 1887.

**Abstract of the results of the Thermometric Observations taken at the Meteorological Office, Chowringhee, in the month of November 1887.**

|   |     |     |      |         |       |
|---|-----|-----|------|---------|-------|
| The mean temperature during the month                         | ... | ... | 73.4 | °       | Date. |
| The highest temperature during the month                      | ... | ... | 88.0 |         | 10th  |
| The lowest temperature during the month                       | ... | ... | 58.7 |         | 25th  |
| The range of temperature during the month                     | ... | ... | 29.3 |         |       |
| The mean daily range of temperature during the month          | ... | ... | 19.1 |         |       |
| The greatest range of temperature in one day during the month | ... | ... | 24.0 |         | 29th  |
| The mean humidity during the month                            | ... | ... | 71   | %       |       |
| The mean vapour tension during the month                      | ... | ... | 5.89 | Inches. |       |
| The total rainfall of the month                               | ... | ... | 0.05 |         |       |
| The greatest fall in 24 hours                                 | ... | ... | 0.03 |         | 3rd   |
| The number of rainy days in the month                         | ... | ... | 2    |         |       |

A. PEDLER,

*For Offg. Meteorological Reporter to the Govt. of India.*

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 5th December 1887.

**Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 27th November to 3rd December 1887.**

| MONTH.   | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|----------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|          |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.    |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| November | 27th  | 71.4         | 81.9     | 22.0   | 59.9     | 64.2           | 5.05            | 59.2       | 65        | NIL     |
| "        | 28th  | 71.5         | 81.9     | 20.0   | 61.9     | 65.3           | 5.42            | 61.2       | 70        | "       |
| "        | 29th  | 71.7         | 83.9     | 24.0   | 59.9     | 65.9           | 5.59            | 62.1       | 72        | "       |
| "        | 30th  | 71.8         | 80.9     | 18.5   | 62.4     | 63.6           | 4.83            | 58.0       | 62        | "       |
| December | 1st   | 70.4         | 80.9     | 20.2   | 60.7     | 63.1           | 4.82            | 57.9       | 65        | "       |
| "        | 2nd   | 69.1         | 80.4     | 22.3   | 58.1     | 61.8           | 4.56            | 56.4       | 64        | "       |
| "        | 3rd   | 68.5         | 81.      | 24.3   | 56.9     | 62.1           | 4.73            | 57.4       | 67        | "       |

|  |     |     |     |      |         |
|--|-----|-----|-----|------|---------|
| The mean temperature of the seven days                         | ... | ... | ... | 70.6 | °       |
| The extreme variation of temperature                           | ... | ... | ... | 27.0 | °       |
| The maximum temperature  | ... | ... | ... | 83.9 | °       |
| The mean relative humidity                                     | ... | ... | ... | 66   | %       |
| The total fall of rain from 27th November to 3rd December 1887 | ... | ... | ... | Nil  | Inches. |

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, and minimum readings a correction dependent on the range, and derived from the hourly observations at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,  
The 5th December 1887.

A. PEDLER,  
*For Offg. Meteorological Reporter to the Govt. of India.*

**PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.**  
**SOUTH-WESTERN CIRCLE.**

NUDDA RIVERS.

*Statement showing Quantities of Goods carried during the month of September 1887.*

| Number of boats or rafts. | DESCRIPTION.                                  | TOTAL GOVERNMENT AND PRIVATE. |                           |                           |  | PRIVATE.                  |               | REMARKS. |
|---------------------------|---|-------------------------------|---------------------------|---------------------------|--|---------------------------|---------------|----------|
|                           |   | Quantity—Tons.                |                           |                           | Value.   | Quantity.                 | Value.        |          |
|                           |   | Up.                           | Down.                     | Total.                    | Rupess.  | Tons.                     | Rupess.       |          |
| 706                       | 1. Grain ...                                  | 407                           | 12,688                    | 13,095                    | 7,49,374   | 13,095                    | 7,49,374      |          |
| .....                     | 2. Cotton ...                                 | .....                         | .....                     | .....                     | .....  | .....                     | .....         |          |
| 349                       | 3. Oilseeds ...                               | 90                            | 7,380                     | 7,470                     | 6,76,946   | 7,470                     | 6,76,946      |          |
| 397                       | 4. Salt ...                                   | 4,512                         | 342                       | 4,854                     | 4,01,620   | 4,854                     | 4,01,620      |          |
| 13                        | 5. Piece-goods ...                            | 10                            | 7                         | 17                        | 10,675   | 17                        | 10,675        |          |
| 66                        | 6. Metal ...                                  | 386                           | 26                        | 412                       | 94,225   | 412                       | 94,225        |          |
| 43                        | 7. Building materials ...                     | 103                           | 156                       | 259                       | 6,376  | 259                       | 6,376         |          |
| 2,129                     | 8. Miscellaneous ...                          | 5,548                         | 33,532                    | 39,080                    | 34,10,432  | 39,080                    | 34,10,432     |          |
| 125                       | 9. Fuel ...                                   | 2,145                         | 120                       | 2,265                     | 23,453   | 2,265                     | 23,453        |          |
| 1 raft                    | 10. Timber ...                                | 220 c. ft.                    | 140 c. ft.                | 360 c. ft.                | 660  | 360 c. ft.                | 660           |          |
| 15 „                      | 11. Bamboos ...                               | .....                         | 9,000 „                   | 9,000 „                   | 900  | 9,000 „                   | 900           |          |
| 3,828 & 16 rafts.         | 12. Total ...                                 | { 13,201 & 220 c. ft. }       | { 54,251 & 9,140 c. ft. } | { 67,452 & 9,360 c. ft. } | { 53,74,661 }  | { 67,452 & 9,360 c. ft. } | { 53,74,661 } |          |
| 4,647 & 2 rafts.          | 13. Total of same month last year             | { 13,899 & 29 c. ft. }        | { 50,031 }                | { 63,930 & 29 c. ft. }    | { 69,21,823 }  | { 63,930 & 29 c. ft. }    | { 69,21,823 } |          |
|                           |   | Up.                           | Down.                     | Total.                    |  |                           | Rs. A. P.     |          |
| 14.                       | Total number of boats plying cargo No.        | 1,256                         | 2,572                     | 3,828                     | Total tollage of month—24 + 25 + 26 ...              |                           | 81,713 15 10  |          |
| 14a.                      | Ditto empty steamers and boats, &c. ...       | 1,220                         | 190                       | 1,410                     |  |                           |               |          |
| 15.                       | Total number of boats plying passenger No.    | 1,187                         | 1,347                     | 2,534                     | Total tollage of same month last year ...            |                           | 34,926 1 10   |          |
| 16.                       | Total registered tonnage, cargo Tons          | 27,342                        | 98,122                    | 1,25,464                  | Memorandum of Tollage.                               |                           |               |          |
| 17.                       | Total registered tonnage, passenger Tons      | 1,529                         | 1,729                     | 3,258                     |  |                           |               |          |
| 18.                       | Ton-mileage ...                               | .....                         | .....                     | .....                     |  |                           | Rs. A. P.     |          |
| 19.                       | Estimated value of cargo Ra.                  | 18,60,721                     | 35,72,380                 | 53,73,101                 | 1. Balance not recovered on the 1st of the month ... |                           | +6,481 12 3   |          |
| 20.                       | Number of passengers ...                      | 1,610                         | 1,316                     | 2,926                     | 2. Tollage per month ...                             |                           | 31,713 15 10  |          |
| 21.                       | Rafts, bamboos c. ft.                         | .....                         | 9,000                     | 9,000                     | 3. Total ...   |                           | 38,195 12 3   |          |
| 22.                       | Do., bullahs „                                | 220                           | 140                       | 360                       | 4. Amount paid into treasury during the month ...    |                           | 22,555 6 1    |          |
| 23.                       | Estimated value of rafts Ra.                  | 330                           | 1,230                     | 1,560                     | 5. Balance due at the end of the month ...           |                           | 15,640 5 1    |          |
| 24.                       | Tollage on boats Ra.                          | 9,727-8-3                     | 21,969-9-7                | 31,697-1-10               |  |                           |               |          |
| 25.                       | Compounded tollage on boats Ra.               | .....                         | .....                     | .....                     |  |                           |               |          |
| 26.                       | Tollage on rafts „                            | 1-8-0                         | 15-6-0                    | 16-14-0                   |  |                           |               |          |
| 27.*                      | Total tollage on boats per ton-mile ...       | .....                         | .....                     | .....                     |  |                           |               |          |
| 28.                       | Total tollage on rafts per 100 cubic feet ... | .....                         | .....                     | 0-2-11                    |  |                           |               |          |

\* Boats in these rivers do not pay per mile.  
† This is the correct amount.

*Abstract for the month of September 1887, as compared with the corresponding month of the previous year.*

|             | 1887-88.          |                      | 1886-87.          |                      |
|-------------|-------------------|----------------------|-------------------|----------------------|
|             | During the month. | To end of the month. | During the month. | To end of the month. |
|             | Rs. A. P.         | Rs. A. P.            | Rs. A. P.         | Rs. A. P.            |
| Tollage ... | 81,713 15 10      | 1,24,384 14 9        | 34,926 1 10       | 1,21,075 5 1         |

CALCUTTA,  
The 6th December 1887.

A. D. McARTHUR, Major, R.E.,  
Under-Secy. to the Govt of Bengal.

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL

## SOUTH-WESTERN CIRCLE.

## NUDDRA RIVERS.

Statement showing quantities of Goods carried during the month of October 1887.

| Number of boats or rafts.                  | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE.      |  |  |  | PRIVATE.                               |              | REMARKS. |
|--|-----------------------------------|------------------------------------|--|--|--|--|--------------|----------|
|  |                                   | Quantity—Tons.                     |  |  | Value.   | Quantity.                              | Value.       |          |
|  |                                   | Up.                                | Down.                                  | Total.                                 | Rupees.  | Tons.                                  | Rupees.      |          |
| 532  | 1. Grain ...                      | 212                                | 6,769                                  | 6,981                                  | 3,29,794   | 6,981                                  | 3,29,794     |          |
| .....                                      | 2. Cotton ...                     | .....                              | .....                                  | .....                                  | .....  | .....                                  | .....        |          |
| 183  | 3. Oilseeds ...                   | 37                                 | 3,306                                  | 3,343                                  | 3,20,593   | 3,343                                  | 3,20,593     |          |
| 256  | 4. Salt ...                       | 2,375                              | 37                                     | 2,412                                  | 2,02,698   | 2,412                                  | 2,02,698     |          |
| 1  | 5. Piece-goods ...                | $\frac{1}{4}$                      | $\frac{1}{4}$                          | $\frac{1}{2}$                          | 2,050  | $\frac{1}{2}$                          | 2,050        |          |
| 56   | 6. Metal ...                      | 267                                | 8                                      | 275                                    | 50,396   | 275                                    | 50,396       |          |
| 67   | 7. Building materials             | 99                                 | 228                                    | 327                                    | 7,390  | 327                                    | 7,390        |          |
| 1 588                                      | 8. Miscellaneous ...              | 3,018                              | 32,721                                 | 35,739                                 | 38,48,216  | 35,739                                 | 38,48,216    |          |
| 148  | 9. Fuel ...                       | 1,879                              | 173                                    | 2,052                                  | 20,486   | 2,052                                  | 20,486       |          |
| 3 rafts                                    | 10. Timber ...                    | 391 c. ft.                         | 2,419 c. ft.                           | 2,810 c. ft.                           | 1,135  | 2,810 c. ft.                           | 1,135        |          |
| 46 "                                       | 11. Bamboos ...                   | .....                              | 35,067 "                               | 35,067 "                               | 3,487  | 35,067 "                               | 3,487        |          |
| 2,831 & 49 rafts                           | 12. Total ...                     | { 7,887 $\frac{1}{4}$ & 391 c. ft. | { 43,242 $\frac{1}{4}$ & 37,486 c. ft. | { 51,129 $\frac{1}{2}$ & 37,877 c. ft. | { 47,86,245  | { 51,129 $\frac{1}{2}$ & 37,877 c. ft. | { 47,86,245  |          |
| 3,220 & 52 rafts                           | 13. Total of same month last year | { 9,475 & 53 c. ft.                | { 36,045 & 35,991 c. ft.               | { 45,520 & 36,044 c. ft.               | { 55,82,430  | { 45,520 & 36,044 c. ft.               | { 55,82,430  |          |
|  |                                   | Up.                                | Down.                                  | Total.                                 |  |  | Rs. A. P.    |          |
| 14. Total number of boats plying cargo     | No.                               | 890                                | 1,941                                  | 2,831                                  | Total tollage of month—24+25+26 ...                  |  | 20,502 13 6  |          |
| 14A. Ditto empty boats, steamers, &c.      | ...                               | 1,194                              | 82                                     | 1,276                                  | Total tollage of same month last year ...            |  | 26,337 15 11 |          |
| 15. Total number of boats plying passenger | No.                               | 689                                | 1,589                                  | 2,278                                  | Memorandum of Tollage.                               |  |              |          |
| 16. Total registered tonnage, cargo        | Tons                              | 18,802                             | 53,332                                 | 72,134                                 |  |  |              |          |
| 17. Total registered tonnage, passenger    | Tons                              | 548                                | 1,238                                  | 1,786                                  |  |  |              |          |
| 18. Ton mileage                            | ...                               | ...                                | .....                                  | .....                                  |  |  |              |          |
| 19. Estimated value of cargo               | Rs.                               | 9,53,153                           | 38,28,470                              | 47,81,623                              |  |  |              |          |
| 20. Number of passengers                   | ...                               | 3,435                              | 5,620                                  | 9,060                                  |  |  |              |          |
| 21. Rafts, bamboos                         | c. ft.                            | .....                              | 35,067                                 | 35,067                                 | 1. Balance not recovered on the 1st of the month ... |  | 15,640 5 8   |          |
| 22. Do., bullahs                           | "                                 | 391                                | 2,419                                  | 2,810                                  | 2. Tollage per month ...                             |  | 20,502 13 6  |          |
| 23. Estimated value of rafts               | Rs.                               | 315                                | 4,307                                  | 4,622                                  | 3. Total ...   |  | 36,143 3 2   |          |
| 24. Tollage on boats                       | Rs.                               | 7,703-10-1                         | 12,740-0-11                            | 20,443-11-0                            | 4. Amount paid into Treasury during the month ...    |  | 35,270 8 0   |          |
| 25. Compounded tollage on boats            | Rs.                               | .....                              | .....                                  | .....                                  | 5. Balance due at the end of the month ...           |  | 872 11 2     |          |
| 26. Tollage on rafts                       | "                                 | 4-2-0                              | 55-0-6                                 | 59-2-6                                 |  |  |              |          |
| 27. Total tollage on boats per ton-mile    | ...                               | .....                              | .....                                  | .....                                  |  |  |              |          |
| 28. Ditto on rafts per 100 cubic feet      | ...                               | .....                              | .....                                  | 0-2-6                                  |  |  |              |          |

\* Boats in these rivers do not pay per mile.

Abstract for the month of October 1887, as compared with the corresponding month of the previous year.

|             | 1887-88.          |                      | 1886-87.          |                      |
|-------------|-------------------|----------------------|-------------------|----------------------|
|             | During the month. | To end of the month. | During the month. | To end of the month. |
|             | Rs. A. P.         | Rs. A. P.            | Rs. A. P.         | Rs. A. P.            |
| Tollage ... | 20,502 13 6       | 1,14,887 12 3        | 26,337 15 11      | 1,47,413 5 0         |

CALCUTTA,  
The 6th December 1887.A. D. McARTHUR, Major, R.E.,  
Under-Secy. to the Govt. of Bengal.

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

## CALCUTTA AND EASTERN CANALS.

Statement showing Quantities of Goods carried during the month of October 1887.

| Number of boats or rafts.                     | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |           |                      | PRIVATE.   |                      | REMARKS.             |
|---|-----------------------------------|-------------------------------|-----------|----------------------|--|----------------------|----------------------|
|   |                                   | Quantity—Tons.                |           |                      | Value.   | Quantity.            |                      |
|   |                                   | Up.                           | Down.     | Total.               | Rupees.  | Tons.                |                      |
| 902   | 1. Grain ...                      | 10,875                        | .....     | 10,875               | 8,96,465   | 10,875               | 8,96,465             |
| 5   | 2. Cotton ...                     | 7                             | 3         | 10                   | 6,000  | 10                   | 6,000                |
| 24  | 3. Oilseeds ...                   | 494                           | 7         | 501                  | 59,062   | 501                  | 59,062               |
| 376   | 4. Salt ...                       | 472                           | 5,740     | 6,212                | 5,81,802   | 6,212                | 5,81,802             |
| .....   | 5. Piece-goods ...                | .....                         | .....     | .....                | .....  | .....                | .....                |
| 5   | 6. Metal ...                      | 7                             | 64        | 71                   | 10,850   | 71                   | 10,850               |
| 111   | 7. Building materials ...         | 3,772                         | 80        | 3,852                | 60,505   | 3,852                | 60,505               |
| 2,797   | 8. Miscellaneous* ...             | 27,928                        | 500       | 28,428               | 31,81,160  | 28,428               | 31,81,160            |
| 714   | 9. Fuel ...                       | 11,030                        | 4,138     | 15,168               | 1,15,964   | 15,168               | 1,15,964             |
| .....   | 10. Timber ...                    | .....                         | .....     | .....                | .....  | .....                | .....                |
| 2 rafts                                       | 11. Bamboos ...                   | 520 No.                       | .....     | 520 No.              | 65   | 520 No.              | 65                   |
| 4,934 & 2 rafts.                              | 12. Total ...                     | { 54,585 & 520 No. }          | 10,532    | { 65,117 & 520 No. } | 49,11,873  | { 65,117 & 520 No. } | 49,11,873            |
| 3,710 & 13 rafts                              | 13. Total of same month last year | { 40,279 & 234 No. }          | 8,094     | { 48,373 & 234 No. } | 29,01,727  | { 48,373 & 234 No. } | 29,01,727            |
|   |                                   | Up.                           | Down.     | Total.               |  |                      |                      |
| 14. Total number of boats plying cargo        | No.                               | 4,380                         | 554       | 4,934                | Total tollage of month—<br>24+25+26 ...              |                      | Rs. A. 1<br>38,532 9 |
| 14a. Ditto empty                              | "                                 | 2,106                         | 948       | 3,054                |  |                      |                      |
| 15. Total number of boats plying passenger    | No.                               | 176                           | 4         | 180                  | Total tollage of same month last year ...            |                      | 28,742 13            |
| 16. Total registered tonnage, cargo           | Tons                              | 1,66,614                      | 2,879     | 1,69,493             | Memorandum of Tollage.                               |                      |                      |
| 17. Total registered tonnage, passenger       | Tons                              | 594                           | 17        | 611                  |  |                      |                      |
| 18. Ton-mileage                               | ...                               | .....                         | .....     | .....                |  |                      | Rs. A. 1             |
| 19. Estimated value of cargo                  | Rs.                               | 43,42,274                     | 5,69,534  | 49,11,808            | 1. Balance not recovered on the 1st of the month ... |                      | 997 1                |
| 20. Number of passengers                      | No.                               | 801                           | 29        | 830                  | 2. Tollage per month ...                             |                      | 38,532 9             |
| 21. Rafts, bamboos                            | C. ft.                            | 520                           | .....     | 520                  |  |                      |                      |
| 22. Do., bullahs                              | "                                 | .....                         | .....     | .....                |  |                      |                      |
| 23. Estimated value of rafts                  | Rs.                               | 65                            | .....     | 65                   | 3. Total ...   |                      | 39,529 11            |
| 24. Tollage on boats                          | "                                 | 31,490-15-9                   | 7,040-2-0 | 38,531-1-9           |  |                      |                      |
| 25. Compounded tollage on boats               | Rs.                               | .....                         | .....     | .....                | 4. Amount paid into treasury during the month ...    |                      | 38,236 9             |
| 26. Tollage on rafts                          | "                                 | 1-8-0                         | .....     | 1-8-0                |  |                      |                      |
| 27. Total tollage on boats per ton-mile*      | ...                               | .....                         | .....     | .....                |  |                      |                      |
| 28. Total tollage on rafts per 100 cubic feet | ...                               | .....                         | .....     | 0-4-7                | 5. Balance due at the end of the month ...           |                      | 1,293 1              |

Boats in these canals do not pay per mile.

ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).  
CALCUTTA AND EASTERN CANALS.

| Number of<br>ats or rats. | DESCRIPTION.                     | TOTAL GOVERNMENT AND PRIVATE. |       |        |           | PRIVATE.  |           | REMARKS. |
|---------------------------|----------------------------------|-------------------------------|-------|--------|-----------|-----------|-----------|----------|
|                           |                                  | Quantity—Tons.                |       |        | Value.    | Quantity. | Value.    |          |
|                           |                                  | Up.                           | Down. | Total. | Rupees.   | Tons.     | Rupees.   |          |
| 1,093                     | (a) Jute ...                     | 21,510                        | ..... | 21,510 | 23,33,874 | 21,510    | 23,33,874 |          |
| 37                        | (b) Jaggery ...                  | 280                           | 12    | 292    | 32,752    | 292       | 32,752    |          |
| 17                        | (c) Sugar ...                    | 127                           | ..... | 127    | 24,850    | 127       | 24,850    |          |
| 5                         | (d) Tobacco ...                  | 24                            | 12    | 36     | 6,000     | 36        | 6,000     |          |
| 546                       | (e) Fish . . ...                 | 76                            | ..... | 76     | 21,241    | 76        | 21,241    | -        |
| 6                         | (f) Hides ...                    | 16                            | ..... | 16     | 3,580     | 16        | 3,580     |          |
| 70                        | (g) Poultry ...                  | 17                            | ..... | 17     | 14,008    | 17        | 14,008    |          |
| 51                        | (h) Hay and straw ...            | 236                           | ..... | 236    | 6,162     | 236       | 6,162     |          |
| 34                        | (j) Oils ...                     | 5                             | 335   | 340    | 47,700    | 340       | 47,700    |          |
| 44                        | (k) Earthenware ...              | 97                            | 7     | 104    | 1,461     | 104       | 1,464     |          |
| 894                       | (m) Other miscella-<br>neous ... | 5,540                         | 134   | 5,674  | 6,89,529  | 5,674     | 6,89,529  |          |
| 2,797                     | Total Miscellaneous...           | 27,928                        | 500   | 28,428 | 31,81,160 | 28,428    | 31,81,160 |          |

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

## SOUTH-WESTERN CIRCLE.

## TOLLY'S NULLAH.

Statement showing quantities of Goods carried during the month of October 1887.

| Number of boats or rafts.                          | DESCRIPTION.                          | TOTAL GOVERNMENT AND PRIVATE. |              |                    |   | PRIVATE.           |           |
|--|---------------------------------------|-------------------------------|--------------|--------------------|---|--------------------|-----------|
|  |                                       | Quantity—Tons.                |              |                    | Value.  | Quantity.          | Value.    |
|  |                                       | Up.                           | Down.        | Total.             | Rupces.   | Tons.              | Rupces.   |
| 3,407  | 1. Grain ...                          | 9,662                         | 2            | 9,664              | 6,95,166  | 9,664              | 6,95,166  |
| 7  | 2. Cotton ...                         | 32                            | .....        | 32                 | 17,900  | 32                 | 17,900    |
| 6  | 3. Oilseeds ...                       | 100                           | .....        | 100                | 12,600  | 100                | 12,600    |
| 102  | 4. Salt ...                           | 436                           | 320          | 756                | 63,525  | 756                | 63,525    |
| .....  | 5. Piece-goods ...                    | .....                         | .....        | .....              | .....   | .....              | .....     |
| .....  | 6. Metal ...                          | .....                         | .....        | .....              | .....   | .....              | .....     |
| 350  | 7. Building materials ...             | 3,121                         | 17           | 3,138              | 14,809  | 3,138              | 14,809    |
| 1,503  | 8. Miscellaneous* ...                 | 5,507                         | 83           | 5,590              | 5,64,506  | 5,590              | 5,64,506  |
| 250  | 9. Fuel ...                           | 2,599                         | 32           | 2,631              | 20,379  | 2,631              | 20,379    |
| 2 rafts  | 10. Timber ...                        | .....                         | 4 No.        | 4 No.              | 160   | 4 No.              | 160       |
| 1 raft   | 11. Bamboos ...                       | 50 No.                        | .....        | 50 "               | 6   | 50 "               | 6         |
| 5,625 & 3 rafts                                    | 12. Total ...                         | 21,457 & 50 No.               | 454 & 4 No.  | 21,911 & 54 No. }  | 13,89,051   | 21,911 & 54 No. }  | 13,89,051 |
| 3,955 & 4 rafts                                    | 13. Total of same month last year ... | 13,526 & 154 No.              | 664 & 30 No. | 14,190 & 184 No. } | 7,26,539  | 14,190 & 184 No. } | 7,26,539  |
|  |                                       | Up.                           | Down.        | Total.             |   |                    |           |
| 14. Total number of boats plying cargo ... No.     |                                       | 5,550                         | 75           | 5,625              | Total tollage of month—<br>24 + 25 + 26 ... Rs. A. 11,842 15. |                    |           |
| 14a. Ditto empty ... "                             |                                       | 1,098                         | 547          | 1,645              |   |                    |           |
| 15. Total number of boats plying passenger ... No. |                                       | 597                           | 15           | 612                | Total tollage of same month last year ... Rs. A. 7,526 4      |                    |           |
| 16. Total registered tonnage, cargo ... Tons       |                                       | 98,465                        | 1,976        | 1,00,441           | Memorandum of Tollage.  |                    |           |
| 17. Total registered tonnage, passenger ... Tons   |                                       | 1,551                         | 42           | 1,593              |   |                    |           |
| 18. Ton-mileage ...                                |                                       | .....                         | .....        | .....              | Rs. A.  |                    |           |
| 19. Estimated value of cargo Rs.                   |                                       | 13,53,182                     | 35,703       | 13,88,885          | 1. Balance not recovered on the 1st of the month ... 402 15   |                    |           |
| 20. Number of passengers No.                       |                                       | 6,483                         | 69           | 6,552              | 2. Tollage per month ... 11,842 15                            |                    |           |
| 21. Rafts, bamboos C. ft.                          |                                       | 50                            | .....        | 50                 |   |                    |           |
| 22. Do., timber ...                                |                                       | .....                         | 80           | 80                 |   |                    |           |
| 23. Estimated value of rafts Rs.                   |                                       | 6                             | 160          | 166                | 3. Total ... 12,245 14  |                    |           |
| 24. Tollage on boats                               |                                       | 10,886-0-3                    | 955-3-0      | 11,841-3-3         |   |                    |           |
| 25. Compounded tollage on boats ... Rs.            |                                       | .....                         | .....        | .....              |   |                    |           |
| 26. Tollage on rafts                               |                                       | 0-4-0                         | 1-8-0        | 1-12-0             | 4. Amount paid into treasury during the month ... 11,740 2    |                    |           |
| 27. Total tollage on boats per ton-mile* ...       |                                       | .....                         | .....        | .....              |   |                    |           |
| 28. Ditto on rafts per 100 cubic feet ...          |                                       | .....                         | .....        | 1-5-6              | 5. Balance due at the end of the month ... 505 12             |                    |           |

\* Boats in this canal do not pay per mile.

\* For detail see next page.



## ARTICLES OF TRAFFIC INCLUDED IN ITEM \* 8 (MISCELLANEOUS).

## TOLLY'S NULLAH.

| Number of<br>boats or<br>rafts. | DESCRIPTION.                     | TOTAL GOVERNMENT AND PRIVATE. |       |        |          | PRIVATE.  |          |
|---------------------------------|----------------------------------|-------------------------------|-------|--------|----------|-----------|----------|
|                                 |                                  | Quantity—Tons.                |       |        | Value.   | Quantity. | Value    |
|                                 |                                  | Up.                           | Down. | Total. | Rupees.  | Tons.     | Rupees.  |
| 37.                             | (a) Jute ...                     | 237                           | 2     | 239    | 25,962   | 239       | 25,962   |
| 69                              | (b) Jaggery ..                   | 259                           | ..... | 259    | 29,680   | 259       | 29,680   |
| .....                           | (c) Sugar . ...                  | .....                         | ..... | .....  | .....    | .....     | .....    |
| 20                              | (d) Tobacco ...                  | 129                           | 21    | 150    | 25,236   | 150       | 25,236   |
| 96                              | (e) Fish ...                     | 6                             | ..... | 6      | 1,819    | 6         | 1,819    |
| .....                           | (f) Hides ...                    | .....                         | ..... | .. ..  | .....    | .....     | .....    |
| 15                              | (g) Poultry ...                  | 2                             | ..... | 2      | 1,206    | 2         | 1,206    |
| 668                             | (h) Hay and straw...             | 1,395                         | ..... | 1,395  | 29,286   | 1,395     | 29,286   |
| 40                              | (j) Oils ...                     | 380                           | 3     | 383    | 53,625   | 383       | 53,625   |
| 144                             | (k) Earthenware ...              | 44                            | 5     | 49     | 2,271    | 49        | 2,271    |
| 414                             | (m) Other miscellane-<br>ous ... | 3,055                         | 52    | 3,107  | 3,95,421 | 3,107     | 3,95,421 |
| 1,503                           | Total Miscellaneous...           | 5,507                         | 83    | 5,590  | 5,64,506 | 5,590     | 5,64,506 |

ABSTRACT FOR THE MONTH OF OCTOBER 1887, AS COMPARED WITH THE  
CORRESPONDING MONTH OF THE PREVIOUS YEAR.

|                                 | TRAFFIC, 1887-88. |    |    |                      |    |    | TRAFFIC, 1886-87. |    |    |                      |    |    |
|---------------------------------|-------------------|----|----|----------------------|----|----|-------------------|----|----|----------------------|----|----|
|                                 | During the month. |    |    | To end of the month. |    |    | During the month. |    |    | To end of the month. |    |    |
|                                 | Rs.               | A. | P. | Rs.                  | A. | P. | Rs.               | A. | P. | Rs.                  | A. | P. |
| Calcutta and Eastern Canals ... | 38,532            | 9  | 9  | 1,72,804             | 3  | 3  | 28,742            | 13 | 6  | 1,49,279             | 10 | 9  |
| Tolly's Nullah ...              | 11,842            | 15 | 3  | 64,336               | 10 | 3  | 7,526             | 4  | 0  | 48,085               | 2  | 9  |
| Total                           | 50,375            | 9  | 0  | 2,37,140             | 13 | 6  | 36,269            | 1  | 6  | 1,97,314             | 13 | 6  |

CALCUTTA,  
The 6th December 1887. }

A. D. MCARTHUR, Major, R.E.,  
Under-Secretary to the Government of Bengal.

## PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

ORISSA COAST CANAL SYSTEM.

LENGTH OF CANAL OPEN, 97½ MILES.

Statement showing Quantities of Goods carried during the month of October 1887.

| Number of boats or rafts.                          | DESCRIPTION.                      | TOTAL GOVERNMENT AND PRIVATE. |                 |                      |  | PRIVATE.             |            | REMARKS. |
|--|-----------------------------------|-------------------------------|-----------------|----------------------|--|----------------------|------------|----------|
|  |                                   | Quantity—Tons.                |                 |                      | Value.   | Quantity.            | Value.     |          |
|  |                                   | Up.                           | Down.           | Total.               | Rupees.  | Tons.                | Rupees.    |          |
| 207  | 1. Grain ...                      | 1,797                         | 246             | 2,043                | 68,167   | 2,043                | 68,167     |          |
| 2  | 2. Cotton ...                     | .....                         | 4               | 4                    | 1,450  | 4                    | 1,450      |          |
| 4  | 3. Oilseeds ...                   | 6                             | .....           | 6                    | 426  | 6                    | 426        |          |
| 21   | 4. Salt ...                       | 71                            | 87              | 158                  | 11,835   | 158                  | 11,835     |          |
| 1  | 5. Piece-goods ...                | .....                         | 4               | 4                    | 2,000  | 4                    | 2,000      |          |
| 2  | 6. Metal ...                      | .....                         | 4               | 4                    | 900  | 4                    | 900        |          |
| 14   | 7. Building materials ...         | 22                            | 21              | 43                   | 578  | 43                   | 578        |          |
| 568  | 8. Miscellaneous ...              | 174                           | 640             | 814                  | 84,622   | 814                  | 84,622     |          |
| 8  | 9. Fuel ...                       | 5                             | 112             | 117                  | 1,698  | 113                  | 1,448      |          |
| 17 rafts   | 10. Timber ...                    | 1,540 c. ft.                  | .....           | 1,540 c. ft.         | 1,680  | 1,540 c. ft.         | 1,680      |          |
| 15 "   | 11. Bamboos ...                   | 725 "                         | .....           | 725 "                | 77   | 725 "                | 77         |          |
| 827 & 32 rafts                                     | 12. Total ...                     | 2,075 & 2,265 c. ft.          | 1,118           | 3,193 & 2,265 c. ft. | 173,433  | 3,189 & 2,265 c. ft. | 173,183    |          |
| 647 & 20 rafts                                     | 13. Total of same month last year | 925 & 726 c. ft.              | 250 & 88 c. ft. | 1,175 & 814 c. ft.   | 52,089   | 1,175 & 814 c. ft.   | 52,089     |          |
|  |                                   | Up.                           | Down.           | Total.               |  |                      | Rs. A. P.  |          |
| 14. Total number of boats plying cargo ... No.     |                                   | 437                           | 390             | 827                  | Total tollage of month—<br>24+25+26 ...            |                      | 5,537 5 9  |          |
| 15. Total number of boats plying passenger ... No. |                                   | 92                            | 101             | 193                  | Total tollage of same month last year ...          |                      | 1,430 11 3 |          |
| 16. Total registered tonnage, cargo ... Tons       |                                   | 4,794                         | 3,716           | 8,510                | Memorandum of Tollage.                             |                      |            |          |
| 17. Total registered tonnage, passenger ... Tons   |                                   | 1,919                         | 314             | 2,233                |  |                      |            |          |
| 18. Ton mileage ...                                |                                   | 167,928                       | 145,503         | 313,431              |  |                      |            |          |
| 19. Estimated value of cargo Rs.                   |                                   | 71,189                        | 1,00,487        | 1,71,676             |  |                      |            |          |
| 20. Number of passengers ...                       |                                   | 3,493                         | 3,086           | 6,579                |  |                      |            |          |
| 21. Rafts, bamboos... c. ft.                       |                                   | 725                           | .....           | 725                  |  |                      |            |          |
| 22. Do., bullahs ...                               |                                   | 1,540                         | .....           | 1,540                |  |                      |            |          |
| 23. Estimated value of rafts Rs.                   |                                   | 1,757                         | .....           | 1,757                |  |                      |            |          |
| 24. Tollage on boats "                             |                                   | 2,741-8-3                     | 2,277-5-9       | 5,018-14-0           |  |                      |            |          |
| 25. Compounded tollage on boats Rs.                |                                   | 210-1-6                       | 267-11-0        | 477-12-6             |  |                      |            |          |
| 26. Tollage on rafts "                             |                                   | 40-11-3                       | .....           | 40-11-3              |  |                      |            |          |
| 27. Total tollage on boats per ton mile ... Pie    |                                   | .....                         | .....           | 0-0-3                |  |                      |            |          |
| 28. Total tollage on rafts per 100 cubic feet Rs.  |                                   | .....                         | .....           | 1-12-9               |  |                      |            |          |
|  |                                   |                               |                 |                      | 1. Balance not covered on the 1st of the month ... |                      | 2,779 7 3  |          |
|  |                                   |                               |                 |                      | 2. Tollage per month ...                           |                      | 5,537 5 9  |          |
|  |                                   |                               |                 |                      | 3. Total ...                                       |                      | 8,316 13 0 |          |
|  |                                   |                               |                 |                      | 4. Amount paid into treasury during the month ...  |                      | 4,847 0 9  |          |
|  |                                   |                               |                 |                      | 5. Balance due at the end of the month ...         |                      | 3,469 12 3 |          |

Abstract for the month of October 1887, as compared with the corresponding month of the previous year.

|             | 1887-88.             |                      | 1886-87.             |                      |
|-------------|----------------------|----------------------|----------------------|----------------------|
|             | During the month.    |                      | During the month.    |                      |
|             | To end of the month. | To end of the month. | To end of the month. | To end of the month. |
|             | Rs. A. P.            | Rs. A. P.            | Rs. A. P.            | Rs. A. P.            |
| Tollage ... | 5,537 5 9            | 23,451 8 9           | 1,430 11 3           | 13,649 12 0          |

CALCUTTA,  
The 6th December 1887. }A. D. McARTHUR, Major, R.E.,  
Under-Secy. to the Govt. of Bengal.

## CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 3rd December 1887, as compared with the corresponding week of the previous year.*

| NATURE OF CARGO.      | WEEK ENDING SATURDAY, THE<br>3RD DECEMBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>4TH DECEMBER 1886. |                     |          |
|-----------------------|---|---------------------|----------|---|---------------------|----------|
|                       | Number of<br>boats.                             | Weight of<br>cargo. | Tollage. | Number of<br>boats.                             | Weight of<br>cargo. | Tollage. |
|                       | No.   | Mds.                | Rs.      | No.   | Mds.                | Rs.      |
| Rice and paddy ... .. | 890   | 1,09,585            | 1,820    | 453   | 56,207              | 894      |
| Jute ... ..           | 265   | 1,62,150            | 2,835    | 176   | 1,09,750            | 2,139    |
| Firewood ... ..       | 155   | 69,825              | 942      | 170   | 66,490              | 992      |
| Other articles ... .. | 1,242   | 2,79,199            | 4,817    | 987   | 2,20,995            | 3,035    |
| Total ... ..          | 2,552   | 6,20,759            | 10,414   | 1,786   | 4,53,442            | 7,060    |

## Nalhati State Railway.

*Statement showing Increases and Decreases in tonnage of Staples carried over the Nalhati State Railway during the month of October 1887, as compared with the same month of the previous year.*

| STAPLES.   | 1886.        |                | 1887.        |                | 1886.        | 1887.        | Increase.    | Decrease.      |
|--|--------------|----------------|--------------|----------------|--------------|--------------|--------------|----------------|
|  | Up.          | Down.          | Up.          | Down.          | Total.       | Total.       |              |                |
| I.—Coal ... ..                                   | Tons.<br>226 | Tons.<br>..... | Tons.<br>309 | Tons.<br>..... | Tons.<br>226 | Tons.<br>309 | Tons.<br>134 | Tons.<br>..... |
| II.—Cotton, raw ... ..                           | 3            | .....          | 5            | .....          | 3            | 5            | .....        | .....          |
| IV.—Cotton piece-goods—                          |              |                |              |                |              |              |              |                |
| 1.—European—                                     |              |                |              |                |              |              |              |                |
| a.—In bales and bundles ... ..                   | 7            | 1              | 11           | 3              | 8            | 14           | 6            | .....          |
| 2.—Indian—                                       |              |                |              |                |              |              |              |                |
| a.—In bales and bundles ... ..                   | 2            | .....          | 1            | .....          | 2            | 1            | .....        | 1              |
| X.—Jute—   |              |                |              |                |              |              |              |                |
| 1.—Raw ... ..                                    | .....        | 3              | 12           | .....          | 3            | 12           | 9            | .....          |
| 2.—Gunny-bags and cloths ... ..                  | .....        | 2              | 2            | 1              | 3            | 5            | 1            | .....          |
| VII.—Grains—                                     |              |                |              |                |              |              |              |                |
| 2.—Rice ... ..                                   | 21           | 4              | 63           | 455            | 25           | 518          | 493          | .....          |
| 4.—Gram ... ..                                   | .....        | .....          | .....        | 1              | .....        | 1            | .....        | .....          |
| 5.—Others ... ..                                 | .....        | 10             | 2            | 7              | 10           | 9            | .....        | 1              |
| VIII.—Hides and skins—                           |              |                |              |                |              |              |              |                |
| 1.—Hides of cattle—                              |              |                |              |                |              |              |              |                |
| a.—Dressed ... ..                                | 4            | 1              | .....        | .....          | 5            | .....        | .....        | 5              |
| 2.—Skins of sheep, goats and small animals—      |              |                |              |                |              |              |              |                |
| a.—Dressed ... ..                                | .....        | .....          | 1            | .....          | .....        | 1            | 1            | .....          |
| XI.—Lac—   |              |                |              |                |              |              |              |                |
| 1.—Stick ... ..                                  | .....        | 1              | .....        | .....          | 1            | .....        | .....        | 1              |
| XII.—Leather, manufactured ... ..                | 4            | .....          | 6            | .....          | 4            | 6            | 2            | .....          |
| XIII.—Liquors—                                   |              |                |              |                |              |              |              |                |
| 1.—Beer ... ..                                   | 1            | .....          | 1            | .....          | 1            | 1            | .....        | .....          |
| XIV.—Metals—                                     |              |                |              |                |              |              |              |                |
| 2.—Iron ... ..                                   | 3            | .....          | .....        | .....          | 3            | .....        | .....        | 3              |
| 4.—Others ... ..                                 | 3            | 9              | 6            | 9              | 12           | 15           | 3            | .....          |
| XV.—Oils—  |              |                |              |                |              |              |              |                |
| 2.—Kerosine ... ..                               | .....        | .....          | 4            | .....          | .....        | 4            | 4            | .....          |
| 3.—Others ... ..                                 | 1            | .....          | 2            | .....          | 1            | 2            | 1            | .....          |
| XIX.—Provisions—                                 |              |                |              |                |              |              |              |                |
| 1.—Ghee ... ..                                   | 4            | .....          | 3            | .....          | 4            | 3            | .....        | 1              |
| 2.—Dried fruits and nuts ... ..                  | 2            | .....          | 1            | 1              | 2            | 2            | .....        | .....          |
| 3.—Others ... ..                                 | 3            | .....          | .....        | 1              | 3            | 1            | .....        | 2              |
| XX.—Railway plant and rolling-stock ... ..       | 35           | 6              | 90           | 6              | 43           | 96           | 53           | .....          |
| XXI.—Salt ... ..                                 | 24           | .....          | 23           | .....          | 24           | 23           | .....        | 1              |
| XVI.—Oilseeds—                                   |              |                |              |                |              |              |              |                |
| 2.—Mustard and rape ... ..                       | 16           | 1              | 9            | .....          | 17           | 9            | .....        | 8              |
| 7.—Others ... ..                                 | 23           | 32             | 24           | 6              | 55           | 30           | .....        | 25             |
| XXIII.—Silk, raw ... ..                          | 5            | 16             | 3            | 12             | 21           | 14           | .....        | 7              |
| 2.—Indian ... ..                                 | .....        | .....          | .....        | .....          | .....        | .....        | .....        | .....          |
| XXIV.—Silk piece-goods—                          |              |                |              |                |              |              |              |                |
| 2.—Indian ... ..                                 | 1            | 2              | .....        | 4              | 4            | 4            | .....        | .....          |
| XXVII.—Stone and lime ... ..                     | .....        | .....          | 3            | 1              | .....        | 4            | 4            | .....          |
| XXVI.—Sugar—                                     |              |                |              |                |              |              |              |                |
| 1.—Drained ... ..                                | 5            | .....          | 16           | .....          | 5            | 14           | 9            | .....          |
| 2.—Undrained ... ..                              | .....        | .....          | 1            | .....          | .....        | 1            | 1            | .....          |
| XXX.—Tobacco ... ..                              | .....        | .....          | 4            | .....          | .....        | 4            | 4            | .....          |
| XXIX.—Timber ... ..                              | .....        | .....          | 10           | .....          | .....        | 10           | 10           | .....          |
| XXXII.—Wool ... ..                               | .....        | .....          | .....        | .....          | .....        | .....        | .....        | .....          |
| 2.—Piece-goods—                                  |              |                |              |                |              |              |              |                |
| a.—Indian ... ..                                 | 1            | .....          | .....        | .....          | 1            | .....        | .....        | 1              |
| XXXIII.—All other articles of merchandise ... .. | 34           | 15             | 53           | 20             | 49           | 73           | 23           | .....          |
| Total ... ..                                     | 429          | 196            | 709          | 537            | 534          | 1,236        | 709          | 87             |

## INCREASE.

Coal ... .. Tons.  
184  
This increase is due partly to steamer service and partly to silk factories being worked by steam-power to a greater extent this year.

Grains—(2). Rice ... .. 493

The increase in this commodity is due to greater despatches from intermediate stations owing to good crops this year.

Railway plant and rolling stock ... .. 53

This increase is due to more materials carried during the month

## DECREASE.

Oilseeds—(7). Others ... .. 25  
The decrease in this head is due to dull market.

NALHATI, the 3rd December 1887.

B. G. MOOKERJEE, Manager.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 26th November 1887, on 1,513½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                 | Other earnings (estimated). | Total earnings.  | TRAFFIC TRAIN-MILES RUN. |              |            |
|---|-----------------------|--------------------|----------------------------------|-----------------|-----------------------------|------------------|--------------------------|--------------|------------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.       |                             |                  | Coaching.                | Merchandise. | Total.     |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.       | Rs. A. P.                   | Rs. A. P.        |                          |              |            |
| Total traffic for the week ...                              | 317,383               | 2,45,702 13 0*     | 26,19,961 20                     | 6,41,144 6 9    | 17,017 15 8                 | 9,04,765 8 5     | 64,124                   | 92,411½      | 156,535½   |
| Or per mile of railway ...                                  | .....                 | 162 5 0            | .....                            | 423 8 9         | 11 13 5                     | 597 11 2         | .....                    | .....        | .....      |
| For previous 20 weeks of half-year ...                      | 4,863,187             | 51,16,173 13 0     | 4,37,86,976 10                   | 97,39,854 13 11 | 3,33,455 12 9               | 1,51,89,494 7 8  | 1,308,125                | 1,637,423½   | 2,945,548½ |
| Total for 21 weeks ...                                      | 4,082,519             | 53,61,876 10 0     | 4,64,06,937 30                   | 1,03,80,999 4 8 | 3,5,383 12 5                | 1,50,91,259 11 1 | 1,372,249                | 1,729,835½   | 3,102,114½ |
| COMPARISON.   |                       |                    |                                  |                 |                             |                  |                          |              |            |
| Total for corresponding week of previous year ...           | 305,617½              | 3,42,582 14 10     | 26,00,671 30                     | 6,23,673 2 9    | 10,991 7 4                  | 9,83,247 8 11    | 65,670                   | 101,566      | 167,236    |
| Per mile of railway corresponding week of previous year ... | .....                 | 226 2 1            | .....                            | 411 10 8        | 11 3 5                      | 649 0 2          | .....                    | .....        | .....      |
| Total to corresponding date of previous year ...            | 4,985,946½            | 56,12,025 5 7      | 4,68,62,381 30                   | 1,11,64,204 8 8 | 3,48,581 5 8                | 1,71,21,813 9 11 | 1,447,382                | 1,933,048    | 3,380,430  |

\* The falling off in coaching traffic is in third class passengers and Government traffic.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 27TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 26TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 27TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 26TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 1,515  | 9,83,248  | 649              | 1,513½                                       | 9,04,765  | 598              | 1,515   | 2,90,08,396     | 581              | 1,517½  | 2,85,01,806     | 532              | .....                   | 14,06,590               |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 26th November 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 10,738                | 5,122 10 0         | 44,255 30                        | 2,045 3 0  | 24 8 0                      | 8,092 8 0       | 1,637                    | 557          | 2,394  |
| Or per mile of railway ...                                  | 188                   | 89 8 11            | 773 30                           | 51 7 10    | 0 6 10                      | 141 7 7         | .....                    | .....        | .....  |
| For previous 20 weeks of half-year ...                      | 294,342               | 1,58,538 10 0      | 7,32,947 20                      | 48,283 0 0 | 6,9 2 0                     | 2,07,485 12 0   | 36,720½                  | 13,507½      | 50,228 |
| Total for 21 weeks ...                                      | 305,080               | 1,63,660 4 0       | 7,77,202 10                      | 51,228 8 0 | 693 10 0                    | 2,15,578 1 0    | 38,537½                  | 14,064½      | 52,602 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 9,604½                | 4,560 11 5         | 70,038 30                        | 3,380 15 0 | 46 8 0                      | 8,006 2 5       | 1,966                    | 784          | 2,450  |
| Per mile of railway corresponding week of previous year ... | 168                   | 80 1 4             | 1,224 20                         | 59 1 9     | 0 13 0                      | 140 0 1         | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 312,534½              | 1,75,299 6 0       | 8,91,361 0                       | 56,192 5 0 | 1,262 13 9                  | 2,31,054 3 9    | 38,342                   | 16,077       | 54,419 |

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 27TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 26TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 27TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 26TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 57½  | 8,008     | 140              | 57½  | 8,093     | 141              | 57½   | 3,59,742        | 185              | 57½   | 3,34,837        | 172              | .....                   | 24,906                  |

## DILDARNAGAR-GHAZIPUR STATE RAILWAY.

Approximate Return of Traffic for week ended 25th November 1887, on 12 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                      | Other earnings (estimated). | Total earnings.     | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|----------------------|-----------------------------|---------------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.            |                             |                     | Coaching.                | Merchandise. | Total. |
| Total traffic for the week                              | 2,538                 | Rs. A. P. 424 13 0 | Mds. S. 31,000 0                 | Rs. A. P. 1,893 13 0 | Rs. A. P. 6 6 0             | Rs. A. P. 2,325 0 0 | 344                      | 149          | 493    |
| Or per mile of railway                                  | .....                 | 35 8 5             | .....                            | 157 13 1             | 0 6 0                       | 193 13 0            | .....                    | .....        | .....  |
| For previous 20 weeks of half-year                      | 56,503                | 9,403 7 0          | 2,12,325 20                      | 4,551 8 0            | 138 5 0                     | 14,073 4 0          | 7,951                    | 2,060        | 10,011 |
| Total for 21 weeks                                      | 59,041                | 9,828 4 0          | 2,45,234 20                      | 6,425 5 0            | 144 11 0                    | 16,398 4 0          | 8,295                    | 2,209        | 10,504 |
| COMPARISON.   |                       |                    |                                  |                      |                             |                     |                          |              |        |
| Total for corresponding week of previous year           | 2,164                 | 373 8 5            | 10,115 10                        | 237 15 0             | 8 13 0                      | 620 4 5             | 333                      | 111          | 444    |
| Per mile of railway corresponding week of previous year | .....                 | 31 2 0             | .....                            | 19 13 3              | 0 11 9                      | 51 11 0             | .....                    | .....        | .....  |
| Total to corresponding date of previous year            | 55,184                | 9,329 10 9         | 1,90,693 20                      | 4,040 14 0           | 185 2 9                     | 12,555 11 0         | 6,451                    | 2,354        | 10,805 |

Approximate Statement of gross receipts of the Dildarnagar-Ghazipur State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 27TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 25TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 27TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 25TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 12   | 620       | 52               | 12   | 2,325     | 194              | 12  | 30,827          | 76               | 12  | 30,998          | 76               | 171                     | .....                   |

## SINDIA STATE RAILWAY.

Approximate Return of Traffic for week ended 23th November 1887, on 74½ miles open.

|  | COACHING TRAFFIC.     |                     | MERCHANDISE AND MINERAL TRAFFIC. |                     | Other earnings (estimated). | Total earnings.      | TRAFFIC TRAIN-MILES RUN. |              |        |
|--|-----------------------|---------------------|----------------------------------|---------------------|-----------------------------|----------------------|--------------------------|--------------|--------|
|  | Number of passengers. | Coaching receipts.  | Weight carried.                  | Receipts.           |                             |                      | Coaching.                | Merchandise. | Total. |
| Total traffic for the week                             | 4,708                 | Rs. A. P. 3,550 5 0 | Mds. S. 1,11,107 10              | Rs. A. P. 5,400 4 0 | Rs. A. P. 93 5 0            | Rs. A. P. 9,208 14 0 | 624                      | 2,135        | 2,759  |
| Or per mile of railway                                 | .....                 | 48 12 10            | .....                            | 72 15 11            | 1 4 0                       | 123 0 9              | .....                    | .....        | .....  |
| For previous 20 weeks of half-year                     | 105,640               | 79,069 5 9          | 19,90,734 10                     | 85,101 13 0         | 1,912 0 0                   | 1,66,083 3 9         | 14,061                   | 37,494       | 51,555 |
| Total for 21 weeks                                     | 110,348               | 82,719 10 9         | 21,01,841 20                     | 90,562 1 0          | 2,005 5 0                   | 1,75,267 0 9         | 14,785                   | 39,629       | 54,414 |
| COMPARISON.  |                       |                     |                                  |                     |                             |                      |                          |              |        |
| Total for corresponding week of previous year          | 4,138                 | 3,311 11 7          | 98,003 30                        | 4,925 9 0           | 175 5 0                     | 3,312 9 7            | 749                      | 1,490        | 1,923  |
| Or mile of railway corresponding week of previous year | .....                 | 42 15 0             | .....                            | 64 8 2              | 2 5 6                       | 109 12 8             | .....                    | .....        | .....  |
| Total to corresponding date of previous year           | 111,364               | 80,637 14 11        | 18,94,747 20                     | 64,482 11 9         | 2,436 0 6                   | 1,47,756 11 2        | 15,159                   | 24,080       | 39,239 |

Approximate Statement of gross receipts of the Sindia State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 27TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 25TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 27TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 25TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 74½  | 3,313     | 110              | 74½  | 3,304     | 123              | 74½   | 2,44,131        | 96               | 74½   | 2,89,289        | 114              | 45,158                  | .....                   |

## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 26th November 1887, on 22½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 15,758                | 4,156 14 0         | 6,181 10                         | 282 0 0    | 7 0 0                       | 4,475 14 0      | 912                      | 50           | 968    |
| Or per mile of railway ...                                  | .....                 | 186 13 3           | .....                            | 11 12 5    | 0 5 0                       | 198 14 8        | .....                    | .....        | .....  |
| For previous 20 weeks of half-year ...                      | 345,503               | 85,886 10 0        | 82,971 10                        | 3,391 10 0 | 118 7 0                     | 89,390 11 0     | 18,502½                  | 1,012½       | 19,522 |
| Total for 21 weeks ...                                      | 361,361               | 90,043 8 0         | 90,152 20                        | 3,653 10 0 | 125 7 0                     | 93,523 9 0      | 19,721½                  | 1,064½       | 20,786 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 15,320½               | 3,859 3 1          | 4,671 30                         | 202 7 0    | 8 8 0                       | 4,070 2 1       | 935                      | 33           | 968    |
| Per mile of railway corresponding week of previous year ... | .....                 | 173 7 2            | .....                            | 9 1 7      | 0 6 1                       | 182 14 10       | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 330,412               | 84,074 1 0         | 68,658 10                        | 2,583 15 0 | 133 10 0                    | 85,791 10 0     | 20,351                   | 1,062        | 20,634 |

Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 27TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 26TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 27TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 26TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | P.                      | S.                      |
| 22½  | 4,070     | 187              | 22½  | 4,156     | 186              | 22½   | 1,50,626        | 211              | 22½   | 1,70,895        | 226              | 11,323                  | .....                   |

## INDIAN MIDLAND RAILWAY.

Approximate Return of Traffic for week ended 26th November 1887, on 42 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 2,127                 | 1,687 0 0          | 19,308 0                         | 1,624 1 0  | 21 8 0                      | 2,734 10 0      | 133                      | 255          | 388    |
| Or per mile of railway ...                                  | .....                 | 35 14 1            | .....                            | 35 11 6    | 0 8 2                       | 65 1 3          | .....                    | .....        | .....  |
| For previous 20 weeks of half-year ...                      | 43,344                | 19,250 13 6        | 5,27,078 10                      | 55,507 6 0 | 582 11 0                    | 55,210 14 6     | 6,599                    | 7,587        | 13,986 |
| Total for 21 weeks ...                                      | 45,471                | 20,556 13 6        | 5,47,013 10                      | 57,131 7 6 | 404 4 0                     | 57,051 8 6      | 6,792                    | 7,742        | 14,534 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 2,260½                | 1,770 4 11         | 22,665 0                         | 1,621 12 0 | 48 0 0                      | 2,640 0 11      | 199                      | 650          | 849    |
| Per mile of railway corresponding week of previous year ... | .....                 | 23 5 1             | .....                            | 38 9 10    | 1 2 3                       | 63 1 2          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...            | 52,905½               | 22,900 7 5         | 5,47,953 10                      | 58,951 1 0 | 585 12 6                    | 52,449 4 11     | 5,989                    | 7,451        | 13,440 |

Approximate Statement of gross receipts of the Indian Midland Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 27TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 26TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 27TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 26TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | P.                      | S.                      |
| 42   | 2,734     | 65               | 42   | 2,735     | 65               | 42  | 78,562          | 55               | 42  | 1,05,747        | 74               | 27,185                  | .....                   |

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS).

Approximate Return of Traffic for week ended 19th November 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|----------------|---|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.      |   |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.      | Rs. A. P.   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                | 111,613               | 58,044 0 0         | 6,64,846 0                       | 1,71,116 0 0   | 12,475 0 0  | 2,41,035 0 0    | 21,518                   | 20,744       | 42,262  |
| Or per mile of railway ...                                    | 173                   | 90 0 0             | 1,031 0                          | 265 0 0        | 3 0 0†  | 358 0 0         | .....                    | .....        | .....   |
| For previous 19 weeks of half-year ...                        | 2,276,857             | 10,02,423 0 0      | 1,25,30,164 0                    | 23,70,196 0 0  | 2,42,168 0 0                                      | 34,14,792 0 0*  | 330,481                  | 475,891      | 806,372 |
| Total for 20 weeks ...  | 2,391,470             | 10,60,472 0 0      | 1,31,95,010 0                    | 27,41,312 0 0  | 2,54,643 0 0                                      | 34,56,427 0 0   | 407,999                  | 562,635      | 910,634 |
| COMPARISON.   |                       |                    |                                  |                |   |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 163,336‡              | 61,997 0 0         | 6,40,698 0                       | 1,42,300 0 0   | 14,160 0 0  | 2,18,457 0 0    | 18,761                   | 27,140       | 45,901  |
| Per mile of railway corresponding period of previous year ... | 270                   | 102 0 0            | 1,672 0                          | 236 0 0        | .....   | 337 0 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 2,391,105             | 10,46,779 0 0      | 1,06,22,967 0                    | 120,79,514 0 0 | 2,33,395 0 0                                      | 33,61,688 0 0   | 394,702                  | 429,325      | 794,027 |

\* Audited up to week ending 1st October 1887.

† Rs. 10,500 excluded from calculation.

‡ 48,800 monthly tickets.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 600  | 2,18,457  | 360              | 645  | 2,41,635  | 375              | 606   | 52,05,129       | 200              | 615   | 53,32,050*      | 275              | 6,40,931                | .....                   |

\* Audited up to 1st October 1887.

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 19th November 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                | 21,040                | 8,230 0 0          | 30,023 0                         | 2,063 0 0  | 39 0 0                      | 11,233 0 0      | 3,796                    | 1,424        | 5,210   |
| Or per mile of railway ...                                    | 168                   | 66 0 0             | 310 0                            | 21 0 0     | .....                       | 90 0 0          | .....                    | .....        | .....   |
| For previous 19 weeks of half-year ...                        | 471,529*              | 1,57,597 0 0       | 8,40,657 0                       | 70,697 0 0 | 1,746 0 0                   | 2,30,030 0 0    | 60,288                   | 35,671       | 104,959 |
| Total for 20 weeks ...  | 492,569               | 1,65,817 0 0       | 8,40,680 0                       | 73,660 0 0 | 1,785 0 0                   | 2,41,202 0 0    | 73,054                   | 37,095       | 110,149 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 30,234†               | 9,485 0 0          | 21,018 0                         | 1,723 0 0  | 36 0 0                      | 11,244 0 0      | 4,014                    | 1,196        | 5,210   |
| Per mile of railway corresponding period of previous year ... | 242                   | 76 0 0             | 168 0                            | 14 0 0     | .....                       | 90 0 0          | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...              | 471,899               | 1,57,196 0 0       | 3,94,850 0                       | 30,224 0 0 | 510 0 0                     | 1,57,936 0 0    | 70,820                   | 20,683       | 106,503 |

\* Audited up to week ending 1st October 1887.

† 6,200 monthly tickets.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     | Rs.                     |
| 125  | 11,344    | 90               | 125  | 11,353    | 90               | 125   | 3,61,404        | 88               | 125   | 4,04,227*       | 98               | 42,803                  | .....                   |

\* Audited up to week ending 1st October 1887.



## DACCA STATE RAILWAY.

*Approximate Return of Traffic for week ended 19th November 1887, on 86 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 12,078                | 4,842 0 0          | 47,716 0                         | 5,006 0 0  | 30 0 0                      | 9,878 0 0       | 2,001                    | 863          | 2,864  |
| Or per mile of railway ...                                    | 147                   | 56 0 0             | 555 0                            | 58 0 0     | 1 0 0                       | 115 0 0         | .....                    | .....        | .....  |
| For previous 19 weeks of half-year ...                        | 216,713               | 72,304 0 0         | 4,19,226 0                       | 30,309 0 0 | 2,119 0 0                   | *1,04,732 0 0   | 41,816                   | 19,054       | 61,470 |
| Total for 20 weeks ...  | 228,391               | 77,146 0 0         | 4,66,942 0                       | 35,315 0 0 | 2,149 0 0                   | 1,14,610 0 0    | 43,815                   | 20,617       | 64,434 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | 11,654                | 3,056 0 0          | 18,798 0                         | 1,777 0 0  | 173 0 0                     | 5,606 0 0       | 2,238                    | 714          | 2,940  |
| Per mile of railway corresponding period of previous year ... | 136                   | 43 0 0             | 219 0                            | 21 0 0     | .....                       | 63 0 0          | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | * 203,586             | 66,033 0 0         | 1,98,289 0                       | 29,501 0 0 | 6,261 0 0                   | 92,815 0 0      | 34,605                   | 14,548       | 49,153 |

\* Audited up to week ending 1st October 1887.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Dacca State Railway.*

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 20TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 19TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
| 86   | Rs. 5,006 | 65               | 86   | Rs. 9,878 | 115              | 86  | Rs. 1,59,215    | 56               | 86  | Rs. *1,70,336   | 63               | Rs. 20,121              | .....                   |

\* Audited up to week ending 1st October 1887.

## ASSAM-BEHAR STATE RAILWAY.

(PURNEAH SECTION.)

*Approximate Return of Traffic for week ended 19th November 1887, on 39 miles open.*

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                                | 2,572                 | 1,011 0 0          | 7,000 0                          | 725 0 0    | 15 0 0                      | 1,761 0 0       | 546                      | 546          | 1,092  |
| Or per mile of railway ...                                    | 66                    | 26 0 0             | 203 0                            | 19 0 0     | .....                       | 45 0 0          | .....                    | .....        | .....  |
| For previous 19 weeks of half-year ...                        | 50,504                | 20,853 0 0         | 1,77,066 0                       | 11,864 0 0 | 632 0 0                     | *33,349 0 0     | 13,392                   | 7,406        | 20,898 |
| Total for 20 weeks ...  | 53,076                | 21,864 0 0         | 1,84,066 0                       | 12,589 0 0 | 647 0 0                     | 35,100 0 0      | 13,938                   | 8,042        | 21,980 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...             | .....                 | .....              | .....                            | Nil        | .....                       | Nil             | .....                    | .....        | .....  |
| Per mile of railway corresponding period of previous year ... | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |
| Total to corresponding date of previous year ...              | .....                 | .....              | .....                            | .....      | .....                       | .....           | .....                    | .....        | .....  |

\* Audited up to week ending 1st October 1887.

## FINANCIAL YEAR.

*Approximate Statement of gross receipts of the Assam-Bihar State Railway.*

| RECEIPTS FOR WEEK ENDING 20TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 19TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 20TH NOVEMBER 1886. |                 |                           | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 19TH NOVEMBER 1887. |                 |                           | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|---------------------------|---|-----------------|---------------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked per week. | Mean mileage worked.  | Total receipts. | Per mile worked per week. |                         |                         |
| .....  | Rs. Nil   | .....            | 39   | Rs. 1,761 | 45               | .....   | Rs. Nil         | .....                     | 39  | Rs. *75,335     | 59                        | Rs. 75,315              | .....                   |

\* Audited up to week ending 1st October 1887.

## NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 26th November 1887, on 27½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. F.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                              | 2,689                 | 989 0 0            | 8,424 0                          | 518 0 0    | 24 0 0                      | 1,531 0 0       | 509                      | 254          | 763     |
| Or per mile of railway ...                                  | 99                    | 36 5 0             | 309 0                            | 19 0 0     | 0 14 0                      | 56 3 0          | .....                    | .....        | .....   |
| For previous 20 weeks of half-year ...                      | 61,849                | 21,802 0 0         | 1,70,146 0                       | 10,572 0 0 | 316 0 0                     | 33,690 0 0      | 10,363                   | 6,240        | 16,611½ |
| Total for 21 weeks ...                                      | 64,538                | 22,791 0 0         | 1,78,610 0                       | 11,090 0 0 | 340 0 0                     | 34,221 0 0      | 10,871                   | 6,504        | 17,374½ |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...           | 2,578½                | 963 3 10           | 7,041 0                          | 512 13 0   | 16 3 0                      | 1,492 3 10      | 509                      | 254          | 763     |
| Per mile of railway corresponding week of previous year ... | 95                    | 35 6 0             | 253 0                            | 18 13 0    | 0 9 0                       | 51 13 0         | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...            | 51,743                | 19,923 14 4        | 1,28,600 20                      | 9,820 15 0 | 306 15 6                    | 30,050 12 10    | 10,907                   | 6,532        | 16,439  |

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

| RECEIPTS FOR WEEK ENDING 27TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 26TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 27TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 26TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Ry.              |  | Rs.       | Ry.              |   | Rs.             | Ry.              |   | Rs.             | Ry.              |                         | Rs.                     |
| 27½  | 1,492     | 53               | 2½   | 1,531     | 53               | 27½   | 51,286          | 59               | 2½  | 69,700          | 64               | 5,223                   | .....                   |

## TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for week ended 26th November 1887, on 250 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|---------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. S.                          | Rs. A. P.     | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week on 250 miles open ...                    | 55,143                | 11,818 15 0        | 1,31,245 10                      | 18,791 1 6    | 3 74 1 10                   | 34,394 6 1      | 5,534                    | 5,768        | 11,700  |
| Or per mile of railway ...  | 136                   | 45 10 0            | 500 0                            | 72 9 0        | 2 10 0                      | 120 13 0*       | .....                    | .....        | .....   |
| For previous 20 weeks of half-year ...                              | 837,150               | 3,04,759 0 3       | 23,06,173 30                     | 2,23,002 14 6 | 65,074 11 2                 | 5,02,836 0 11   | 129,895                  | 94,801       | 224,496 |
| Total for 21 weeks ...  | 872,533               | 3,16,578 0 0       | 23,77,459 0                      | 2,41,794 0 0  | 65,850 0 0                  | 5,07,231 0 0    | 135,629                  | 100,567      | 236,196 |
| COMPARISON.   |                       |                    |                                  |               |                             |                 |                          |              |         |
| Total for corresponding week of previous year on 246 miles open ... | 51,770                | 12,185 3 10        | 1,70,690 30                      | 18,650 15 0   | 3 720 6 5                   | 34,563 9 3      | 5,104                    | 4,810        | 9,914   |
| Per mile of railway corresponding week of previous year ...         | 129                   | 49 8 0             | 730 0                            | 75 14 0       | 1 1 0                       | 120 7 0*        | .....                    | .....        | .....   |
| Total to corresponding date of previous year ...                    | 736,117               | 2,54,307 10 3      | 24,81,100 0                      | 2,45,301 0 0  | 66,901 6 5                  | 5,06,513 1 5    | 116,714                  | 91,061       | 207,775 |

\* Steam-haul earnings excluded in calculating "Total earnings per mile of Railway."

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Tirhoot State Railway.

| RECEIPTS FOR WEEK ENDING 27TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 26TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 27TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 26TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. | Mean mileage worked.                                      | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Ry.              |  | Rs.       | Ry.              |   | Rs.             | Ry.              |   | Rs.             | Ry.              |                         |                         |
| 246  | 34,566    | 141              | 269  | 34,304    | 133              | 246   | 10,14,040       | 121              | 240½  | 11,21,261       | 132              | 1,06,624                | .....                   |

DARJEELING-HIMALAYAN RAILWAY COMPANY.

|   |     |     |     |     |           |
|---|-----|-----|-----|-----|-----------|
| Approximate earnings for week ending 19th November 1887 | ... | ... | ... | ... | Rs.       |
| Corresponding week last year                            | ... | ... | ... | ... | 9,661     |
| Decrease  | ... | ... | ... | ... | 10,116    |
| Receipts from 1st July to 19th November 1887            | ... | ... | ... | ... | 455       |
| From 1st July to 20th November 1886                     | ... | ... | ... | ... | 1,96,718  |
| Decrease  | ... | ... | ... | ... | 2,01,718  |
| Miles open, week ending 19th November 1887              | ... | ... | ... | ... | 5,000     |
| Corresponding week last year                            | ... | ... | ... | ... | Miles.    |
|   | ... | ... | ... | ... | 51        |
| Receipts per mile open, week ending 19th November 1887  | ... | ... | ... | ... | Rs. A. P. |
| Corresponding week last year                            | ... | ... | ... | ... | 189 6 11  |
| Decrease  | ... | ... | ... | ... | 198 5 8   |
|   | ... | ... | ... | ... | 8 14 0    |

CHIEF OFFICE, D.-H. RY., DARJEELING, the 28th November 1887.

W. STEVENSON, Secretary.





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, DECEMBER 14, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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## RESOLUTION ON THE ADMINISTRATION REPORT OF THE TRIBUTARY STATES OF ORISSA FOR THE YEAR 1886-87.

### RESOLUTION.

#### POLITICAL.

*Calcutta, the 10th December 1887.*

#### READ—

The Annual Report on the Administration of the Tributary States of Orissa for the year 1886-87.

#### Read also—

The Reports for the years 1884-85 and 1885-86, and the Resolutions recorded thereon

The Report, which has been submitted by Mr. C. T. Metcalfe, C.S.I., who held the office of Superintendent of the Tributary States throughout the period under review, compares favourably in point of brevity with those of the preceding years. The tour of the Superintendent was unusually long, extending over 92 days and including visits to Mohurbhunj, Bamunghati, Dhenkanal, Angul, Boad, Athmalik, the Khondmals, Daspalla, Nayagurh, Keonjhar and Nilgiri. The Assistant Superintendent showed considerable

activity in the same direction, and the Managers of Mohurbhunj, Baramba and Narsingpore, as well as the Tehsildar of the Government Estate of Angul, appear likewise to have made useful rounds of inspection. The Tehsildar of the Khondmals, on the other hand, spent only 20 days in camp, and is described by the Superintendent as unfitted for his duties by disease. The question of appointing a successor to him is now before the Lieutenant-Governor.

2. There were several administrative changes during the year, consequent on the deaths of the Rajahs of Tigiria and Dhenkanal, the Rajah of Nilgiri's temporary loss of the powers of speech and reason, and the mismanagement of affairs in Daspalla, which necessitated the removal of the Dewan Baboo Fakir Mohan Senaputty, and the appointment of Moonshi Mahomed Ali to succeed him. The steps taken by the Superintendent in each case were duly reported to and approved by Government. The Report also notices the unsatisfactory condition of the administration of the little State of Pal Lehara, a separate report on which has been promised and is awaited.

3. Of the total demand of Rs. 33,249-7-11 on account of Government tribute, it is satisfactory to note that the sum of Rs. 6,546 was paid in before the commencement of the year, and during it the entire balance, together with an advance of Rs. 4,100-11-8 on the current claim, was realized. Information on various points connected with the financial position of several of the States has been called for, and this part of the subject cannot be dealt with in the present review.

4. The Superintendent remarks that the rainfall was seasonable and copious, but that, owing to late sowing, the growth of the crops, especially on the high lands, was stunted, and the outturn on the whole only an average one. It is reported, however, in subsequent paragraphs that the autumn harvest was, owing to excessive moisture, poor in seven of the States, and that the late rains were not favourable to the winter crops, the outturn being below the average, except in Angul and Daspalla, where it is said to have failed more or less. Apparently the yield of sugarcane alone was large. Vast quantities of good arable land are lying fallow, the want of communications being a bar to more production than suffices for local consumption; but Mr. Metcalfe thinks that the benefits to be derived from the opening out of the country are becoming appreciated by some of the Chiefs, and that the Cuttack-Benares Railway will, should it eventually pass through the Gurjats, no doubt give an impetus to both agriculture and commerce. The material condition of the people continues to be decidedly backward, and their wants are characterized as being few and easily satisfied. There may be said to be no emigration from or immigration to the Tributary States. The public health was generally good throughout the year, but both cholera and fever appeared in places, and the former assumed an epidemic form in parts of Daspalla, the mortality, however, being fortunately inconsiderable. Vaccine operations were carried on in eight of the States, but the results in Angul, Baramba, Mohurbhunj, and Dhenkanal alone were satisfactory, and the Superintendent states that, notwithstanding all that is being done to popularize the system, it cannot yet be regarded as a success, and that everywhere, except in Mohurbhunj and the Khondmals, there are many more children annually inoculated than vaccinated. The religious element in inoculation is a powerful influence working in its favour, and unsuccessful vaccinations must have a very bad effect. Mr. Metcalfe states that he has noticed instances of the latter, but it is hoped that they are rare.

5. There was a large increase in the number of civil and revenue suits for disposal in the courts of original jurisdiction during the past year, and of this no attempt at an explanation has been made. The total number for disposal, including 2,237 pending from the previous year, was 18,729 against 13,091 in 1885-86, and of these 15,541 were disposed of, while 3,188 remained pending. In Baramba, Dhenkanal, and Mohurbhunj new institutions reached the comparatively high figures 1,962, 8,220, and 5,051, respectively, but, on the other hand, in nine States there were not more than 12 each. These figures altogether exclude the cases tried in the courts of the Native Chiefs. With regard to the criminal administration, it appears that the total number of offences of all classes reported was 2,141 against 2,231 in 1885-86.

In these 3,106 persons were concerned, and the fact that 1,990 of them were convicted is satisfactory. Of 245 civil appeals disposed of, the orders were confirmed in only 124, but the lower criminal courts show a somewhat better result in having been upheld in 59 out of 78 decisions appealed against. The proportionately very large number of criminal cases pending both at the beginning and at the close of the year in the courts of Keonjhar and Nayagarh show that trials do not proceed with regularity and promptitude, and to this the serious attention of the Chiefs of those States should be invited. Recently the police of Dhenkanal, Baramba, and Narsingpore have been placed under the orders of the Assistant Superintendent of Gurjat Police, whose head-quarters have not yet been removed to Dhenkanal, but will be as soon as suitable accommodation can be provided.

6. Sir Stuart Bayley learns with satisfaction that the Tributary Chiefs of Orissa are at length beginning to appreciate the advantage of preserving their forests from reckless destruction, and are in a greater or less degree taking active steps for their protection. The Rajahs of Talcher and Hindole and the Chiefs of Boad, Kandpara, Nayagarh, Runpore, and Athguri have now established reserves, and in Dhenkanal young sal plantations are springing up. The Lieutenant-Governor, however, would be glad of a fuller explanation of the statement that no fresh cutting is allowed in that State, and trusts that throughout the States the measures taken to preserve the forests are not allowed to encroach on the rights and privileges of the people. The Government forest in Angul continues, it is reported, to be maintained at a loss, the expenditure far exceeding the actual receipts. Mr. Metcalfe's remarks (paragraphs 119 and 120) regarding the necessity there is for the curtailment of establishment and the strictest economy in management, will be communicated to the Conservator of Forests. The Superintendent will be asked for a detailed report on the action which he states has been taken with regard to timber and bamboos in Baramba and Narsingpore.

7. Some progress was made in the opening out and improvement of lines of communication, but much yet remains to be done. The completion of the new road from Baripada to Bamunghati is said to have fairly revolutionized the administration of Mohurbhunj by bringing these two places into proximity, and the Manager, Mr. Wylly, and the Engineer, Mr. Morrow, deserve every credit for the successful completion of this undertaking. Mr. Metcalfe's account in paragraph 12 of his discovery of a short route from Daspalla to the Khondmals, hitherto almost beyond the reach of the Superintendent, is interesting, and it appears that by taking this line across the hills, along which a road is being made and the dak now runs, a 16 days' journey is reduced to one of only four. The two principal highways in the mehals, and the only means of communication of the Gurjats with the outer world, are the roads from Cuttack to Sumbalpur, the unsatisfactory condition of which has been noticed again and again, and it is much to be regretted that no improvement seems to have been effected. Mr. Metcalfe's remarks on the subject will be communicated to the Public Works Department.

8. The figures show a large increase of 296 schools and 3,797 pupils in the Tributary States. This advance is admittedly to some extent more apparent than actual, being partly due to the fact that a larger number of patshalas were visited and included in the returns made by the Sub-Inspector. Allowing for this, however, increased attention to educational matters is indicated, and the circumstance must be regarded as satisfactory. Three girls' schools at Mohurbhunj, Dhenkanal, and Athguri respectively, with a total of 94 pupils, are mentioned, and it is reported that besides these 311 girls attend boys' schools in the Gurjats, and that five of them passed the lower primary scholarship examination. The Chiefs of Runpur, Nayagarh, Hindole, Talcher, and Athmalik have apparently begun to evince considerable interest in education, and have more or less availed themselves of the advice and assistance of the Sub-Inspector of Schools; still, it is noticed that the aggregate number of children of the aboriginal races borne on the school rolls shows no advance, but, on the contrary, a slight falling off, from 1,509 to 1,495 pupils.

9. Mr. Metcalfe urges the expediency of taking over for good, on the part of Government, all postal lines and offices, and he deprecates the continuance of the present arrangement under which moral pressure is put upon the Chiefs

to cause them to contribute towards their maintenance. These contributions are in some cases exacted with difficulty, and the Superintendent argues that, as correspondence between his office and the Tributary Chiefs has now become much more frequent, and the people have once enjoyed the benefit of cheap and rapid communication, on political, even more than on social or commercial, grounds it is absolutely necessary that postal arrangements should be conducted with system and regularity—a view in which Sir Steuart Bayley is disposed to concur. The original intention was eventually to relieve the Tributary Mehals of all expenditure in this connection. The matter will be referred to the Post Office authorities.

10. The forests of the Tributary Mehals, especially those of Keonjhar, Pal Lebara, and Mohurbhunj, abound with wild elephants, and an important question regarding the extent to which Government has the power of controlling their capture is now before the Government of India. It is beyond question that the reckless destruction of these animals or anything tending to diminish the supply of them should be restrained as much as possible, and all operations having such a tendency should be jealously watched and, where necessary, brought to the notice of the Lieutenant-Governor.

11. The remarks regarding the officers mentioned in paragraph 162 have been noted, and will be recorded in the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

J. WARE EDGAR,

*Chief Secretary to the Govt. of Bengal.*



Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the crops in the different districts of Bengal, as reported to Government during the week ending the 10th December 1887.

| No.                       | District and date of return.     | Rainfall at Sudder Station in inches. | Character of the weather and state and prospects of the crops.   |
|---------------------------|----------------------------------|---------------------------------------|--|
| <b>BENGAL.</b>            |                                  |                                       |  |
| <i>Western Districts.</i> |                                  |                                       |  |
| <b>BURDWAN DIV.</b>       | 1 Burdwan, Dec. 10, '87          | Nil                                   | Weather—seasonable. The main rice harvest is turning out from a third to a fourth below the average. All other prospects are very fair and prices keep moderate.   |
|                           | 2 Bankoora „ 10, '87             | Nil                                   | Weather—seasonable. Harvesting of <i>haimanti</i> rice proceeding briskly. <i>Rubbi</i> crops and sugarcane doing well. It is reported that there will be a <i>wah</i> of drinking water in certain parts of the Sudder sub-division regarding which enquiries are being made with a view to taking measures for supplying the want. No appreciable change in the rice market. |
|                           | 3 Beerbhoom „ 10, '87            | Nil                                   | Weather—seasonable. Harvesting of <i>amun</i> is progressing. Sugarcane crop is good. Winter crops are still being sown in places. New rice is selling at 23½ seers per rupee.   |
|                           | 4 Midnapur „ 10, '87             | Nil                                   | Weather—seasonable. State and prospects of crops good generally. Paddy is being reaped. Prospects of <i>rubbi</i> crops good, except in Jhargram and Shirsa.   |
|                           | 5 Hooghly „ 10, '87              | Nil                                   | Weather—cool and seasonable. Winter rice harvest progressing. Outturn below the average and in some places poor. Spring crops doing well. Sugarcane thriving.  |
|                           | Howrah „ 12, '87                 | Nil                                   | Ordinary cold weather. <i>Amun</i> rice harvest continues. Prospects good.   |
| <i>Central Districts.</i> |                                  |                                       |  |
| <b>PRESIDENCY DIV.</b>    | 6 24-Parghs. Dec. 13, '87        | Nil                                   | Weather—seasonable and cool. Harvesting of <i>amun</i> in progress; outturn expected to be 12 annas.   |
|                           | 7 Nuddia „ 10, '87               | Nil                                   | Weather—seasonable and dry. Harvesting of <i>amun</i> going on; prospects unfavourable in the south, but outturn fair in other parts of the district. Sugarcane doing well. Prospects of cold-weather crops fair.  |
|                           | 8 Khoosna „ 10, '87              | Nil                                   | Weather—seasonable. State and prospect of winter rice and other crops good.  |
|                           | 9 Jessore „ 10, '87              | Nil                                   | Weather—getting colder. Heavy night dews continue. Harvesting of <i>amun</i> and sowing of winter crops in places still going on. Prospects good.  |
|                           | 10 Moorshedabad „ 10, '87        | Nil                                   | Weather—cool and seasonable. <i>Amun</i> paddy is being cut. <i>Kalai</i> and <i>moong</i> are still being harvested. <i>Til</i> and <i>rahar</i> are progressing.   |
| <b>RANSHAHY DIV.</b>      | 11 Dinagapur Dec. 10, '87        | Nil                                   | Weather—seasonable. Harvesting of winter rice is progressing; about two annas of the crop cut. Prospects good.   |
|                           | 12 Rajshahye „ 10, '87           | Nil                                   | Weather—seasonable. Crops excellent.   |
|                           | 13 Rungpur „ 10, '87             | Nil                                   | <i>Amun</i> crop is being harvested with good results. Sugarcane is being crushed. Cold-weather crops doing well.  |
|                           | 14 Bogra „ 10, '87               | Nil                                   | Weather—seasonable. State and prospects of crops good.   |
|                           | 15 Pubna „ 10, '87               | Nil                                   | Weather—seasonable. State and prospects of crops good. Winter crops thriving.  |
|                           | 16 Darjeeling „ 10, '87          | Nil                                   | Weather—cold and bright. State and prospects of crops good.  |
|                           | 17 Julpigore „ 10, '87           | Nil                                   | Weather—getting cold. Harvesting of winter rice in progress. Standing crops doing well.  |
| <i>Eastern Districts.</i> |                                  |                                       |  |
| <b>DACCA DIVISION.</b>    | 18 Dacca, Dec. 10, '87           | Nil                                   | Weather—cold. <i>Amun</i> paddy is being reaped; outturn good. Winter crops continue good.   |
|                           | 19 Furreedpur „ 10, '87          | Nil                                   | Weather—seasonable. State and prospects of all crops satisfactory.   |
|                           | 20 Backergunge „ 9, '87          | Nil                                   | Weather—seasonable. Prospect of crops very good.   |
|                           | 21 Mymensingh „ 9, '87           | Nil                                   | Weather—seasonable. Standard prospects of crops continue good.   |
| <b>CHITTAGONG DIV.</b>    | 22 Chittagong Dec. 13, '87       | Nil                                   | Weather—seasonable. Harvesting of <i>amun</i> commenced. Prospects of <i>rubbi</i> crops good. Outturn of <i>amun</i> 12 annas. Prices stationary.   |
|                           | 23 Noakholly „ 9, '87            | Nil                                   | Weather—seasonable. <i>Amun</i> crop is being harvested; a good outturn is expected. Botelnut crop has also been good.   |
|                           | 24 Tipperah „ 8, '87             | Nil                                   | Weather—seasonable, though not very cold. <i>Amun</i> rice is being harvested with good outturn. Cold-weather crops coming on nicely.  |
|                           | Chittagong Hill Tracts. „ 6, '87 | Nil                                   | Weather—cold with heavy fogs up to 9 A.M. Harvesting of late rice in low lands has commenced. Gathering of cotton in juns continues. Mustard, chillies and other cold-weather crops doing well.  |
|                           | Hill Tipperah „ 7, '87           | Nil                                   | Weather—seasonably cold. Reaping of <i>amun</i> paddy continues. <i>Til</i> and cotton are being gathered. Sugarcane and mustard doing well.   |

| No.                         | District and date of return. |                           | Rainfall at Sudder Station in inches | Character of the weather and state and prospects of the crops.  |
|-----------------------------|------------------------------|---------------------------|--------------------------------------|---|
| BEHAR.                      |                              |                           |                                      |   |
| PATNA DIV.                  | 26                           | Patna Dec. 10, '87        | Nil                                  | Weather—cold. Paddy is being reaped; probable outturn 10 annas. <i>Rabbi</i> and poppy crops are growing well and prospects favourable at present. <i>Zakur</i> and cotton look well.   |
|                             | 27                           | Gya „ 9, '87              | Nil                                  | Weather—cold. Paddy is being harvested. <i>Rabbi</i> slightly injured by insects. Sowing of poppy completed and the crop looks promising.   |
|                             | 28                           | Shahabad „ 10, '87        | Nil                                  | Weather—cool and clear. Paddy is still being harvested. <i>Rabbi</i> coming on well. Prospects continue favourable. Weather for poppy is not favourable; the crop is well advanced and promising.   |
|                             | 29                           | Durbhunga „ 10, '87       | Nil                                  | Weather—getting cold. Harvesting of rice in progress. Prospects of <i>rabbi</i> continue very promising. Poppy sowings coming on well. A shower of rain would do immense good to <i>rabbi</i> . Prices remain stationary.   |
|                             | 30                           | Mosufferpur „ 10, '87     | Nil                                  | Weather—cold. Harvesting of paddy is being pushed on vigorously; threshing has commenced. Prospects of <i>rabbi</i> crops favourable. Weather favourable to poppy, early sowings having healthy appearance and later ones germinating.  |
|                             | 31                           | Saran „ 10, '87           | Nil                                  | Weather—fair and seasonable; mornings occasionally foggy. <i>Aghani</i> paddy is still being cut and promises an average outturn. <i>Rabbi</i> and poppy crops doing well; prospects continue fair.   |
| BHAGALPORE DIV.             | 32                           | Chumpanan „ 10, '87       | Nil                                  | Weather—cool and clear. Harvesting of paddy is progressing vigorously. New rice is selling in the market. Prospects of poppy and <i>rabbi</i> favourable. Early mustard is in ear; the crop generally is in flower.   |
|                             | 33                           | Monghy: Dec. 10, '87      | Nil                                  | Weather—seasonable. Prospects of <i>rabbi</i> and poppy good. Harvesting of winter rice going on.   |
|                             | 34                           | Bhagulpur „ 10, '87       | Nil                                  | Weather—seasonable. Harvesting of late rice continues; average outturn of 12 annas is expected in the Sudder. <i>Rabbi</i> crops promising; sowings still going on.   |
|                             | 35                           | Purneah „ 10, '87         | Nil                                  | Weather—seasonable. <i>Aghani</i> crop harvested. Pressing of sugarcane commenced. Other crops reported well.   |
|                             | 36                           | Maidah „ 10, '87          | Nil                                  | Weather—seasonable. Harvesting of winter rice continues. State of <i>rabbi</i> crops favourable. Common rice selling at an average of 24½ seers per rupee.  |
|                             | 37                           | Sonthal Pergas. „ 10, '87 | Nil                                  | Weather—seasonable. Rice is being cut. Prospects of <i>rabbi</i> promising.   |
| ORISSA.                     |                              |                           |                                      |   |
| ORISSA DIV.                 | 38                           | Cuttack Dec. 9, '87       | Nil                                  | Weather—seasonable. <i>Sarad</i> rice is being reaped. <i>Rabbi</i> in pods. Common rice sells at 18½ seers per rupee in town and at 25 to 30 seers in the interior.  |
|                             | 39                           | Pooree „ 8, '87           | Nil                                  | Weather—seasonable. <i>Laghu sarad</i> is being harvested. Harvesting of late <i>sarad</i> has commenced in some places. <i>Dalia</i> crop is being sown. Common rice 24 seers 2 chittacks per rupee in the Sudder sub-division, and 28 seers 4 chittacks in the Khorda sub-division. |
|                             | 40                           | Balsore „ 9, '87          | Nil                                  | Weather—seasonable. Harvesting of paddy is advancing. Prospects of <i>rabbi</i> and other crops continue favourable.  |
| CHOTA NAGPORE.              |                              |                           |                                      |   |
| South-West Frontier Agency. |                              |                           |                                      |   |
| CHOTA NAGPORE DIV.          | 41                           | Hazaribagh, Dec. 9, '87   | Nil                                  | Weather—seasonable. Harvesting of rice nearly finished. Sugarcane being cut; a fair outturn expected. Rain much wanted for <i>rabbi</i> . Poppy doing well.   |
|                             | 42                           | Lohardugga „ 10, '87      | Nil                                  | Weather—getting cold. Paddy is being harvested. Rain wanted for <i>rabbi</i> crops. No change in prices.  |
|                             | 43                           | Singbhoom „ 9, '87        | Nil                                  | Weather—seasonable. No rain during the week. The want of rain for the <i>rabbi</i> crop is being felt all over the district. The harvesting of the winter rice continues; the outturn being estimated at from 8 to 12 annas.  |
|                             | 44                           | Manbhoom „ 10, '87        | Nil                                  | Weather—cool and fair. Paddy is being reaped; average outturn between 9 and 10 annas. Prospects of sugarcane and <i>rabbi</i> crops fair. Common rice selling at 20 to 24 seers per rupee.  |

Published for general information.

CALCUTTA, REVENUE DEPT.;  
The 13th December 1887.P. NOLAN,  
Secy. to the Govt. of Bengal.



The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of June 1887.

## IMPORTS INTO CALCUTTA.

| SPECIFICATION OF ROUTES.           | FOOD-GRAINS. |        |           |                  |                    | FIBROUS PRODUCTS. |             | OIL-SEEDS. |               | Tea, Indian. | Cotton, raw. | Silk, raw. | SUGAR.  |            | TOBACCO.  |              |
|------------------------------------|--------------|--------|-----------|------------------|--------------------|-------------------|-------------|------------|---------------|--------------|--------------|------------|---------|------------|-----------|--------------|
|                                    | Rice.        | Paddy. | Wheat.    | Gram and pulses. | Other food-grains. | Jute, raw.        | Gunny-bags. | Linseed.   | Mustard seed. |              |              |            | Draind. | Un-draind. | Bis-path. | Other kinds. |
|                                    | Mds.         | Mds.   | Mds.      | Mds.             | Mds.               | Mds.              | No.         | Mds.       | Mds.          | Mds.         | Mds.         | Mds.       | Mds.    | Mds.       | Mds.      | Mds.         |
| By country boats ...               | 3,55,915     | 81,725 | 1,43,542  | 1,95,739         | 4,063              | 39,591            | 1,335,466   | 86,005     | 24,931        | .....        | 1,467        | 683        | 3,241   | 22,003     | 846       | 6,099        |
| " river steamers ...               | 5,084        | 23     | 53,996    | 3,423            | .....              | 34,658            | .....       | 42,824     | 1,08,457      | 21,237       | 636          | 800        | 2,173   | .....      | 614       | 2,254        |
| " East Indian Railway ...          | 1,47,466     | 3,564  | 15,88,213 | 1,64,477         | 30,778             | .....             | 29,505      | 6,97,004   | 1,62,500      | 1,894        | 28,392       | 1,291      | 1,442   | 2,039      | .....     | 3,903        |
| " Eastern Bengal State Railway ... | 55,074       | .....  | 17,325    | 81,751           | 49                 | 77,940            | 887,500     | 51,570     | 34,041        | 32,894       | 3,407        | 619        | .....   | 51,800     | 2,307     | 28,112       |
| " road ...                         | 63,060       | 5,190  | 282       | 28               | .....              | 533               | 23,130      | 73         | .....         | .....        | 741          | .....      | 5,321   | 12,255     | .....     | 7,299        |
| " sea ...                          | 21,979       | 3,165  | 207       | 1,620            | .....              | .....             | 143,458     | .....      | .....         | 1,268        | 21,093       | 10         | 12,009  | 223        | .....     | 51,127       |
| Grand total of 1887 ...            | 6,51,514     | 93,606 | 18,03,394 | 4,67,046         | 34,910             | 1,52,710          | 2,398,005   | 8,77,534   | 3,36,995      | 59,783       | 50,301       | 2,873      | 24,190  | 71,909     | 3,327     | 1,20,000     |
| Imports in June ...                | 5,01,069     | 98,149 | 18,64,006 | 2,46,026         | 46,729             | 99,484            | 2,111,015   | 10,42,811  | 3,20,727      | 44,213       | 68,087       | 1,945      | 55,538  | 68,898     | 4,032     | 62,539       |

The following Statement shows the Values, Quantities, and Numbers of the Principal Staples of Traffic exported Inland from Calcutta during the month of June 1887.

## EXPORTS FROM CALCUTTA.

| Whither exported.   | Cotton piece-goods. |         | Cotton twist. |         | Salt.    | Gunny-bags. | Whither exported.   | Cotton piece-goods. |           | Cotton twist. |        | Salt.    | Gunny-bags. |
|---------------------|---------------------|---------|---------------|---------|----------|-------------|---|---------------------|-----------|---------------|--------|----------|-------------|
|                     | European.           | Indian. | European.     | Indian. |          |             |   | European.           | Indian.   |               |        |          |             |
| BENGAL.             |                     |         |               |         |          |             |   |                     |           |               |        |          |             |
|                     | Rs.                 | Rs.     | Mds.          | Mds.    | Mds.     | No.         | CHOTA NAGPORE.  | Rs.                 | Rs.       | Mds.          | Mds.   | Mds.     | No.         |
| Bardwan             | 1,43,202            | 440     | 494           | 1,046   | 27,104   | 50,311      | Hazareebagh   | 16,254              |           |               | 74     | 8,923    | 1,400       |
| Beerbhoom           | 1,09,035            | 1,870   | 21            | 216     | 11,297   | 39,705      | Manbhoom  | 28,350              |           | 1             | 793    | 6,458    | 2,345       |
| Midnapore           | 1,93,755            | 1,370   | 3,421         |         | 69,230   | 9,103       | Total of Chota Nagpore  | 44,604              |           | 1             | 867    | 15,579   | 3,745       |
| Hooghly             | 1,11,967            | 4,704   | 1,383         | 324     | 2,437    | 47,094      | Grand Total of supplies into the provinces under the Lieutenant-Governor of Bengal.             |                     |           |               |        |          |             |
| 24-Pargunnahs       | 1,55,350            | 6,831   | 454           |         | 13,307   | 10,515      |   |                     |           |               |        |          |             |
| Naldia              | 2,81,223            |         | 1,801         |         | 29,515   | 55,317      |   |                     | 40,20,094 | 41,375        | 14,376 | 8,890    | 7,42,480    |
| Khulna              | 1,07,970            |         | 179           | 90      | 8,635    | 8,400       | OTHER PROVINCES.  |                     |           |               |        |          |             |
| Jessore             | 1,29,630            |         | 214           | 573     | 26,076   | 10,435      | Assam   | 2,09,034            |           | 74            |        | 40,608   |             |
| Moommedabad         | 77,197              | 2,090   | 89            | 25      | 10,215   | 10,105      | North-Western Provinces and Oudh  |                     |           |               |        |          |             |
| Dinagopore          | 77,364              |         | 64            | 37      | 11,115   | 1,925       | Punjab  | 14,13,090           | 1,540     | 4,485         | 989    | 55,107   | 634,620     |
| Kajalshaye          | 1,89,832            | 330     | 32            |         | 15,080   | 6,320       | Central Provinces   | 5,56,353            | 1,780     | 747           | 12     |          | 190,800     |
| Bungpore            | 2,50,110            |         | 92            | 137     | 15,412   | 5,705       | Rajputana States  | 21,021              |           | 175           |        |          | 202,925     |
| Bocra               | 1,09,878            |         | 19            | 16      | 5,029    | 840         | Bombay  | 22,050              | 330       | 181           |        |          | 41,473      |
| Pubna               | 1,85,031            |         | 10            | 105     | 45,708   | 110         | Nizam's Territory   | 1,022               | 5,040     |               |        |          | 1,816,700   |
| Darjeeling          | 60,653              |         |               | 48      | 2,941    | 130         | Madras  | 62,313              |           | 1,281         |        |          | 148,300     |
| Jalpigore           | 1,94,481            |         | 71            | 119     | 21,002   |             | Sind  |                     |           |               |        | 271      |             |
| Dacca               | 5,50,227            |         | 1,330         | 250     | 19,213   | 10,000      | Pondicherry   |                     |           |               |        |          | 84,700      |
| Furruddpore         | 2,44,675            |         | 935           | 51      | 39,732   | 10,425      | British Burmah  | 2,97,354            | 450       | 1,634         | 1,896  |          | 481,800     |
| Backergunge         | 64,728              |         | 464           | 1,170   | 32,179   | 2,030       | Other places  | 12,377              | 16,907    | 40            | 6,158  |          | 3,612,966   |
| Mymensingh          | 74,529              |         |               | 19      | 4,290    | 485         | Grand Total of 1887   | 75,25,704           | 67,638    | 23,153        | 16,945 | 8,33,526 | 8,310,122   |
| Tippurah            |                     |         |               |         | 3,425    |             | Exports in June   | 87,85,971           | 74,069    | 27,380        | 13,501 | 7,65,573 | 8,905,066   |
| Chittagong          | 63,101              | 600     | 134           |         |          | 800         |   |                     |           |               |        |          |             |
| Noakholy            | 10,136              |         |               |         | 5,300    |             |   |                     |           |               |        |          |             |
| Total of Bengal     | 34,35,859           | 18,245  | 10,907        | 4,021   | 4,22,222 | 291,237     | The Sea-borne Trade of Calcutta in these Staples during the month of June 1887 was as follows:— |                     |           |               |        |          |             |
| BEHAR.              |                     |         |               |         |          |             |   |                     |           |               |        |          |             |
| Patna               | 72,072              | 530     | 115           | 177     | 72,467   | 265,545     | IMPORTED INTO CALCUTTA—   | Rs.*                | Rs.       | Mds.          | Mds.   | Mds.     | No.         |
| Gya                 | 50,715              | 4,510   | 153           | 690     | 22,186   | 18,585      | From Foreign Ports—   |                     |           |               |        |          |             |
| Mahabud             | 1,04,963            | 3,500   | 1             | 509     | 13,002   | 62,335      | United Kingdom  | 86,32,699           |           | 9,490         |        | 6,08,302 | 100,000     |
| Mosufferpore        | 48,470              | 4,400   |               | 63      | 8,131    | 12,915      | Other Foreign ports   | 16,385              |           | 754           |        | 2,48,522 |             |
| Durhanga            | 1,61,847            | 4,950   | 1             | 675     | 62,552   | 91,770      | Total of Foreign Trade  | 86,48,434           |           | 10,234        |        | 8,51,918 | 104,000     |
| Saran               | 2,33,508            | 1,210   | 4             | 153     | 15,292   | 25,445      | From Indian Ports—  |                     |           |               |        |          |             |
| Champaran           | 1,32,337            | 3,740   |               | 104     | 37,886   | 51,973      | Bombay  | 10,144              | 1,71,402  |               | 10,445 | 47,042   | 34,000      |
| Monghyr             | 68,404              | 110     | 15            | 330     | 10,100   | 91,595      | Madras  | 400                 | 14,242    |               | 123    |          |             |
| Shahpore            | 1,34,390            | 440     | 41            | 252     | 18,480   | 100,185     | Other ports in Madras   |                     |           |               |        |          |             |
| Purneah             | 1,58,982            |         | 70            | 544     | 4,495    | 5,800       | British Burmah  | 1,000               |           |               | 5      |          |             |
| Maldah              |                     |         | 16            |         | 4,275    | 1,000       | Other Indian ports  | 400                 |           |               |        |          |             |
| Southern Pargunnahs | 1,71,423            |         | 50            | 371     | 21,114   | 88,795      | Total of Interportal Trade  | 11,944              | 1,87,154  |               | 10,572 | 47,042   | 37,450      |
| Total of Behar      | 13,90,039           | 22,990  | 405           | 3,883   | 2,00,689 | 825,285     | Grand Total of Im- (1887 ...  | 86,50,878           | 1,87,154  | 10,224        | 10,572 | 8,08,990 | 148,450     |
| ORISSA.             |                     |         |               |         |          |             |   |                     |           |               |        |          |             |
| Cuttack             |                     |         | 6             |         |          |             | ports in June ... (1886 ...   | 1,24,52,389         | 1,86,860  | 15,696        | 5,009  | 7,82,713 | 4,100       |
| Balasore            | 58,600              |         | 2,907         | 109     | 14,190   | 36,575      | * As per tariff declaration value.  |                     |           |               |        |          |             |
| Total of Orissa     | 58,600              | 40      | 3,003         | 109     | 14,190   | 36,575      |   |                     |           |               |        |          |             |

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported from Calcutta during the month of June 1887.

| SPECIFICATION OF ROUTES.           | COTTON PIECE-GOODS. |         | COTTON TWIST. |         | Salt.    | Gunny-bags. |
|------------------------------------|---------------------|---------|---------------|---------|----------|-------------|
|                                    | European.           | Indian. | European.     | Indian. |          |             |
|                                    | Rs.                 | Rs.     | Mds.          | Mds.    | Mds.     | No.         |
| By country boats ...               | 2,23,365            | 750     | 4,115         | .....   | 3,55,605 | 31,802      |
| " river steamers ...               | 5,80,715            | 1,550   | 1,260         | 110     | 29,455   | 11,379      |
| " East Indian Railway ...          | 37,97,561           | 32,780  | 4,291         | 7,084   | 3,94,931 | 1,947,925   |
| " Eastern Bengal State Railway ... | 2,47,503            | 350     | 4,040         | 3,800   | 1,40,123 | 112,585     |
| " road ...                         | 1,63,928            | 10,845  | 919           | 4,408   | 2,000    | 8,000       |
| " sea ...                          | 4,94,736            | 21,513  | 6,401         | 7,269   | 12,965   | 6,105,000   |
| Grand Total of Exports in June ... | 75,25,704           | 67,638  | 23,153        | 10,572  | 8,08,990 | 8,310,122   |
| Exports in June ...                | 87,85,971           | 74,069  | 27,380        | 13,501  | 7,65,573 | 8,905,066   |

**Results of the Meteorological Observations taken at the Alipore Observatory from  
4th to 10th December 1887.**

| Month. | Date | Maximum in sun | Number of hours of bright sunshine. | Mean pressure barometer at 59° Fahr. | TEMPERATURE. |          |        |          | HYGROMETRY |                 |            |           | WIND.                 |     | Miles recorded. | Rain. | WEATHER.             |
|--------|------|----------------|-------------------------------------|--------------------------------------|--------------|----------|--------|----------|------------|-----------------|------------|-----------|-----------------------|-----|-----------------|-------|----------------------|
|        |      |                |                                     |                                      | Mean.        | Maximum. | Range. | Minimum. | Wet bulb.  | Vapour tension. | Dew point. | Humidity. | Prevailing direction. |     |                 |       |                      |
| 1887.  |      | °              |                                     | Inches.                              | °            | °        | °      | °        | °          | Inches.         | °          | %         |                       |     | Inches.         |       |                      |
| Dec.   | 4th  | 130.0          | 9.7                                 | 30.043                               | 67.1         | 78.5     | 18.2   | 60.3     | 61.3       | 0.469           | 57.2       | 72        | NNW and N             | ... | 81              | Nil   | Clear,    P.         |
| "      | 5th  | 129.9          | 9.2                                 | .039                                 | 66.9         | 77.7     | 19.7   | 58.0     | 60.7       | .451            | 56.0       | 71        | N and NNE             | ... | 60              | "     | Clear,    P.         |
| "      | 6th  | 127.9          | 9.0                                 | .039                                 | 65.6         | 77.0     | 20.8   | 56.2     | 59.9       | .451            | 56.0       | 73        | N, N by W and calm    | ... | 35              | "     | Clear,    P.         |
| "      | 7th  | 128.9          | 9.1                                 | .065                                 | 65.0         | 76.8     | 21.4   | 55.4     | 59.8       | .448            | 55.8       | 74        | NNW and N             | ... | 33              | "     | Clear,    P.         |
| "      | 8th  | 128.9          | 9.2                                 | .062                                 | 65.4         | 76.7     | 20.6   | 56.1     | 60.2       | .456            | 56.4       | 74        | W and NNW             | ... | 43              | "     | Clear,    P.         |
| "      | 9th  | 127.5          | 9.4                                 | .021                                 | 64.9         | 76.3     | 21.3   | 55.0     | 59.6       | .445            | 55.6       | 74        | NNW and N             | ... | 55              | "     | Clear,    P.         |
| "      | 10th | 130.5          | 9.3                                 | 29.985                               | 65.8         | 76.3     | 18.5   | 58.3     | 60.1       | .447            | 55.8       | 72        | N by E and calm       | ... | 59              | "     | Chiefly clear,    P. |

The mean pressure of the seven days

The average pressure of the corresponding period for 24 years, S. G.'s Office

Inches.

30.035

30.022

The total number of hours of bright sunshine

The maximum possible number of hours of sunshine

Hours.

64.9

75.4

The mean temperature of the seven days

The average temperature of the corresponding period for 24 years, S. G.'s Office

The extreme variation of temperature

The maximum temperature

°

65.8

69.2

23.5

78.5

The highest velocity of the wind in one hour

The highest pressure of wind on one square foot

Miles.

8

lbs.

Not measurable.

The mean relative humidity

The average relative humidity of the corresponding period for 24 years, S. G.'s Office

%

73

71

The total fall of rain from 4th to 10th December 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

The total fall from 1st January to 10th December 1887

The average fall of the corresponding period for 24 years, S. G.'s Office

Inches.

Nil

58.07

65.19

The mean pressure, temperature, &c., are deduced from the traces of the barograph and thermograph. The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

= fog, dew,

A. PEDLER,

For Offg. Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;  
Calcutta, the 12th December 1887.

## Meteorological Report of the Province of

| METEOROLOGICAL DIVISION. | DISTRICT.                                    | Representative stations. | STATION OBSERVATIONS.                         |  |                           |                            |                        |              |          |         |                                 |                                 |                         |                             |                          |                             |                            |                                     |
|--------------------------|--|--------------------------|---|--|---------------------------|----------------------------|------------------------|--------------|----------|---------|---------------------------------|---------------------------------|-------------------------|-----------------------------|--------------------------|-----------------------------|----------------------------|-------------------------------------|
|                          |  |                          | AIR PRESSURE.                                 |  |                           |                            |                        | TEMPERATURE. |          |         |                                 |                                 |                         | HUMIDITY.                   |                          | CLOUD.                      |                            |                                     |
|                          |  |                          | Highest, 10 A.M., barometer reading of month. | Lowest, 10 A.M., barometer reading of month. | Mean, 10 A.M., for month. | Mean reduced to sea-level. | Variation from normal. | of month.    | Highest. | Lowest. | Mean daily maximum temperature. | Mean daily minimum temperature. | Mean daily temperature. | Variation from normal mean. | Mean, 10 A.M., humidity. | Variation from normal mean. | Mean cloud amount, 10 A.M. | Variation from normal mean, 10 A.M. |
|                          |  |                          |   |  |                           |                            |                        |              |          |         |                                 |                                 |                         |                             |                          |                             |                            |                                     |
| SOUTH-WEST BENGAL.       | Pooree                                       | Gopalpore                | 30.078  | 29.831                                       | 30.004                    | 30.030                     | +0.09                  | 80.2         | 61.9     | 81.2    | 70.0                            | 73.0                            | +0.9                    | 67                          | —                        | 3.8                         | —                          | 2.54                                |
|                          | False Point                                  | False Point              | 30.115  | 29.897                                       | 30.035                    | 30.055                     | +0.07                  | 80.4         | 62.0     | 82.1    | 64.9                            | 73.5                            | -0.4                    | 68                          | -7                       | 5.1                         | -0.3                       | 3.08                                |
|                          | Cuttack                                      | Cuttack                  | 30.055  | 29.847                                       | 29.975                    | 30.053                     | +0.18                  | 80.9         | 67.8     | 80.0    | 66.6                            | 76.3                            | +0.8                    | 68                          | -10                      | 3.3                         | +1.0                       | 0.20                                |
|                          | Balasore                                     | Balasore                 | 30.003  | 29.863                                       | 30.002                    | 30.002                     | +0.31                  | 80.4         | 62.5     | 83.7    | 61.9                            | 72.3                            | +1.0                    | 61                          | —                        | 1.3                         | —                          | 0.18                                |
| SOUTH-WEST BENGAL.       | South-West Midnapore and South 24 Pargannas. | Saugor Island            | 30.117  | 29.883                                       | 30.033                    | 30.063                     | +0.14                  | 81.7         | 60.4     | 81.2    | 67.0                            | 74.1                            | -0.5                    | 72                          | -2                       | 2.3                         | +0.2                       | 4.34                                |
|                          | Midnapore                                    | Midnapore                | 30.014  | 29.803                                       | 29.927                    | 30.081                     | +0.48                  | 88.8         | 56.2     | 81.2    | 62.2                            | 73.2                            | +2.2                    | 54                          | —                        | 1.5                         | —                          | 0.12                                |
|                          | 24-Pargannas, Howrah, and Hooghly.           | Calcutta                 | 30.127  | 29.915                                       | 30.034                    | 30.050                     | +0.20                  | 83.0         | 60.0     | 81.1    | 64.9                            | 73.0                            | 0                       | 63                          | -11                      | 2.4                         | 0                          | 0.23                                |
|                          | Burdwan                                      | Burdwan                  | 30.048  | 29.855                                       | 29.953                    | 30.060                     | +0.08                  | 87.0         | 53.4     | 83.4    | 63.4                            | 73.4                            | +0.4                    | 52                          | -14                      | 1.3                         | -0.3                       | Nil                                 |
| SOUTH-WEST BENGAL.       | Bankura                                      | Bankura                  | 29.836  | 29.639                                       | 29.738                    | —                          | —                      | 88.6         | 51.3     | 84.1    | 62.4                            | 73.3                            | —                       | 57                          | —                        | 0.9                         | —                          | Nil                                 |
|                          | West Burdwan and Beerbhoom.                  | Raniganj                 | 29.820  | 29.626                                       | 29.733                    | 3.0.048                    | +0.30                  | 89.3         | 51.4     | 85.1    | 60.9                            | 73.0                            | +1.3                    | 47                          | —                        | 0.9                         | —                          | Nil                                 |
|                          | Moorshedabad                                 | Baranpore                | 30.091  | 29.918                                       | 30.002                    | 30.071                     | +0.24                  | 84.7         | 60.2     | 82.0    | 61.3                            | 73.2                            | -0.1                    | 60                          | -4                       | 1.4                         | -1.1                       | Nil                                 |
|                          | Nuddea                                       | Krishnagar               | 30.078  | 29.917                                       | 29.994                    | 30.061                     | —                      | 84.7         | 58.7     | 82.8    | 61.0                            | 73.3                            | —                       | 60                          | —                        | 2.3                         | —                          | 0.03                                |
| SOUTH-WEST BENGAL.       | Jessore and Khoulas                          | Jessore                  | 30.106  | 29.916                                       | 30.017                    | 30.051                     | +0.17                  | 80.7         | 53.5     | 84.2    | 61.1                            | 74.2                            | +0.5                    | 67                          | -5                       | 2.6                         | +0.2                       | 0.13                                |
|                          | Chittagong                                   | Chittagong               | 30.009  | 29.861                                       | 29.933                    | 30.030                     | +0.13                  | 87.1         | 60.1     | 84.2    | 63.2                            | 73.1                            | +0.5                    | 75                          | -4                       | 2.5                         | -0.2                       | 3.74                                |
|                          | Chittagong Hill Tracts                       | Dumturi                  | —   | —  | —                         | —                          | —                      | —            | —        | —       | —                               | —                               | —                       | —                           | —                        | —                           | —                          | —                                   |
|                          | Backerganj                                   | Barisal                  | 30.003  | 29.901                                       | 30.017                    | 30.020                     | +0.02                  | 84.3         | 61.1     | 81.9    | 65.3                            | 73.0                            | +0.4                    | 70                          | —                        | 1.4                         | —                          | 5.28                                |
| SOUTH-WEST BENGAL.       | Noakhally                                    | Noakhally                | 30.018  | 29.914                                       | 29.977                    | 30.021                     | +0.31                  | 84.5         | 58.5     | 82.9    | 64.1                            | 73.5                            | 0                       | 65                          | —                        | 2.3                         | —                          | 4.71                                |
|                          | Furzedpore                                   | Furzedpore               | 30.030  | 29.921                                       | 30.005                    | 30.045                     | +0.70                  | 83.5         | 59.0     | 81.3    | 63.0                            | 73.2                            | +0.6                    | 60                          | —                        | 0.6                         | —                          | 0.25                                |
|                          | Dacca  | Dacca                    | 30.036  | 29.833                                       | 30.0.81                   | 30.041                     | +0.23                  | 85.1         | 53.4     | 83.6    | 60.0                            | 74.8                            | +0.1                    | 70                          | -2                       | 2.1                         | -0.1                       | 1.09                                |
|                          | Tipperah                                     | Comilla                  | 30.074  | 29.912                                       | 29.993                    | 30.035                     | +0.67                  | 87.5         | 57.0     | 81.4    | 63.9                            | 74.2                            | +0.8                    | 69                          | —                        | 1.5                         | —                          | 0.32                                |
| SOUTH-WEST BENGAL.       | Mymensingh                                   | Mymensingh               | 30.079  | 29.916                                       | 30.000                    | 30.060                     | +0.79                  | 85.4         | 56.1     | 83.1    | 63.5                            | 73.3                            | +0.1                    | 75                          | —                        | 3.1                         | —                          | 0.07                                |
|                          | Bogra  | Bogra                    | 30.038  | 29.888                                       | 29.959                    | 30.023                     | —                      | 84.3         | 53.3     | 82.7    | 62.2                            | 72.4                            | —                       | 71                          | —                        | 0.7                         | —                          | Nil                                 |
|                          | Pubna  | Serajgunj                | 30.080  | 29.920                                       | 29.998                    | 30.040                     | +0.44                  | 86.1         | 56.4     | 83.4    | 63.8                            | 73.1                            | +1.6                    | 71                          | —                        | 1.4                         | —                          | Nil                                 |
|                          | Rajshahye                                    | Rampore Beaulah.         | 30.077  | 29.907                                       | 29.957                    | 30.058                     | +0.72                  | 85.2         | 55.7     | 82.3    | 60.0                            | 71.1                            | +1.8                    | 61                          | —                        | 0.4                         | —                          | 0.03                                |
| SOUTH-WEST BENGAL.       | Maldah                                       | Maldah                   | 29.947  | 29.824                                       | 29.905                    | —                          | —                      | 86.0         | 53.5     | 82.5    | 60.2                            | 71.4                            | —                       | 63                          | —                        | 0.5                         | —                          | Nil                                 |
|                          | Dinapore                                     | Dinapore                 | 29.985  | 29.830                                       | 29.920                    | 30.043                     | +0.3                   | 84.1         | 51.7     | 82.8    | 61.2                            | 72.0                            | +2.8                    | 65                          | —                        | 0.8                         | —                          | Nil                                 |
|                          | Rungpore                                     | Rungpore                 | 30.009  | 29.830                                       | 29.919                    | 30.058                     | +0.10                  | 87.8         | 56.3     | 83.1    | 61.2                            | 72.4                            | +2.3                    | 59                          | —                        | 0                           | —                          | Nil                                 |
|                          | Jalpigoree and Cooch Behar.                  | Jalpigoree               | 29.861  | 29.705                                       | 29.777                    | 30.072                     | +0.15                  | 82.9         | 53.9     | 81.7    | 61.1                            | 71.4                            | +1.3                    | 68                          | —                        | 0                           | —                          | Nil                                 |
| SOUTH-WEST BENGAL.       | Darjeeling Hill Tracts                       | Darjeeling               | 23.217  | 23.024                                       | 23.024                    | —                          | -0.40                  | 37.6         | 39.7     | 53.0    | 42.7                            | 48.9                            | +1.4                    | 73                          | -8                       | 3.2                         | -1.0                       | 0.03                                |
|                          | Purneah and North Bhagulpore.                | Purneah                  | 30.051  | 29.890                                       | 29.963                    | 30.002                     | +0.30                  | 82.2         | 51.8     | 80.3    | 53.1                            | 70.1                            | -0.0                    | 71                          | +2                       | 0.7                         | -0.3                       | —                                   |
|                          | Mozufferpore                                 | Mozufferpore             | —   | —  | —                         | —                          | —                      | —            | —        | —       | —                               | —                               | —                       | —                           | —                        | —                           | —                          | —                                   |
|                          | Durbhunga                                    | Durbhunga                | 30.002  | 29.836                                       | 29.913                    | 30.055                     | +0.53                  | 83.9         | 57.4     | 81.3    | 62.3                            | 71.0                            | -0.5                    | 75                          | +8                       | 1.0                         | +0.1                       | Nil                                 |
| SOUTH-WEST BENGAL.       | Chumbarun                                    | Mothuri                  | 29.900  | 29.733                                       | 29.816                    | 30.027                     | +0.25                  | 84.7         | 45.7     | 81.4    | 53.0                            | 69.2                            | +1.2                    | 48                          | —                        | 1.1                         | —                          | Nil                                 |
|                          | Sarun  | Chupra                   | 29.989  | 29.770                                       | 29.860                    | 30.070                     | +0.33                  | 84.5         | 53.3     | 81.8    | 58.9                            | 70.4                            | +0.5                    | 65                          | —                        | 0                           | —                          | Nil                                 |
|                          | Shahabad                                     | Dehree                   | 29.817  | 29.632                                       | 29.722                    | 30.087                     | +0.46                  | 85.7         | 58.0     | 79.3    | 69.9                            | 69.7                            | +1.3                    | 62                          | —                        | 0.1                         | —                          | Nil                                 |
|                          | Arrah  | Arrah                    | 29.946  | 29.755                                       | 29.840                    | 30.005                     | +0.65                  | 85.4         | 51.4     | 82.7    | 56.1                            | 70.4                            | +0.5                    | 40                          | —                        | 0.4                         | —                          | Nil                                 |
| SOUTH-WEST BENGAL.       | Gya  | Gya                      | 29.953  | 29.781                                       | 29.864                    | 30.033                     | +0.42                  | 85.3         | 49.9     | 82.2    | 56.2                            | 69.2                            | —                       | 58                          | —                        | 0.7                         | —                          | Nil                                 |
|                          | Patna  | Bankipore                | 29.773  | 29.589                                       | 29.079                    | 30.007                     | -0.03                  | 84.9         | 53.0     | 83.2    | 58.1                            | 70.7                            | -0.2                    | 40                          | -6                       | 1.0                         | -0.7                       | Nil                                 |
|                          | South Bhagulpore and Monghyr.                | Bhagulpore               | 30.000  | 29.816                                       | 29.908                    | 30.033                     | +0.23                  | 87.4         | 52.9     | 82.9    | 59.9                            | 71.4                            | +1.0                    | 61                          | 0                        | 0.6                         | -1.1                       | Nil                                 |
|                          | South Bhagulpore and Monghyr.                | Bhagulpore               | 30.012  | 29.823                                       | 29.908                    | 30.072                     | +0.59                  | 83.3         | 53.0     | 81.1    | 58.9                            | 70.0                            | +0.7                    | 58                          | —                        | 0.2                         | —                          | Nil                                 |
| SOUTH-WEST BENGAL.       | Sonthal Pargannas                            | Naya Dooanka             | 29.032  | 29.440                                       | 29.548                    | —                          | +0.19                  | 86.1         | 52.0     | 83.0    | 54.9                            | 70.9                            | +1.5                    | 51                          | —                        | 0.3                         | —                          | Nil                                 |
|                          | Hazaribagh                                   | Hazaribagh               | 28.114  | 27.922                                       | 28.030                    | 30.084                     | +0.29                  | 82.2         | 51.8     | 78.2    | 67.5                            | 67.3                            | +0.5                    | 41                          | -12                      | 1.4                         | -0.7                       | Nil                                 |
|                          | Loharunga and Manbhoom.                      | Kanchoe                  | 27.978  | 27.811                                       | 27.901                    | 30.085                     | +0.81                  | 82.2         | 47.9     | 77.9    | 55.6                            | 66.4                            | +1.6                    | 50                          | —                        | 1.8                         | —                          | Nil                                 |
|                          | Chyobassa                                    | Chyobassa                | 29.360  | 29.171                                       | 29.278                    | —                          | +0.24                  | 83.4         | 51.3     | 83.3    | 59.6                            | 71.5                            | +1.1                    | 46                          | —                        | 0.9                         | —                          | Nil                                 |
| SOUTH-WEST BENGAL.       | Sibangar                                     | Sibangar                 | 29.841  | 29.086                                       | 29.704                    | 30.111                     | +0.33                  | 81.0         | 51.2     | 78.6    | 59.5                            | 69.1                            | 0                       | 55                          | -1                       | 3.0                         | -1.3                       | Nil                                 |
|                          | Thunuri                                      | Thunuri                  | 30.030  | 29.861                                       | 29.946                    | 30.067                     | +0.16                  | 84.4         | 57.8     | 78.9    | 61.9                            | 70.4                            | -1.2                    | 75                          | 0                        | 0.2                         | -1.1                       | Nil                                 |
|                          | Silchar                                      | Silchar                  | 30.038  | 29.866                                       | 29.954                    | 30.052                     | +0.03                  | 80.5         | 56.3     | 80.1    | 63.5                            | 73.9                            | +1.1                    | 65                          | 9                        | 4.0                         | +0.6                       | 2.3                                 |
|                          | Silchar                                      | Silchar                  | 30.038  | 29.866                                       | 29.954                    | 30.052                     | +0.03                  | 80.5         | 56.3     | 80.1    | 63.5                            | 73.9                            | +1.1                    | 65                          | 9                        | 4.0                         | +0.6                       | 2.3                                 |

+ 26 days.  
 + 29 do.  
 + 25 do.  
 + 28 do.

Bengal for the month of November 1887.

| DISTRICT OBSERVATIONS. |              |                      |                       |                                   |                   |              |            |                            |                                   | Representative stations. | DISTRICT.                                    | METEOROLOGICAL DIVISION. |
|------------------------|--------------|----------------------|-----------------------|-----------------------------------|-------------------|--------------|------------|----------------------------|-----------------------------------|--------------------------|--|--------------------------|
| RAINFALL.              |              |                      |                       |                                   |                   |              |            |                            |                                   |                          |  |                          |
| Of month.              |              |                      |                       |                                   | Since 15th May.   |              |            |                            |                                   |                          |  |                          |
| Mean of district.      | Normal mean. | Variation from mean. | Number of rainy days. | Normal mean number of rainy days. | Mean of district. | Normal mean. | Variation. | Mean number of rainy days. | Normal mean number of rainy days. |                          |  |                          |
| 1.90                   | 1.05         | -0.15                | 3.5                   | 3.0                               | 43.98             | 55.34        | -12.36     | 60.9                       | 81.8                              | Gopalpore ...            | Dooree ...                                   | ORISSA.                  |
| 0.86                   | 1.01         | -0.15                | 2.4                   | 1.8                               | 44.87             | 51.07        | -6.80      | 74.2                       | 78.5                              | Cuttack ...              | Cuttack ...                                  |                          |
| 0.19                   | 0.88         | -0.69                | 1.8                   | 1.5                               | 41.81             | 53.36        | -11.55     | 64.9                       | 76.1                              | Balasore ...             | Balasore ...                                 |                          |
| 1.35                   | 0.58         | +0.77                | 1.3                   | 1.5                               | 58.28             | 61.78        | -3.50      | 70.0                       | 84.2                              | Sanger Island ...        | South-West Midnapore and South 24-Pargannas. |                          |
| 0.05                   | 0.25         | -0.20                | 0.3                   | 0.8                               | 50.45             | 50.80        | -0.35      | 65.7                       | 70.0                              | Midnapore ...            | Midnapore ...                                | SOUTH-WEST BENGAL.       |
| 0.04                   | 0.33         | -0.29                | 0.3                   | 1.1                               | 40.50             | 51.53        | -11.03     | 74.1                       | 80.0                              | Calcutta ...             | 24-Pargannas, Howrah, and Hooghly.           |                          |
| 0.33                   | 0.30         | +0.03                | 0.7                   | 0.7                               | 45.04             | 46.19        | -1.15      | 71.4                       | 74.5                              | Burdwan ...              | Burdwan ...                                  |                          |
| Nil                    | 0.34         | -0.34                | 0.0                   | 0.8                               | 40.35             | 51.70        | -11.35     | 71.0                       | 81.2                              | Bankoora ...             | Bankoora ...                                 |                          |
| Nil                    | 0.15         | -0.15                | 0.0                   | 0.6                               | 47.59             | 51.85        | -4.26      | 75.1                       | 82.1                              | Raniganj ...             | West Burdwan and Beerbhoom.                  |                          |
| Nil                    | 0.26         | -0.26                | 0.0                   | 0.5                               | 58.31             | 40.19        | +18.12     | 80.8                       | 77.2                              | Berhampore ...           | Moorsheadabad ...                            |                          |
| 0.01                   | 0.33         | -0.32                | 0.1                   | 0.8                               | 42.78             | 48.97        | -6.19      | 73.3                       | 76.8                              | Krishnagore ...          | Nuddea ...                                   |                          |
| 0.42                   | 0.37         | +0.05                | 1.0                   | 1.1                               | 41.50             | 53.19        | -11.69     | 76.6                       | 83.7                              | Jessore ...              | Jessore and Khoolna ...                      |                          |
| 3.76                   | 1.75         | +2.01                | 3.5                   | 2.5                               | 96.63             | 113.54       | -17.51     | 104.5                      | 106.1                             | Chittagong ...           | Chittagong ...                               |                          |
| 3.08                   | 1.93         | +2.05                | 4.0                   | 2.0                               | 61.50             | 81.19        | -19.69     | 104.5                      | 111.8                             | Demagiri ...             | Chittagong Hill Tracts                       |                          |
| 4.56                   | 1.16         | +3.40                | 3.3                   | 1.7                               | 59.32             | 77.24        | -17.92     | 91.6                       | 105.2                             | Barrisal ...             | Backergunj ...                               |                          |
| 4.82                   | 2.35         | +2.47                | 3.0                   | 2.2                               | 72.67             | 108.26       | -35.59     | 92.0                       | 107.4                             | Noakholy ...             | Noakholy ...                                 |                          |
| 0.41                   | 0.39         | +0.02                | 1.0                   | 1.0                               | 35.90             | 55.83        | -19.93     | 65.7                       | 80.0                              | Furzedpore ...           | Furzedpore ...                               | EAST BENGAL.             |
| 1.08                   | 0.51         | +0.57                | 1.5                   | 1.0                               | 40.29             | 60.47        | -20.18     | 84.5                       | 89.4                              | Dacca ...                | Dacca ...                                    |                          |
| 1.12                   | 0.72         | +0.40                | 2.5                   | 1.4                               | 42.01             | 70.47        | -28.46     | 75.2                       | 95.8                              | Commillah ...            | Tipperah ...                                 |                          |
| 0.12                   | 0.25         | -0.13                | 0.6                   | 0.8                               | 60.33             | 67.05        | -6.72      | 75.8                       | 89.3                              | Mymensingh ...           | Mymensingh ...                               |                          |
| Nil                    | 0.38         | -0.38                | 0.0                   | 0.8                               | 60.38             | 56.58        | +3.80      | 71.9                       | 76.7                              | Bogra ...                | Bogra ...                                    |                          |
| 0.05                   | 0.28         | -0.23                | 0.5                   | 0.8                               | 44.00             | 53.38        | -9.38      | 79.0                       | 79.0                              | Serajgunj ...            | Pubna ...                                    |                          |
| 0.15                   | 0.20         | -0.05                | 0.5                   | 0.4                               | 40.57             | 53.52        | -3.95      | 63.0                       | 76.2                              | Rampore Beaulah ...      | Rajshahye ...                                |                          |
| Nil                    | 0.18         | -0.18                | 0.0                   | 0.5                               | 40.61             | 54.20        | -13.59     | 71.0                       | 82.5                              | Maldah ...               | Maldah ...                                   |                          |
| Nil                    | 0.06         | -0.06                | 0.0                   | 0.3                               | 60.06             | 55.51        | +4.55      | 77.4                       | 75.0                              | Dinagore ...             | Dinagore ...                                 |                          |
| Nil                    | 0.10         | -0.10                | 0.0                   | 0.3                               | 80.00             | 72.77        | +7.23      | 73.3                       | 74.8                              | Rungpore ...             | Rungpore ...                                 |                          |
| Nil                    | 0.06         | -0.06                | 0.0                   | 0.2                               | 117.42            | 109.07       | +8.35      | 88.6                       | 95.9                              | Jalpigoree ...           | Jalpigoree and Cooch Behar.                  |                          |
| 0.07                   | 0.26         | -0.19                | 0.5                   | 1.2                               | 117.17            | 119.81       | -2.64      | 116.4                      | 109.6                             | Darjeeling ...           | Darjeeling Hill Tracts...                    | NORTH BENGAL.            |
| Nil                    | 0.06         | -0.06                | 0.0                   | 0.2                               | 65.01             | 57.39        | +7.62      | 71.4                       | 68.4                              | Purneah ...              | Purneah and North Dinagupore.                |                          |
| Nil                    | 0.08         | -0.08                | 0.0                   | 0.3                               | 46.80             | 42.50        | +4.30      | 59.7                       | 55.6                              | Mozufferpore ...         | Mozufferpore ...                             |                          |
| Nil                    | 0.06         | -0.06                | 0.0                   | 0.3                               | 40.62             | 43.64        | -3.02      | 64.7                       | 55.6                              | Durbhunga ...            | Durbhunga ...                                |                          |
| Nil                    | 0.01         | -0.01                | 0.0                   | 0.2                               | 49.38             | 45.63        | +3.75      | 54.0                       | 51.9                              | Motihari ...             | Chumpanan ...                                |                          |
| Nil                    | 0.18         | -0.18                | 0.0                   | 0.5                               | 39.35             | 42.32        | -2.97      | 65.0                       | 53.4                              | Chupra ...               | Saran ...                                    |                          |
| Nil                    | 0.27         | -0.27                | 0.0                   | 0.4                               | 37.55             | 39.40        | -1.85      | 51.2                       | 59.4                              | Dehree ...               | Shahabad ...                                 |                          |
| Nil                    | 0.24         | -0.24                | 0.0                   | 0.5                               | 38.00             | 40.80        | -2.80      | 56.3                       | 55.0                              | Gya ...                  | Gya ...                                      |                          |
| Nil                    | 0.19         | -0.19                | 0.0                   | 0.4                               | 36.04             | 40.82        | -4.78      | 56.1                       | 60.1                              | Bankipore ...            | Panna ...                                    |                          |
| Nil                    | 0.19         | -0.19                | 0.0                   | 0.4                               | 42.93             | 42.52        | +0.41      | 59.2                       | 64.5                              | Bhagulpore ...           | South Bhagulpore and Mouknyr.                |                          |
| Nil                    | 0.10         | -0.10                | 0.0                   | 0.6                               | 52.49             | 50.02        | +2.47      | 74.5                       | 74.5                              | Naya Doonka ...          | South Pargannas ...                          |                          |
| Nil                    | 0.33         | -0.33                | 0.0                   | 1.1                               | 46.42             | 49.35        | -2.93      | 63.0                       | 60.3                              | Hararibach ...           | Hararibach ...                               | SOUTH BENGAL.            |
| Nil                    | 0.33         | -0.33                | 0.0                   | 1.0                               | 44.34             | 46.61        | -2.27      | 67.1                       | 80.1                              | Chanchee ...             | Lomardunga and Malbazar.                     |                          |
| Nil                    | 0.23         | -0.23                | 0.0                   | 1.5                               | 49.62             | 50.43        | -0.81      | 71.0                       | 90.2                              | Chaubasa ...             | Chaubasa ...                                 |                          |
| Nil                    | 0.23         | -0.23                | 0.0                   | 1.5                               | 49.62             | 50.43        | -0.81      | 71.0                       | 90.2                              | Sibsagar ...             | Sibsagar ...                                 |                          |
| Nil                    | 0.23         | -0.23                | 0.0                   | 1.5                               | 49.62             | 50.43        | -0.81      | 71.0                       | 90.2                              | Dhubri ...               | Dhubri ...                                   | CHUTTA NAGPUR.           |
| Nil                    | 0.23         | -0.23                | 0.0                   | 1.5                               | 49.62             | 50.43        | -0.81      | 71.0                       | 90.2                              | Shilohar ...             | Shilohar ...                                 |                          |









SUPPLEMENT TO THE CALCUTTA GAZETTE, DECEMBER 14, 1887.

**in Bengal in November 1887—continued.**

[illegible]

SUPPLEMENT TO THE CALCUTTA GAZETTE, DECEMBER 11, 1967

### Table of Rainfall recorded at Stations

| Meteorological<br>division. | District.                | Station.                | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  |
|-----------------------------|--------------------------|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>SOUTH BENGAL</b>         | Shahabad ...             | Buxar ...               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Dehree ...              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Shubsooh ...            | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Sasemim ...             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Arrai ...               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             | Gya ...                  | Mohaniah ...            | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Aurangabad... ..        | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Gya ...                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Nowadah ...             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Johanabad ...           | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Arrai ...               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Daudnagar ...           | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Sherrghati ...          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Rajauli ...             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Fabri Bars-<br>wan. ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             | Patna ...                | Patna ...               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Dinapore ...            | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Behar ...               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Barrh ...               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Bickram<br>Hills ...    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             | Monghyr ...              | Begooneral ...          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Monghyr ...             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Jamui ...               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Gogri ...               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Sheikhpura ...          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             | South Bhagal-<br>pore.   | Bhagalpore ...          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Kolgong ...             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             | Sonthal Per-<br>gunnahs. | Rajmehal ...            | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Godda ...               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|                             |                          | Pakour ...              | ... |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

al for the month of November 1887—concluded.

| 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | Number of rainy days. | Average number of rainy days. | Total rainfall for the month. | Average rainfall for the month. | Highest rainfall during the month. | Total rainfall from 1st January 1887 up to 30th Nov. 1887. | Average rainfall from 1st January up to 30th Nov. 1887. | Station.        | District.    | Meteorological division. |
|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------|-------------------------------|-------------------------------|---------------------------------|------------------------------------|--|---|-----------------|--------------|--------------------------|
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.5                           | Nil                           | 0.15                            | Nil                                | 36.48  | 39.59   | Ruxar           | Shahabad ... | SOUTH BEHAR.             |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.3                           | Nil                           | 0.46                            | Nil                                | 40.41  | ?   | Dehree.         | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.5                           | Nil                           | 0.21                            | Nil                                | 42.78  | 42.78   | Buabooch.       | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.4                           | Nil                           | 0.20                            | Nil                                | 54.46  | 41.85   | Sasaram.        | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 48.10  | 44.85   | Arrah.          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | ?  | ?   | Mohaniah.       | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.3                           | Nil                           | 0.23                            | Nil                                | 32.18  | 43.24   | Aurangabad...   | Gya          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.6                           | Nil                           | 0.21                            | Nil                                | 44.14  | 41.04   | Gya.            | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.4                           | Nil                           | 0.18                            | Nil                                | 38.69  | 41.60   | Nowadah.        | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.3                           | Nil                           | 0.25                            | Nil                                | 48.83  | 42.37   | Jehanabad.      | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 42.21  | ?   | Arwal.          | ...          | Patna.                   |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 29.21  | ?   | Daudnagar.      | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 38.90  | ?   | Sherrghati.     | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 52.15  | ?   | Rajauli.        | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 24.30  | ?   | Pakri Bara-wan. | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.4                           | Nil                           | 0.21                            | Nil                                | 38.64  | 41.79   | Patna           | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.3                           | Nil                           | 0.18                            | Nil                                | 40.37  | 42.29   | Dinapore.       | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.4                           | Nil                           | 0.23                            | Nil                                | 40.06  | 43.65   | Behar.          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.4                           | Nil                           | 0.22                            | Nil                                | 38.61  | 41.08   | Barhi.          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 41.35  | ?   | Bicram.         | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 36.97  | ?   | Hilsa.          | ...          | Monghyr.                 |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.4                           | Nil                           | 0.29                            | Nil                                | 55.03  | 42.11   | Hagoosera       | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.5                           | Nil                           | 0.25                            | Nil                                | 52.08  | 45.36   | Monghyr.        | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.4                           | Nil                           | 0.09                            | Nil                                | 45.35  | 44.79   | Jamui.          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | ?  | ?   | Gogri.          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 30.68  | ?   | Sheikpura.      | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.5                           | Nil                           | 0.22                            | Nil                                | 44.07  | 47.37   | Bhagulpore      | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.4                           | Nil                           | 0.18                            | Nil                                | 43.85  | 45.90   | Banka.          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 40.73  | ?   | Kolgong.        | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.4                           | Nil                           | 0.23                            | Nil                                | 61.59  | 56.09   | Rajmehal        | ...          | Sonthal Per-gunnahs.     |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.3                           | Nil                           | 0.09                            | Nil                                | 55.74  | 47.60   | Godda.          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.4                           | Nil                           | 0.09                            | Nil                                | 52.65  | 50.51   | Pakour.         | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 1.1                           | Nil                           | 0.17                            | Nil                                | 49.85  | 57.53   | Nya Dooinka.    | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.5                           | Nil                           | 0.14                            | Nil                                | 52.32  | 52.30   | Deoghur.        | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.7                           | Nil                           | 0.29                            | Nil                                | 44.91  | 51.16   | Jaintara.       | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | ?  | ?   | Simra.          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 40.98  | ?   | Nawhat.         | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.7                           | Nil                           | 0.20                            | Nil                                | 43.48  | 50.44   | Pachamba        | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 1.2                           | Nil                           | 0.25                            | Nil                                | 49.02  | 49.31   | (Girdi).        | ...          | CENTRAL NAGPUR.          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 1.4                           | Nil                           | 0.26                            | Nil                                | 48.20  | 49.18   | Hazaribagh.     | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 1.3                           | Nil                           | 0.48                            | Nil                                | 50.69  | 49.26   | Semtagurah.     | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.5                           | Nil                           | 0.30                            | Nil                                | 59.00  | 64.48   | Mahudi Hills.   | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 53.50  | ?   | Jhoomrah Hills  | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 51.04  | ?   | Barhi.          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 51.04  | ?   | Chitra.         | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 75.25  | ?   | Karagdeha.      | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 53.73  | ?   | Kamghar.        | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 56.06  | ?   | Lohardugga      | ...          | LOHARDUGGA.              |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 1.2                           | Nil                           | 0.30                            | Nil                                | 50.90  | 49.78   | Ranchi.         | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.8                           | Nil                           | 0.45                            | Nil                                | 52.61  | 44.07   | Palamow.        | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 44.26  | ?   | Silla.          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 30.80  | ?   | Balumat.        | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 57.15  | ?   | Hosainabad.     | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | ?  | ?   | Garwah.         | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 1.5                           | Nil                           | 0.23                            | Nil                                | 52.28  | 55.17   | Chyebassa       | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 39.66  | ?   | Chakradhar.     | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 58.70  | ?   | Ghatila.        | ...          | Singbhoom.               |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 44.15  | ?   | Baharagura.     | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 1.2                           | Nil                           | 0.16                            | Nil                                | 47.93  | 50.14   | Purnia          | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | 0.6                           | Nil                           | 0.10                            | Nil                                | 32.32  | 47.75   | Gobindpore.     | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 30.90  | ?   | Raghunath.      | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | 45.74  | ?   | pore.           | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | ?  | ?   | Barrabhoom.     | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | ?  | ?   | Jhalda.         | ...          |                          |
| ... | ... | ... | ... | ... | ... | ... | ... | Nil                   | ?                             | Nil                           | ?                               | Nil                                | ?  | ?   | Char.           | ...          |                          |

**SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS  
TAKEN IN ASSAM, FOR THE MONTH OF NOVEMBER 1887.**

THE normal features of the meteorology of Bengal during November are very simple. Northerly winds blow over the whole of Bengal and these usually extend as a north-easterly wind current over the north and centre of the Bay. These northerly winds are dry and usually give in Bengal almost cloudless skies; temperature also diminishes steadily during the month, the diminution being strongly marked in the night temperatures, and the air is dry. As a rule, little or no rain falls unless it is brought up by one or other of two kinds of disturbances, which almost reverse the normal weather conditions. The first class of disturbances are barometric depressions or cyclonic storms which are formed in the south of the Bay in front of the retreating south-west monsoon. When they form as they do occasionally, they usually advance towards the Madras coast and expend their main force over the south of the Peninsula, but they also generally modify the weather over the whole of the Bay, and if the disturbance is a large one, humid winds may again be forced over Bengal, when skies will cloud over and temperature and humidity rapidly increase, and rain may fall, particularly over the southern and eastern parts of the province. The second class of disturbances are land formed barometric depressions which originate over Upper India and drift sometimes over Bengal, giving clouded skies, increased humidity and temperature, and sometimes light rain. These land formed disturbances seldom occur in November, and if they do occur, they are of little importance.

Except therefore for rainfall brought up by the occurrence of storms in the Bay, as a rule the province is almost rainless in November. Its occurrence and distribution are therefore very capricious, and the normal rainfall of November in Bengal is extremely small. Orissa usually receives a fall of about an inch and a third, and East Bengal one of nearly an inch; but in the other districts the fall is from about a tenth up to a third of an inch.

*Meteorology of the month.*—At the close of October a large and diffused though by no means intense barometric depression had formed in the south of the Bay, and on the 31st of that month the centre of the feeble storm was off the west coast of the Bay nearly opposite to Madras. The storm subsequently filled up and did not pass over the land. The disturbed conditions, due to the disintegration of the storm, drifted over Bengal, temperature and humidity increased, skies rapidly clouded over, and rainfall became general over Orissa and East Bengal from the commencement of November, while a few showers fell in South-West Bengal. These disturbed conditions ceased from about the 4th or 5th, but on the 6th conditions became disturbed over the Central Provinces, and moderate general rain commenced to fall over this area on this day and on the 7th. This had the effect of partially stopping the cool dry northerly wind current which had been blowing over Bengal, and from the 8th slightly disturbed conditions again existed in Bengal for a few days. Ordinary cold weather conditions then set in from about the 10th, but on the 16th again conditions began to change, winds became variable and light, while cloud proportion, temperature and humidity rapidly increased in South Bengal. These changes were again produced by the existence of a feeble barometric depression in the centre of the Bay, which appeared off the Madras coast on the 18th, and on this day a few rain showers fell in Orissa. With the disappearance of the depression, conditions again became normal, but on the 23rd conditions were disturbed by the formation of a fresh depression in the Bay. The disturbed conditions, however, only lasted two days, and from the 25th up to the close of the month weather was of ordinary north-east monsoon conditions, skies became clear, and temperature and humidity decreased, while rainfall was entirely absent.

Neither of the barometric depressions which were formed in the Bay in November were of much importance, and the retreat of the south-west monsoon down the Bay this year has been unusually quiet, and quite different to the case of 1886, when three fierce cyclones were formed in succession in November, all of which crossed the Madras coast. No land formed depression was formed during the month, and thus the whole of the rainfall was brought up by the existence of the feeble storms in the Bay, and rainfall has therefore occurred principally in Orissa, South Bengal, and East Bengal, while Behar and Chutia Nagpur have been entirely rainless. The periods of rainfall were during the first three or four days of the month and again on the 18th.

*Pressure.*—The variations of pressure have been of the normal oscillatory character, and have therefore been of little importance. For the whole month, taking into consideration only those stations which have submitted observations for a series of years, and which therefore yield trustworthy averages, the mean pressure in Bengal has been 0.024 inch in excess of the normal. The excess pressure is, however, mainly confined to the north of the province, to North Behar and North Bengal, where at Durbhunga the excess has averaged 0.053 inch, and at Purneah it has averaged 0.050 inch; on the other hand the pressure in the south of the province has been almost normal, and at False Point the mean pressure has only been 0.007 inch in excess of the normal, at Burdwan the excess has been 0.008 inch, at Chittagong 0.013 inch, and at Saugor Island 0.014 inch. In Assam also pressure has been in slight excess by about 0.012 inch, the largest excess being at Sibsagar, where it has equalled 0.024 inch, and the smallest at Silchar, where it has been 0.003 inch.

*Temperature.*—The mean temperature of the province of Bengal for the month has been 0.6° in excess of the normal, but the excess has been mainly confined to North Bengal and

Chuttia Nagpur, where it has varied from one degree to one degree and a half. In North Behar, on the other hand, an almost normal temperature has obtained. The variations during the month have been somewhat important, for during the first week temperature was in defect by about 1°, for the second and third weeks temperature was almost normal, while in the fourth week there was a general excess of no less than 2·7°. The general distribution of temperature throughout the month is clearly shown in the table below, where the weekly variations of maximum, minimum and mean temperatures from the normal at nine typical stations in different districts of the province are given. From this table it will be seen that the largest variations have usually occurred in the night or minimum temperatures :—

|                      | WEEK ENDING NOVEMBER 4TH.   |   |  | WEEK ENDING NOVEMBER 11TH.  |   |  | WEEK ENDING NOVEMBER 18TH.  |   |  | WEEK ENDING NOVEMBER 25TH.  |   |  |
|----------------------|---|---|--|---|---|--|---|---|--|---|---|--|
|                      | Variation of actual mean maximum temperature of week from normal. | Variation of actual mean minimum temperature of week from normal. | Variation of actual daily temperature of week from normal. | Variation of actual mean maximum temperature of week from normal. | Variation of actual mean minimum temperature of week from normal. | Variation of actual daily temperature of week from normal. | Variation of actual mean maximum temperature of week from normal. | Variation of actual mean minimum temperature of week from normal. | Variation of actual daily temperature of week from normal. | Variation of actual mean maximum temperature of week from normal. | Variation of actual mean minimum temperature of week from normal. | Variation of actual daily temperature of week from normal. |
| Cuttack              | -2·3  | +0·2  | -1·1   | +1·1  | +2·3  | +1·7   | +1·1  | -0·9  | +0·1   | +1·7  | +3·7  | 2·2·9  |
| Calcutta (All-pore). | -2·7  | +0·3  | -1·7   | -0·6  | -2·5  | -1·5   | -0·6  | -1·1  | -0·8   | +1·5  | +2·8  | +2·1   |
| Dacca                | -3·5  | -0·6  | -2·1   | -1·9  | -3·2  | -2·6   | +0·1  | -1·1  | +0·6   | +2·2  | +3·3  | +2·7   |
| Burdwan              | -2·7  | -0·4  | -1·6   | +0·1  | -2·5  | -1·2   | +0·3  | -1·4  | -1·0   | +2·4  | +1·8  | +2·1   |
| Patna (Bankipour).   | +0·5  | +0·3  | +0·4   | +1·4  | +0·1  | +0·8   | -1·0  | -1·0  | -1·0   | +1·4  | +3·6  | +2·5   |
| Gya                  | -0·9  | -1·4  | -1·3   | +0·2  | -1·8  | -0·8   | -0·4  | -2·1  | -1·2   | +1·6  | +1·7  | +1·6   |
| Furness              | -4·9  | -1·1  | -2·5   | -3·4  | -2·4  | -2·9   | -2·5  | +2·1  | -0·2   | -0·6  | +2·5  | +0·9   |
| Hazarihagh           | +0·2  | -1·2  | -0·5   | +2·3  | -0·5  | +0·8   | -0·5  | -1·8  | -1·0   | +1·6  | +2·5  | +2·0   |
| Darjeeling           | -1·7  | -0·8  | -1·2   | -1·2  | +1·5  | +0·1   | +0·8  | +3·7  | +2·3   | +2·7  | +2·5  | +2·6   |

**Rainfall**—Has been entirely absent in Behar and Chuttia Nagpur, and practically absent in North Bengal, where the average fall only equals three hundredths of an inch. The heaviest falls have occurred in East Bengal, which has received an average amount of 2·46 inches. Orissa has also received an average fall of 0·77 inch, and South-West Bengal one of 0·20 inch. The fall in East Bengal has been nearly three times as large as the usual fall in November, and in Orissa and South-West Bengal the amounts have been about two-thirds of the normal fall. In East Bengal the Chittagong district received an exceptionally large average fall of 8·76 inches, while the Chittagong Hill Tracts, Backergunge, and Noakholly districts averaged about 4 inches. Falls averaging about an inch were received in the Dacca and Commilla districts, but in Furreedpur the fall was small. In Orissa the principal falls took place in the Pooree district, which averaged 1·90 inches, the Cuttack district received 0·56 inch, while in the Balasore district rainfall was almost absent. Finally, in South-West Bengal the falls were received mainly in the South-West Midnapore and South 24-Pergunnahs district, which averaged 1·35 inches; the Burdwan district received an average of 0·82 inch, and Jessore district 0·42 inch, but elsewhere rainfall was almost absent.

The following table gives in a condensed form the rainfall information for each of the seven large meteorological districts of Bengal for the present year up to the close of November. The numbers there given are the actual average rainfalls in each month in each district expressed as a percentage of the normal fall for the period, and the last column gives also the total rainfall up to the end of November expressed as a percentage of the normal amount :—

| Meteorological Divisions. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | Actual rainfall of first eleven months expressed as a percentage of the normal fall for the period. |
|---------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|---|
| Orissa                    | 119      | Nil       | 187    | 60     | 193  | 66    | 91    | 83      | 59         | 63       | 63        | 81  |
| South-West Bengal         | 2·93     | 3         | 252    | 56     | 139  | 82    | 103   | 76      | 83         | 74       | 63        | 98  |
| East Bengal               | 412      | 14        | 206    | 34     | 71   | 79    | 80    | 71      | 54         | 79       | 207       | 79  |
| North Bengal              | 530      | 3         | 374    | 114    | 163  | 139   | 67    | 97      | 83         | 77       | 19        | 108   |
| North Behar               | 381      | Nil       | 127    | 109    | 177  | 135   | 59    | 111     | 75         | 131      | Nil       | 103   |
| South Behar               | 411      | Nil       | 263    | 183    | 433  | 70    | 83    | 83      | 79         | 94       | Nil       | 100   |
| Chuttia Nagpur            | 600      | Nil       | 10     | 111    | 331  | 73    | 83    | 90      | 71         | 45       | Nil       | 91  |

In Assam the only station of the three submitting reports which received rain in November was Silchar which obtained 2·65 inches; Dhubri and Sibsagar were apparently rainless.

The following table gives the summary of the temperature and rainfall data of each of the seven Meteorological Divisions of the province for the month of November 1887 :—

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                   |                               |                         |                        |                       |  |           | RAINFALL.       |            |                          |                                 |            |                      |                 |
|------------------------------|--------------------------------|-------------------------------|-------------------------|------------------------|-----------------------|--|-----------|-----------------|------------|--------------------------|---------------------------------|------------|----------------------|-----------------|
|                              | Highest observed during month. | Lowest observed during month. | Averages for month.     |                        |                       | Average mean of month above or below normal mean of month. | Of month. |                 |            | Rainy days.              |                                 |            | Since 16th May 1887. |                 |
|                              |                                |                               | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average.  | Normal average. | Variation. | Average number in month. | Normal average number in month. | Variation. | Average.             | Normal average. |
|                              |                                |                               |                         |                        |                       |  |           |                 |            |                          |                                 |            |                      |                 |
|                              |                                |                               |                         |                        |                       |  |           |                 |            |                          |                                 |            |                      |                 |
| Orissa. ... ..               | 90°9                           | 82°0                          | 83°2                    | 83°8                   | 74°5                  | +0°6   | 0°77      | 1°23            | —0°46      | 2°5                      | 2°0                             | +0°5       | 43°48                | 55°38           |
| South-West Bengal ... ..     | 89°3                           | 83°5                          | 84°1                    | 83°5                   | 73°3                  | +0°4   | 0°20      | 0°38            | —0°18      | 0°4                      | 0°9                             | —0°5       | 46°71                | 51°58           |
| East Bengal ... ..           | 87°5                           | 86°1                          | 83°1                    | 84°9                   | 74°0                  | +0°4   | 2°46      | 0°93            | +1°54      | 2°2                      | 1°5                             | +0°7       | 55°50                | 74°70           |
| North Bengal ... ..          | 87°8                           | 84°7                          | 82°8                    | 81°2                   | 71°9                  | +1°4   | 0°05      | 0°16            | —0°13      | 0°1                      | 0°4                             | —0°3       | 75°60                | 69°48           |
| North Behar ... ..           | 84°7                           | 48°7                          | 81°6                    | 59°1                   | 70°4                  | +0°1   | Nil       | 0°08            | —0°08      | 0°0                      | 0°3                             | —0°3       | 52°07                | 47°74           |
| South Behar ... ..           | 87°4                           | 49°9                          | 82°1                    | 58°6                   | 70°3                  | +0°6   | Nil       | 0°20            | —0°20      | 0°0                      | 0°5                             | —0°5       | 41°35                | 43°38           |
| Chutia Nagpur ... ..         | 82°2°                          | 47°9°                         | 78°1°                   | 66°6°                  | 67°3°                 | +1°0°  | Nil       | 0°31            | —0°31      | 0°0                      | 1°1                             | —1°1       | 44°56                | 46°00           |
| Assam ... ..                 | 80°5                           | 51°2                          | 81°2                    | 61°7                   | 71°5                  | 0  |           |                 |            |                          |                                 |            |                      |                 |

\* Chyebassa not included.

METEOROLOGICAL OFFICE, BENGAL ;  
The 13th November 1887.

ALEXANDER PEDLER,  
Offg. Meteorological Reporter to the Govt. of Bengal.



Results of the Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 4th to 10th December 1887.

| Month.   | Date. | TEMPERATURE. |          |        |          | Mean wet bulb. | HYGROMETRY.     |            |           | Rain.   |
|----------|-------|--------------|----------|--------|----------|----------------|-----------------|------------|-----------|---------|
|          |       | Mean.        | Maximum. | Range. | Minimum. |                | Vapour tension. | Dew point. | Humidity. |         |
| 1887.    |       | °            | °        | °      | °        | °              | Inches.         | °          | %         | Inches. |
| December | 4th   | 68.6         | 80.7     | 22.0   | 58.7     | 62.6           | .489            | 58.3       | 70        | NH.     |
| "        | 5th   | 68.6         | 79.4     | 22.0   | 57.4     | 61.9           | .465            | 56.9       | 66        | "       |
| "        | 6th   | 67.1         | 78.0     | 23.0   | 55.9     | 61.1           | .460            | 56.6       | 69        | "       |
| "        | 7th   | 66.9         | 78.0     | 23.6   | 55.3     | 61.6           | .479            | 57.8       | 73        | "       |
| "        | 8th   | 67.1         | 78.9     | 23.0   | 55.9     | 62.0           | .490            | 58.4       | 74        | "       |
| "        | 9th   | 66.1         | 78.4     | 23.5   | 54.9     | 61.0           | .470            | 57.2       | 78        | "       |
| "        | 10th  | 67.2         | 78.7     | 21.7   | 57.0     | 61.7           | .478            | 57.7       | 72        | "       |

The mean temperature of the seven days ... 67.4  
The extreme variation of temperature ... 25.8  
The maximum temperature ... 80.7  
The mean relative humidity ... 71  
Inches.  
The total fall of rain from 4th to 10th December 1887 ... Nil.

The mean temperature and humidity are obtained by applying to the mean of the 10h, 16h, an minimum readings a correction dependent on the range, and derived from the hourly observation at the Surveyor-General's Office, Chowringhee, in past years.

METEOROLOGICAL OFFICE, INDIA,  
The 12th December 1887.

A. PEDLER,  
For Offg. Meteorological Reporter to the Govt. of India.

## Meteorological Report of the Province of Bengal

| METEOROLOGICAL DIVISION. | DISTRICT.              | Representative station. | STATION OBSERVATIONS.           |                            |                      |                       |                     |                      |                           |                     |                     |                           |                                   |                                 |                                     |                           |
|--------------------------|------------------------|-------------------------|---------------------------------|----------------------------|----------------------|-----------------------|---------------------|----------------------|---------------------------|---------------------|---------------------|---------------------------|-----------------------------------|---------------------------------|-------------------------------------|---------------------------|
|                          |                        |                         | AIR PRESSURE.                   |                            |                      | WIND.                 |                     | TEMPERATURE.         |                           |                     |                     |                           |                                   |                                 |                                     |                           |
|                          |                        |                         | Mean barometric height, 10 A.M. | Mean reduced to sea-level. | Variation from mean. | Prevailing direction. | Mean wind velocity. | Highest during week. | Date.                     | Lowest during week. | Date.               | Mean maximum temperature. | Mean minimum temperature of week. | Mean daily temperature of week. | Variation from normal mean of week. | Mean 10 A.M. temperature. |
|                          |                        |                         |                                 |                            |                      |                       |                     |                      |                           |                     |                     |                           |                                   |                                 |                                     |                           |
| OCEANIC.                 | Pooree                 | Gopalpore               | 30'064                          | 30'114                     | +0'034               | North-easterly        | 22'6                | 79'2                 | 3rd, 9th Dec.             | 61'9                | 3rd Dec.            | 79'2                      | 65'0                              | 72'1                            | +4'3                                | 77'5                      |
|                          | False Point            | False Point             | 30'008                          | 30'115                     | +0'014               | N                     | 19'2                | 79'0                 | 8th, 9th "                | 50'0                | 8th "               | 79'0                      | 60'8                              | 69'7                            | +0'6                                | 75'2                      |
|                          | Cuttack                | Cuttack                 | 30'034                          | 30'117                     | +0'023               | ENE                   | 21'0                | 88'4                 | 3rd "                     | 57'8                | 3rd "               | 85'4                      | 80'7                              | 72'6                            | +0'7                                | 76'8                      |
|                          | Balasore               | Balasore                | 30'089                          | 30'110                     | +0'010               | N                     | 74'3                | 82'4                 | 5th "                     | 53'5                | 3, 4, 7 "           | 81'5                      | 54'4                              | 67'9                            | +2'3                                | 72'0                      |
|                          | South-West Midnapore   | Sangor Island           | 30'008                          | 30'125                     | +0'022               | N, NNW                | 23'3                | 79'2                 | 4th "                     | 58'4                | 3rd "               | 78'4                      | 59'0                              | 69'0                            | -0'6                                | 72'0                      |
| SOUTH-WEST BENGAL.       | South 24-Pergunnahs    | Midnapore               | 29'908                          | 30'154                     | +0'038               | N                     | 63'8                | 83'3                 | 3rd, 4th "                | 53'7                | 9th "               | 81'4                      | 54'0                              | 68'0                            | +0'2                                | 75'2                      |
|                          | Howrah                 | Calcutta                | 30'108                          | 30'130                     | +0'043               | N                     | 68'0                | 78'5                 | 3rd, 5th "                | 54'1                | 9th "               | 77'6                      | 57'1                              | 67'4                            | -0'3                                | 70'0                      |
|                          | Hughly                 |                         |                                 |                            |                      | NE                    |                     |                      |                           |                     |                     |                           |                                   |                                 |                                     |                           |
|                          | Burdwan                | Burdwan                 | 30'030                          | 30'134                     | +0'027               |                       | 37'6                | 81'5                 | 3rd "                     | 54'3                | 7th "               | 79'3                      | 60'7                              | 68'3                            | -0'1                                | 71'4                      |
|                          | Bankoora               | Bankoora                | 29'811                          | —                          | —                    | Calm                  | 1'1                 | 81'3                 | 3rd "                     | 53'8                | 9th "               | 80'5                      | 54'6                              | 67'6                            | —                                   | 71'3                      |
|                          | Beerbhoom              | Raneesgunge             | 29'800                          | 30'121                     | +0'013               | NNW                   | 75'8                | 81'3                 | 5th "                     | 54'7                | 5th & 6th Dec.      | 80'4                      | 53'5                              | 68'0                            | +1'0                                | 73'1                      |
|                          | West Burdwan           |                         |                                 |                            |                      |                       |                     |                      |                           |                     |                     |                           |                                   |                                 |                                     |                           |
|                          | Moorsheadabad          | Berhampore              | 30'071                          | 30'140                     | +0'043               | NNW                   | 40'0                | 79'6                 | 3rd "                     | 50'2                | 6th & 9th Dec.      | 78'0                      | 57'1                              | 67'6                            | +0'1                                | 69'7                      |
|                          | Nuddea                 | Krishnagur              | 30'051                          | 30'122                     | —                    | NNW                   | 42'1                | 80'0                 | 3rd "                     | 51'7                | 6th "               | 79'1                      | 54'4                              | 67'0                            | —                                   | 71'3                      |
|                          | Jessore                | Jessore                 | 30'088                          | 30'123                     | +0'035               | NW                    | 38'8                | 82'7                 | 3rd "                     | 53'5                | 7th "               | 80'7                      | 53'1                              | 67'0                            | -0'3                                | 73'6                      |
| EAST BENGAL.             | Khoolna                |                         |                                 |                            |                      |                       |                     |                      |                           |                     |                     |                           |                                   |                                 |                                     |                           |
|                          | Chittagong             | Chittagong              | 29'960                          | 30'091                     | +0'026               | NNE                   | 34'0                | 82'1                 | 4th "                     | 56'1                | 9th "               | 80'9                      | 53'2                              | 69'5                            | -0'6                                | 73'2                      |
|                          | Chittagong Hill Tracts | Demagiri                |                                 |                            |                      |                       |                     |                      | Observations not received |                     |                     |                           |                                   |                                 |                                     |                           |
|                          | Backergunge            | Barrisal                | 30'090                          | 30'092                     | +0'043               | Calm and NE           | 48'2                | 80'8                 | 3rd & 4th Dec.            | 55'1                | 9th "               | 78'2                      | 56'4                              | 67'3                            | -0'4                                | 74'8                      |
|                          | Noakholly              | Noakholly               | 30'010                          | 30'094                     | +0'031               | Calm                  | Out of order.       | 84'3                 | 3rd "                     | 53'0                | 8th "               | 80'7                      | 54'3                              | 67'5                            | +0'5                                | 74'2                      |
|                          | Furzedpore             | Furzedpore              | 30'077                          | 30'118                     | +0'060               | N                     | 33'0                | 80'7                 | 3rd "                     | 53'5                | 8th "               | 78'5                      | 55'7                              | 63'1                            | -0'6                                | 71'4                      |
|                          | Tacca                  | Dacca                   | 30'064                          | 30'107                     | +0'041               | N                     | 41'0                | 83'1                 | 3rd & 4th Dec.            | 55'1                | 7th "               | 80'9                      | 50'9                              | 68'0                            | -0'3                                | 73'1                      |
|                          | Commillah              | Commillah               | 30'061                          | 30'101                     | +0'037               | NW                    | 19'5                | 85'3                 | 3rd "                     | 50'1                | 9th "               | 82'0                      | 51'0                              | 67'5                            | 0                                   | 71'6                      |
|                          | Mymensingh             | Mymensingh              | 30'070                          | 30'150                     | +0'073               | ENE                   | 28'7                | 81'7                 | 1th "                     | 53'1                | 3rd "               | 78'1                      | 51'0                              | 60'1                            | -0'3                                | 71'6                      |
|                          | Bogra                  | Bogra                   | 30'023                          | 30'088                     | —                    | Calm and NE           | 23'0                | 81'6                 | 4th "                     | 53'6                | 5th "               | 79'3                      | 54'3                              | 66'8                            | —                                   | 68'9                      |
| NORTH BENGAL.            | Patna                  | Serajgunge              | 30'063                          | 30'111                     | +0'040               | NE                    | 19'9                | 82'0                 | 3rd "                     | 52'3                | 4th & 5th Dec.      | 79'0                      | 53'8                              | 66'7                            | +0'3                                | 71'3                      |
|                          | Rajshahye              | Rampore Beau-<br>loah.  | 30'048                          | 30'120                     | +0'000               | N                     | 92'1                | 80'3                 | 3rd to 5th Dec.           | 52'7                | 6th "               | 79'1                      | 53'8                              | 66'5                            | +2'1                                | 71'9                      |
|                          | Maldah                 | Maldah                  | 29'976                          | —                          | —                    | Calm                  | 16'0                | 86'8                 | 7th "                     | 49'4                | 6th "               | 80'7                      | 53'2                              | 67'0                            | —                                   | 69'7                      |
|                          | Dinapore               | Dinapore                | 29'983                          | 30'108                     | +0'038               | WNW                   | 40'3                | 79'6                 | 4th "                     | 51'4                | 8th "               | 78'2                      | 52'1                              | 63'2                            | -0'4                                | 72'9                      |
|                          | Rangpore               | Rangpore                | 29'987                          | 30'117                     | +0'010               | NE                    | 38'0                | 79'2                 | 4th "                     | 51'5                | 5th "               | 78'4                      | 52'5                              | 65'5                            | -0'2                                | 70'0                      |
|                          | Jalpigoree             | Jalpigoree              | 30'849                          | 30'148                     | +0'037               | NE                    | ?                   | 77'9                 | 4th & 5th Dec.            | 51'9                | 3rd, 5th & 6th Dec. | 77'0                      | 52'5                              | 64'8                            | -0'7                                | 70'2                      |
|                          | Cooch Behar            |                         |                                 |                            |                      |                       |                     |                      |                           |                     |                     |                           |                                   |                                 |                                     |                           |
|                          | Darjeeling Hill Tracts | Darjeeling              | 29'085                          | —                          | +0'007               | Easterly              | 24'3                | 56'8                 | 4th "                     | 35'7                | 8th "               | 52'4                      | 37'8                              | 45'1                            | +0'3                                | 46'3                      |
|                          | Purneah                | Purneah                 | 30'028                          | 30'101                     | +0'033               | Calm                  | 0'7                 | 70'2                 | 3rd to 5th Dec.           | 49'8                | 3rd "               | 75'0                      | 50'4                              | 63'0                            | -2'3                                | 67'6                      |
|                          | North Bhagulpore       |                         |                                 |                            |                      |                       |                     |                      | Observations suspended.   |                     |                     |                           |                                   |                                 |                                     |                           |
| SOUTH BENGAL.            | Mozufferpore           | Mozufferpore            |                                 |                            |                      |                       |                     |                      |                           |                     |                     |                           |                                   |                                 |                                     |                           |
|                          | Durbhunga              | Durbhunga               | 29'980                          | 30'185                     | +0'040               | WNW                   | 35'7                | 78'9                 | 3rd & 4th Dec.            | 54'9                | 5th & 6th Dec.      | 75'8                      | 55'9                              | 65'9                            | +0'1                                | 68'3                      |
|                          | Chumpran               | Motihari                | 29'872                          | 30'108                     | +0'034               | NW                    | 60'7                | 77'7                 | 3rd & 4th Dec.            | 47'1                | 3rd "               | 77'0                      | 49'2                              | 62'6                            | —                                   | 73'6                      |
|                          | Saran                  | Chupra                  | 29'933                          | 30'137                     | +0'030               | W                     | 0'7                 | 77'0                 | 3rd "                     | 52'0                | 5th & 7th Dec.      | 75'0                      | 53'0                              | 64'4                            | +0'6                                | 70'8                      |
|                          |                        | Dohree                  | 29'776                          | 30'148                     | +0'027               | SSW                   | 105'3               | 78'0                 | 5th, 7th, 9th Dec.        | 54'5                | 4th "               | 74'0                      | 55'1                              | 61'5                            | +2'4                                | 68'2                      |
|                          | Shahabad               | Buxar                   | 29'903                          | 30'154                     | +0'025               | Variable              | 40'1                | 75'4                 | 3rd "                     | 51'4                | 9th "               | 77'2                      | 52'7                              | 64'0                            | +1'9                                | 72'5                      |
|                          |                        | Arrah                   | 29'929                          | 30'130                     | +0'028               | Variable              | 7'0                 | 77'3                 | 3rd "                     | 49'9                | 4th "               | 75'7                      | 50'8                              | 63'3                            | +0'6                                | 68'2                      |
|                          | Gya                    | Gya                     | 29'757                          | 30'152                     | +0'023               | Calm                  | 14'9                | 77'7                 | 4th "                     | 50'2                | 4th "               | 76'7                      | 51'1                              | 63'9                            | -1'0                                | 70'5                      |
|                          | Patna                  | Bankipore               | 29'978                          | 30'171                     | +0'035               | SSW                   | 35'5                | 78'1                 | 3rd "                     | 51'8                | 5th "               | 79'5                      | 53'2                              | 64'9                            | +1'2                                | 68'6                      |
|                          | South Bhagulpore       | Bhagulpore              | 29'981                          | 30'150                     | +0'052               | N                     | 24'6                | 76'4                 | 4th "                     | 49'0                | 6th "               | 78'3                      | 51'0                              | 63'2                            | -0'0                                | 68'3                      |
| CHOTA NAGPUR.            | Monghyr                |                         |                                 |                            |                      |                       |                     |                      |                           |                     |                     |                           |                                   |                                 |                                     |                           |
|                          | Bonthal Pergunnahs     | Doonka                  | 29'631                          | —                          | +0'036               | Calm                  | 6'9                 | 78'6                 | 3rd "                     | 50'6                | 6th "               | 77'7                      | 51'5                              | 64'6                            | +0'5                                | 71'1                      |
|                          | Hazribagh              | Hazribagh               | 29'074                          | 30'144                     | +0'027               | Northerly             | 97'6                | 74'4                 | 4th & 5th Dec.            | 51'6                | 6th 9th "           | 73'8                      | 53'1                              | 63'0                            | +0'5                                | 67'4                      |
|                          | Lohardugga             | Ranchee                 | 27'932                          | 30'118                     | +0'026               | Calm                  | 81'6                | 75'5                 | 4th, 6th Dec.             | 43'5                | 9th "               | 74'6                      | 49'7                              | 63'2                            | +2'1                                | 67'4                      |
|                          | Manbhoom               |                         |                                 |                            |                      |                       |                     |                      |                           |                     |                     |                           |                                   |                                 |                                     |                           |
| CHOTA NAGPUR.            | Singbhoom              | Clybass                 | 29'330                          | —                          | +0'020               | NE                    | 18'3                | 79'5                 | 6th, 8th & 9th Dec.       | 50'3                | 3rd "               | 79'2                      | 51'8                              | 65'4                            | +1'3                                | 71'3                      |

**Summary.**—The normal means of air pressure and temperature are the arithmetical average or means of the readings during the same period for the last ten years. The humidity of the atmosphere is expressed as percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The number of the hours of rain or average of the rainfall in that district determined from the returns sent in by the sub-divisional stations for the period in question during the past 15 years is the district reading in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

the week ending Friday, the 9th of December 1887.

| Average<br>at 10 A.M. | Average cloud amount<br>at 10 A.M. for week. | Rainfall of week at<br>observing station. | DISTRICT OBSERVATIONS. |                 |                       |                 |            |                       |                 |            |                                  |                                 | Representative<br>station. | DISTRICT               | METEOROLOGICAL DIVISION. |  |  |  |
|-----------------------|--|---|------------------------|-----------------|-----------------------|-----------------|------------|-----------------------|-----------------|------------|----------------------------------|---------------------------------|----------------------------|------------------------|--------------------------|--|--|--|
|                       |  |   | OF WEEK.               |                 | RAINFALL.             |                 |            |                       |                 |            |                                  |                                 |                            |                        |                          |  |  |  |
|                       |  |   | Mean for<br>district.  | Normal<br>mean. | Since 1st of month.   |                 |            | Since May 15th.       |                 |            | Average number<br>of rainy days. | Normal number<br>of rainy days. |                            |                        |                          |  |  |  |
|                       |  |   |                        |                 | Mean for<br>district. | Normal<br>mean. | Variation. | Mean for<br>district. | Normal<br>mean. | Variation. |                                  |                                 |                            |                        |                          |  |  |  |
| 59                    | 0.6  | Nil                                       | —                      | —               | —                     | —               | —          | —                     | —               | —          | —                                | —                               | Gopalpore                  | Pooree                 | Central.                 |  |  |  |
| 73                    | 0.7  | Nil                                       | Nil                    | 0.35            | Nil                   | 0.25            | -0.35      | 43.97                 | 55.67           | -11.70     | 0.0                              | 0.6                             | False Point                | ...                    | Central.                 |  |  |  |
| 54                    | 0  | Nil                                       | Nil                    | 0.25            | Nil                   | 0.25            | -0.25      | 44.87                 | 51.03           | -7.06      | 0.0                              | 0.5                             | Cuttack                    | Cuttack                | Central.                 |  |  |  |
| 61                    | 0  | Nil                                       | Nil                    | 0.08            | Nil                   | 0.10            | -0.10      | 41.84                 | 53.48           | -11.64     | 0.0                              | 0.2                             | Balasore                   | Balasore               | Central.                 |  |  |  |
| 73                    | 0.8  | Nil                                       | Nil                    | 0.17            | Nil                   | 0.17            | -0.17      | 58.28                 | 61.06           | -3.68      | 0.0                              | 0.3                             | Rangpur Island             | South-West Midnapore   | Central.                 |  |  |  |
| 54                    | 0  | Nil                                       | Nil                    | 0.10            | Nil                   | 0.10            | -0.10      | 50.40                 | 50.01           | -0.45      | 0.0                              | 0.4                             | Midnapore                  | South 24-Pargunnahs    | Central.                 |  |  |  |
| 63                    | 0  | Nil                                       | Nil                    | 0.15            | Nil                   | 0.15            | -0.15      | 40.50                 | 51.08           | -11.18     | 0.0                              | 0.3                             | Calcutta                   | 24-Pargunnahs          | Central.                 |  |  |  |
| 50                    | 0  | Nil                                       | Nil                    | 0.10            | Nil                   | 0.10            | -0.10      | 45.04                 | 46.20           | -1.25      | 0.0                              | 0.2                             | Burdwan                    | Howrah                 | Central.                 |  |  |  |
| 60                    | 0  | Nil                                       | Nil                    | 0.15            | Nil                   | 0.15            | -0.15      | 40.34                 | 51.86           | -2.52      | 0.0                              | 0.2                             | Bankura                    | Hooghly                | Central.                 |  |  |  |
| 55                    | 0  | Nil                                       | Nil                    | 0.08            | Nil                   | 0.08            | -0.08      | 47.59                 | 51.03           | -4.34      | 0.0                              | 0.3                             | Ranagunge                  | Burdwan                | Central.                 |  |  |  |
| 73                    | 0  | Nil                                       | Nil                    | 0.10            | Nil                   | 0.10            | -0.10      | 58.81                 | 49.20           | +9.61      | 0.0                              | 0.3                             | Berhampore                 | West Burdwan           | Central.                 |  |  |  |
| 64                    | 0  | Nil                                       | Nil                    | 0.08            | Nil                   | 0.08            | -0.08      | 48.78                 | 49.05           | -0.27      | 0.0                              | 0.2                             | Krishnachur                | Mooredabad             | Central.                 |  |  |  |
| 69                    | 0  | Nil                                       | Nil                    | 0.19            | Nil                   | 0.20            | -0.20      | 41.50                 | 53.39           | -11.89     | 0.0                              | 0.3                             | Jessore                    | Nudda                  | Central.                 |  |  |  |
| 73                    | 0.6  | Nil                                       | Nil                    | 0.40            | Nil                   | 0.42            | -0.42      | 90.03                 | 113.98          | -17.95     | 0.0                              | 0.5                             | Chittagong                 | Jessore                | Central.                 |  |  |  |
| 62                    | 0  | Nil                                       | Nil                    | 0.30            | Nil                   | 0.35            | -0.35      | 61.50                 | 81.54           | -20.04     | 0.0                              | 0.7                             | Demagiri                   | Khoolna                | Central.                 |  |  |  |
| 63                    | 0  | Nil                                       | Nil                    | 0.34            | Nil                   | 0.34            | -0.34      | 50.32                 | 77.58           | -18.26     | 0.0                              | 0.5                             | Barrisal                   | Chittagong Hill Tracts | Central.                 |  |  |  |
| 71                    | 0  | Nil                                       | Nil                    | 0.72            | Nil                   | 0.72            | -0.72      | 72.07                 | 100.02          | -27.95     | 0.0                              | 0.5                             | Noakholly                  | Backergunge            | Central.                 |  |  |  |
| 64                    | 0  | Nil                                       | Nil                    | 0.09            | Nil                   | 0.09            | -0.09      | 35.91                 | 55.93           | -20.02     | 0.0                              | 0.2                             | Furzedpore                 | Noakholly              | Central.                 |  |  |  |
| 70                    | 0  | Nil                                       | Nil                    | 0.22            | Nil                   | 0.22            | -0.22      | 40.29                 | 60.71           | -21.42     | 0.0                              | 0.4                             | Dacca                      | Furzedpore             | Central.                 |  |  |  |
| 70                    | 0  | Nil                                       | Nil                    | 0.31            | Nil                   | 0.31            | -0.31      | 43.01                 | 70.78           | -27.77     | 0.0                              | 0.4                             | Commillah                  | Dacca                  | Central.                 |  |  |  |
| 73                    | 0.4  | Nil                                       | Nil                    | 0.12            | Nil                   | 0.12            | -0.12      | 00.53                 | 67.17           | -6.64      | 0.0                              | 0.3                             | Mymensingh                 | Commillah              | Central.                 |  |  |  |
| 70                    | 0  | Nil                                       | Nil                    | 0.08            | Nil                   | 0.08            | -0.08      | 60.45                 | 50.06           | +9.39      | 0.0                              | 0.2                             | Bogra                      | Mymensingh             | Central.                 |  |  |  |
| 73                    | 0  | Nil                                       | Nil                    | 0.07            | Nil                   | 0.07            | -0.07      | 44.00                 | 53.46           | -9.46      | 0.0                              | 0.3                             | Seragunge                  | Bogra                  | Central.                 |  |  |  |
| 65                    | 0  | Nil                                       | Nil                    | 0.08            | Nil                   | 0.08            | -0.08      | 49.57                 | 53.60           | -4.03      | 0.0                              | 0.3                             | Rampore Beaulah            | Pubna                  | Central.                 |  |  |  |
| 63                    | 0  | Nil                                       | Nil                    | 0.06            | Nil                   | 0.06            | -0.06      | 46.61                 | 54.32           | -7.71      | 0.0                              | 0.2                             | Maldah                     | Rajshahye              | Central.                 |  |  |  |
| 60                    | 0  | Nil                                       | Nil                    | 0.13            | Nil                   | 0.13            | -0.13      | 69.06                 | 55.06           | +13.40     | 0.0                              | 0.3                             | Dinagore                   | Maldah                 | Central.                 |  |  |  |
| 70                    | 0  | Nil                                       | Nil                    | 0.02            | Nil                   | 0.02            | -0.02      | 80.60                 | 73.79           | +6.81      | 0.0                              | 0.1                             | Rungpore                   | Dinagore               | Central.                 |  |  |  |
| 61                    | 0  | Nil                                       | Nil                    | Nil             | Nil                   | Nil             | Nil        | 117.42                | 109.97          | +7.45      | 0.0                              | 0.0                             | Julpigoree                 | Rungpore               | Central.                 |  |  |  |
| 39.                   | 0.1  | Nil                                       | Nil                    | 0.01            | Nil                   | 0.02            | -0.02      | 117.17                | 119.86          | -2.69      | 0.0                              | 0.1                             | Darjeeling                 | Julpigoree             | Central.                 |  |  |  |
| 71                    | 0  | Nil                                       | Nil                    | Nil             | Nil                   | Nil             | Nil        | 65.04                 | 57.42           | +7.62      | 0.0                              | 0.0                             | Purneah                    | Cooch Behar            | Central.                 |  |  |  |
| 74                    | 0  | Nil                                       | Nil                    | Nil             | Nil                   | Nil             | Nil        | 40.90                 | 42.54           | +1.64      | 0.0                              | 0.0                             | Mozufferpore               | Darjeeling Hill Tracts | Central.                 |  |  |  |
| 54                    | 0  | Nil                                       | Nil                    | Nil             | Nil                   | Nil             | Nil        | 40.62                 | 43.63           | +3.01      | 0.0                              | 0.0                             | Durbhunga                  | Purneah                | Central.                 |  |  |  |
| 69                    | 0  | Nil                                       | Nil                    | Nil             | Nil                   | Nil             | Nil        | 39.35                 | 43.33           | -3.98      | 0.0                              | 0.0                             | Chupra                     | North Bhagulpore       | Central.                 |  |  |  |
| 61                    | 0  | Nil                                       | Nil                    | Nil             | Nil                   | Nil             | Nil        | 37.45                 | 39.40           | -1.95      | 0.0                              | 0.0                             | Buxar                      | Mozufferpore           | Central.                 |  |  |  |
| 64                    | 0  | Nil                                       | Nil                    | Nil             | Nil                   | Nil             | Nil        | 38.00                 | 40.81           | -2.81      | 0.0                              | 0.0                             | Gya                        | Durbhunga              | Central.                 |  |  |  |
| 65                    | 0  | Nil                                       | Nil                    | Nil             | Nil                   | Nil             | Nil        | 36.04                 | 40.82           | -4.78      | 0.0                              | 0.0                             | Bankipore                  | Chumpran               | Central.                 |  |  |  |
| 64                    | 0.1  | Nil                                       | Nil                    | 0.01            | Nil                   | 0.01            | -0.01      | 42.93                 | 42.53           | +0.40      | 0.0                              | 0.1                             | Bhagulpore                 | Saran                  | Central.                 |  |  |  |
| 54                    | 0  | Nil                                       | Nil                    | 0.05            | Nil                   | 0.05            | -0.05      | 52.49                 | 50.07           | +2.42      | 0.0                              | 0.2                             | Deoria                     | Shahabad               | Central.                 |  |  |  |
| 48                    | 0  | Nil                                       | Nil                    | 0.03            | Nil                   | 0.03            | -0.03      | 40.42                 | 40.89           | -0.47      | 0.0                              | 0.2                             | Hazariabagh                | Gya                    | Central.                 |  |  |  |
| 64                    | 0  | Nil                                       | Nil                    | 0.05            | Nil                   | 0.05            | -0.05      | 44.34                 | 40.86           | -3.48      | 0.0                              | 0.2                             | Ranchee                    | Patna                  | Central.                 |  |  |  |
| 40                    | 0  | Nil                                       | Nil                    | 0.11            | Nil                   | 0.11            | -0.11      | 40.88                 | 50.57           | -9.69      | 0.0                              | 0.2                             | Chyebassa                  | South Bhagulpore       | Central.                 |  |  |  |

years. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.  
 barbing cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal mean  
 years. The means of the district are the numerical averages of the rainfall returns received in the district, i.e., from the total rainfall at the sub-divisional.





Statement of Rainfall in Bengal for the week ending Friday (6 p.m.), the 9th of December 1887 *concl.*

| Meteorological Division. | District. | Station.            | RAINFALL.               |                       |                       |                        |                          |                         |                       | TOTAL              |                   | Total rainfall since 1st of month. | Average total rain fall from 1st of month. | Total rainfall since 15th May. | Average rainfall from 15th May to date. |
|--------------------------|-----------|---------------------|-------------------------|-----------------------|-----------------------|------------------------|--------------------------|-------------------------|-----------------------|--------------------|-------------------|------------------------------------|--|--------------------------------|---|
|                          |           |                     | Saturday, 3rd December. | Sunday, 4th December. | Monday, 5th December. | Tuesday, 6th December. | Wednesday, 7th December. | Thursday, 8th December. | Friday, 9th December. | Number rainy days. | Rainfall of week. |                                    |  |                                |   |
| NORTH BHAR               | Saran     | Gopalgunge          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 41'80                          | 48'4                                    |
|                          |           | Bewari              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 38'94                          | 45'4                                    |
| SOUTH BHAR               | Shahabad  | Chaurah             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 37'28                          | 39'1                                    |
|                          |           | Buxar               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 33'56                          | 37'1                                    |
|                          |           | Dumra               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 37'80                          | ?                                       |
|                          |           | Muhurrah            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 40'74                          | 39'78                                   |
|                          |           | Nasirah             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 35'44                          | 40'09                                   |
|                          |           | Arrah               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 40'35                          | 39'38                                   |
|                          |           | Mohania             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | ?                                       |
|                          |           | Gya                 | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 30'25                          | 35'30                                   |
|                          |           | Aurangabad          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 42'15                          | 41'74                                   |
|                          |           | Nowadah             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 35'02                          | 39'33                                   |
|                          |           | Jehanabad           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 45'51                          | 39'09                                   |
|                          |           | Arwal               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 39'24                          | ?                                       |
|                          |           | Daudnagar           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 27'51                          | ?                                       |
|                          |           | Sherrghati          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 35'75                          | ?                                       |
|                          |           | Kajauli             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 27'43                          | ?                                       |
|                          |           | Pakri Barawan       | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 21'42                          | ?                                       |
|                          |           | Patna               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 36'36                          | 41'59                                   |
|                          |           | Dinapur             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 37'56                          | 40'38                                   |
|                          |           | Bohar               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 54'30                          | 41'44                                   |
|                          |           | Barh                | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 35'71                          | 38'81                                   |
|                          |           | Bikram              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 39'75                          | ?                                       |
|                          |           | Hilsa               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 31'54                          | ?                                       |
|                          |           | Munshyr             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 48'86                          | 38'33                                   |
|                          |           | Begosera            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 46'64                          | 45'90                                   |
|                          |           | Munshyr             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 38'99                          | 42'39                                   |
|                          |           | Jamui               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 42'03                          | ?                                       |
|                          |           | Gopri               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 28'18                          | ?                                       |
|                          |           | Shikhpura           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'02                           | 40'85                                   |
|                          |           | South Bangul-pore.  | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'01                           | 39'34                                   |
|                          |           | Banka               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 43'27                                   |
|                          |           | Kolgaug             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | ?                                       |
|                          |           | Southal Par-gunahs. | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'04                           | 57'73                                   |
|                          |           | Rajmahal            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'03                           | 49'10                                   |
|                          |           | Gudua               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'06                           | 77'75                                   |
|                          |           | Pakour              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'08                           | 44'77                                   |
|                          |           | Nya Doonka          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'02                           | 40'71                                   |
|                          |           | Doonpur             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'05                           | 38'86                                   |
|                          |           | Jamui               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 49'61                                   |
|                          |           | Sintra              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 49'26                                   |
|                          |           | Nanhat              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | ?                                       |
|                          |           | Hasaribagh          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'03                           | 40'97                                   |
|                          |           | Pachamba            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'02                           | 45'43                                   |
|                          |           | (Girid),            | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'04                           | 39'32                                   |
|                          |           | Hasaribagh          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'06                           | 47'50                                   |
|                          |           | Southurrah          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 57'10                                   |
|                          |           | Southurrah Hills    | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 39'27                                   |
|                          |           | Jamui               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 47'72                                   |
|                          |           | Chitra              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 72'16                                   |
|                          |           | Karagucha           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 50'34                                   |
|                          |           | Namghur             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | ?                                       |
|                          |           | Lohardugga          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 53'47                                   |
|                          |           | Lohardugga          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'05                           | 56'41                                   |
|                          |           | Kanoni              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'02                           | 48'20                                   |
|                          |           | Pannow              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 42'06                                   |
|                          |           | Silli               | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | ?                                       |
|                          |           | Balumat             | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 31'09                                   |
|                          |           | Mossababad          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 52'70                                   |
|                          |           | Gurwah              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | ?                                       |
|                          |           | Singbhoom           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'11                           | 40'02                                   |
|                          |           | Chyenabha           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 34'99                                   |
|                          |           | Chakradhar-pore.    | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 53'49                                   |
|                          |           | Chhatilla           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 38'64                                   |
|                          |           | Baharagura          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | ?                                       |
|                          |           | Parula              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'00                           | 44'11                                   |
|                          |           | Boundpore           | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | 0'04                           | 28'53                                   |
|                          |           | Raghunath-pore.     | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 36'80                                   |
|                          |           | Barrabhoom          | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | 40'02                                   |
|                          |           | Jhalda              | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | ?                                       |
|                          |           | Chas                | Nil                     | Nil                   | Nil                   | Nil                    | Nil                      | Nil                     | Nil                   | Nil                | Nil               | Nil                                | Nil  | ?                              | ?                                       |

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the return is wanting the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 13th December 1887.

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS  
TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 9TH  
OF DECEMBER 1887.

CONDITIONS during the previous week had been normal for the cold weather season in Bengal, and during the present week these conditions have undergone no change. Skies have been almost entirely cloudless, temperature and humidity have been low, pressure has been high, and there has been an entire absence of rain. No disturbances of any importance have been formed either in the Bay or in Upper India, though a feeble barometric depression was formed in the south of the Bay, which advanced towards the south of the peninsula on the 6th and 7th, and though indications of the formation of a depression in Upper India were noticed in the middle of the week, but these never developed to any extent, and neither of these slight disturbances in any way affected the weather in Bengal. The week has therefore been one of almost complete serenity throughout the whole of the Province.

**Pressure.**—The pressure changes during the week have been unusually small. For the first two days pressure was rising, this was succeeded by a fall, then by a slight rise and a further fall; so that on the whole pressure has not altered to any material extent. For the whole week, taking into consideration only those stations where observations have been made for a series of years, and which therefore yield reliable averages, the mean pressure of the Province has been 0.034 inch in excess of the normal. The feature of prominent excess in the northern districts of the Province has again shown itself this week, and thus at Purneah the excess has been 0.063 inch and at Durbhunga 0.049 inch, while in the south of the Province, at such stations as False Point, the mean pressure has only been 0.014 inch in excess of the normal.

**Temperature.**—The mean temperature of the whole Province for the week has been 0.5° in excess of the normal, but the variations from normal pressure in different districts are irregular. In Chutia Nagpur and Orissa the mean temperature has been nearly one and a half degrees in excess of the normal, and in South Benar, North Bengal, and South-West Bengal temperature has been in excess, but by small amounts. On the other hand temperature has been in defect of the normal by small amounts in East Bengal and North Behar.

The general distribution of temperature during the week may be seen from the table below, where the mean maximum and minimum temperatures at nine typical stations in different districts of the Province are given compared with the normal for the period, and where it will be seen that the variations are again very irregular. The mean maximum or day temperature of these nine stations has been 0.4° in excess of the normal, while the mean minimum or night temperature has been 0.2° in defect of the normal, and at such stations as Calcutta and Dacca the mean minimum temperature has been as much as 2° in defect of the normal—

Table showing the excess or defect of the actual temperature from the normal mean during the week ending 3rd—9th December 1887.

|                        | Normal<br>mean maxi-<br>mum tem-<br>perature,<br>week<br>ending 1st<br>December. | Actual<br>mean maxi-<br>mum tem-<br>perature,<br>week<br>ending 9th<br>December<br>1887. | Excess or<br>defect from<br>the normal<br>mean. | Normal<br>mean mini-<br>mum tem-<br>perature,<br>week<br>ending 9th<br>December. | Actual<br>mean mini-<br>mum tem-<br>perature,<br>week<br>ending 9th<br>December<br>1887. | Excess or<br>defect from<br>the normal<br>mean. | Normal<br>mean daily<br>tempera-<br>ture, week<br>ending the<br>9th De-<br>cember. | Actual<br>mean daily<br>tempera-<br>ture, week<br>ending 9th<br>December<br>1887. | Excess or<br>defect from<br>the normal<br>mean. |
|------------------------|--|--|---|--|--|---|--|---|---|
| Cuttack ... ..         | 83.2   | 85.4   | +2.2  | 60.6   | 59.7   | −0.9  | 71.9   | 72.6  | +0.7  |
| Calcutta (Alipore) ... | 77.2   | 77.2   | +0.4  | 59.1   | 57.1   | −2.0  | 68.2   | 67.4  | −0.8  |
| Dacca ... ..           | 79.4   | 80.9   | +1.5  | 59.0   | 56.9   | −2.1  | 69.2   | 68.9  | −0.3  |
| Burdwan ... ..         | 78.9   | 79.9   | +1.0  | 58.9   | 56.9   | −2.0  | 68.4   | 68.3  | −0.1  |
| Patna (Bankipore) ...  | 76.2   | 77.6   | +1.4  | 51.2   | 53.2   | +2.0  | 67.7   | 68.9  | +1.2  |
| Gya ... ..             | 77.6   | 76.7   | −0.9  | 52.1   | 51.1   | −1.0  | 64.9   | 63.9  | −1.0  |
| Purneah ... ..         | 78.4   | 75.6   | −2.8  | 52.1   | 50.4   | −1.7  | 65.5   | 65.0  | −0.5  |
| Hazariabagh ... ..     | 73.1   | 73.8   | +0.7  | 51.8   | 52.1   | +0.3  | 62.5   | 63.0  | +0.5  |
| Darjeeling ... ..      | 61.1   | 62.4   | +1.3  | 38.5   | 37.8   | −0.7  | 44.8   | 45.1  | +0.3  |

Rainfall as above stated has been entirely absent from the Province throughout the whole week.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 9th of December 1887 :

| METEOROLOGICAL<br>DIVISIONS. | TEMPERATURE.                  |                              |                         |                        |                       |  |          | RAINFALL.       |            |                         |                                |            |                        |                 |                      |                 |
|------------------------------|-------------------------------|------------------------------|-------------------------|------------------------|-----------------------|--|----------|-----------------|------------|-------------------------|--------------------------------|------------|------------------------|-----------------|----------------------|-----------------|
|                              | Highest observed during week. | Lowest observed during week. | Averages for week.      |                        |                       | Average mean of week above or below normal mean of week. | Of week. |                 |            | Rainy days.             |                                |            | Since 1st of November. |                 | Since 15th May 1897. |                 |
|                              |                               |                              | Of highest of each day. | Of lowest of each day. | Of mean for each day. |  | Average. | Normal average. | Variation. | Average number in week. | Normal average number in week. | Variation. | Average.               | Normal average. | Average.             | Normal average. |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                        |                 |                      |                 |
|                              |                               |                              |                         |                        |                       |  |          |                 |            |                         |                                |            |                        |                 |                      |                 |
| Orissa                       | 88.4                          | 53.5                         | 81.3                    | 59.0                   | 70.6                  | +1.5   | Nil      | 0.21            | -0.21      | 0.0                     | 0.4                            | -0.4       | Nil                    | 0.22            | 43.42                | 53.34           |
| South-West Bengal            | 82.7                          | 51.7                         | 70.6                    | 56.1                   | 67.8                  | +0.1   | Nil      | 0.13            | -0.13      | 0.0                     | 0.2                            | -0.2       | Nil                    | 0.13            | 40.71                | 51.09           |
| East Bengal                  | 86.4                          | 50.1                         | 70.6                    | 55.5                   | 67.6                  | -0.2   | Nil      | 0.29            | -0.29      | 0.0                     | 0.4                            | -0.4       | Nil                    | 0.29            | 35.50                | 74.00           |
| North Bengal                 | 86.8                          | 49.4                         | 78.0                    | 53.2                   | 66.1                  | +0.2   | Nil      | 0.06            | -0.06      | 0.0                     | 0.2                            | -0.2       | Nil                    | 0.06            | 73.60                | 69.51           |
| North Behar                  | 77.7                          | 47.1                         | 70.1                    | 51.0                   | 64.0                  | -0.4   | Nil      | Nil             | Nil        | 0.0                     | 0.0                            | 0          | Nil                    | Nil             | 33.07                | 47.78           |
| South Behar                  | 79.6                          | 40.0                         | 70.2                    | 53.3                   | 64.2                  | +0.7   | Nil      | 0.01            | -0.01      | 0.0                     | 0.1                            | -0.1       | Nil                    | 0.01            | 41.85                | 43.38           |
| Chutia Nagpur                | 78.8                          | 43.6                         | 74.3                    | 50.9                   | 63.6                  | +1.3   | Nil      | 0.04            | -0.04      | 0.0                     | 0.2                            | -0.2       | Nil                    | 0.04            | 44.56                | 48.65           |

\* Chyeddagan not included.

## MEMORANDUM.

THE returns from the principal Municipalities in Bengal presented, during the week ending 12th November 1887, the following results:—

1. That births and deaths were recorded in these Municipalities at the rates respectively of 27·5 and 31·8 per 1,000 of population, as opposed to 22·5 and 29·1 per 1,000 in the preceding week ending 5th November, indicating a considerable improvement in the registration of both the events, particularly of births.

2. That the following Municipalities returned the highest proportions of births and deaths:—

| Births.    |     |                  | Deaths.             |     |                  |
|------------|-----|------------------|---------------------|-----|------------------|
|            |     | Ratio per mille. |                     |     | Ratio per mille. |
| Arrah      | ... | 63·4             | Puri                | ... | 77·6             |
| Bhagulpore | ... | 48·9             | Kishnaghur          | ... | 62·5             |
| Durbhanga  | ... | 42·6             | Serampore           | ... | 49·1             |
| Monghyr    | ... | 41·6             | Purneah             | ... | 51·9             |
| Kishnaghur | ... | 37·8             | Bhagulpore          | ... | 48·9             |
| Gya        | ... | 36·9             | Arrah               | ... | 45·5             |
| Ranaghat   | ... | 35·9             | Monghyr             | ... | 45·2             |
| Serampore  | ... | 31·4             | Comillah            | ... | 42·4             |
|            |     |                  | Suburbs of Calcutta | ... | 42·2             |
|            |     |                  | Bali                | ... | 42·1             |
|            |     |                  | Gya                 | ... | 41·0             |
|            |     |                  | Durbhanga           | ... | 40·9             |
|            |     |                  | Beaulcah            | ... | 34·2             |
|            |     |                  | Narainganj          | ... | 33·1             |
|            |     |                  | Hughli              | ... | 29·5             |

3. That, as compared with the results of the preceding week, fever alone exhibited noticeable enhancement of mortality, the fatal results from the other diseases exhibiting only fractional differences, and small-pox presenting no death, *vide* figures shown below:—

|                  |     |     |     |     |     | Ratio per mille during the weeks ending— |                |
|------------------|-----|-----|-----|-----|-----|--|----------------|
|                  |     |     |     |     |     | 12th Nov 1887.                           | 5th Nov. 1887. |
| Cholera          | ... | ... | ... | ... | ... | 3·0                                      | 2·6            |
| Small-pox        | ... | ... | ... | ... | ... | ...                                      | 1              |
| Fever            | ... | ... | ... | ... | ... | 15·6                                     | 14·0           |
| Bowel-complaints | ... | ... | ... | ... | ... | 4·6                                      | 4·5            |
| Injury           | ... | ... | ... | ... | ... | 3  | 2              |
| Other causes     | ... | ... | ... | ... | ... | 8·3                                      | 7·7            |

4. That the Municipalities named below appear to have suffered the most from the diseases indicated in the foregoing table, excepting small-pox from which, as before stated, no death was reported to have occurred, and injury, the casualties from which were nowhere above normal:—

| Cholera.            |                  | Fever.     |                  | Bowel-complaints. |                  | Other causes.       |                  |
|---------------------|------------------|------------|------------------|-------------------|------------------|---------------------|------------------|
|                     | Ratio per mille. |            | Ratio per mille. |                   | Ratio per mille. |                     | Ratio per mille. |
| Puri                | 37·7             | Kishnaghur | 56·8             | Bali              | 21·1             | Gya                 | 19·1             |
| Serampore           | 11·8             | Purneah    | 38·1             | Puri              | 12·6             | Serampore           | 17·7             |
| Bhagulpore          | 8·1              | Beaulcah   | 31·5             | Arrah             | 12·0             | Puri                | 16·8             |
| Monghyr             | 5·4              | Comillah   | 30·8             |                   |                  | Purneah             | 13·8             |
| Suburbs of Calcutta | 3·7              | Bhagulpore | 29·9             |                   |                  | Monghyr             | 13·6             |
| Patna               | 2·9              | Darjuling  | 26·1             |                   |                  | Suburbs of Calcutta | 12·4             |
| Howrah              | 2·3              | Durbhanga  | 22·8             |                   |                  | Arrah               | 12·0             |
|                     |                  | Hughli     | 21·5             |                   |                  | Durbhanga           | 10·2             |
|                     |                  | Arrah      | 20·3             |                   |                  | Bhagulpore          | 10·0             |

5. That the casualties in relation to *Sex*, *Class* and *Age* were returned at the rates indicated below:—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |     |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |     | Ratio per mille. |
| Males   | ... | 31·0             | Christians          | ... | 26·1             | Under 1 year         | ... | 236·7            |
| Females   | ... | 32·8             | Hindus              | ... | 32·4             | 1 and under 5 years  | ... | 45·0             |
| Ratio of male deaths to every 100 female deaths | 107 |                  | Mahomedans          | ... | 31·0             | 5 " 10 "             | ... | 20·2             |
|   |     |                  |                     |     |                  | 10 " 15 "            | ... | 17·6             |
|   |     |                  |                     |     |                  | 15 " 20 "            | ... | 15·7             |
|   |     |                  |                     |     |                  | 20 " 30 "            | ... | 21·3             |
|   |     |                  |                     |     |                  | 30 " 40 "            | ... | 21·6             |
|   |     |                  |                     |     |                  | 40 " 50 "            | ... | 25·0             |
|   |     |                  |                     |     |                  | 50 " 60 "            | ... | 33·3             |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 73·0             |

R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

The 30th November 1887.





| DISTRICTS.          | NAMES OF MUNICIPALITIES. | MORTALITY ACCORDING TO— |         |             |            |                |               |                      |                       |                        |                        | RATIO PER 1,000 OF POPULATION PER ANNUM. |                        |                        |                        |                        |               |                      |                       |                        |                        |                        |                        |                        |                        |                        |
|---------------------|--------------------------|-------------------------|---------|-------------|------------|----------------|---------------|----------------------|-----------------------|------------------------|------------------------|--|------------------------|------------------------|------------------------|------------------------|---------------|----------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                     |                          | Class.                  |         |             |            |                | Age.          |                      |                       |                        |                        | RATIO PER 1,000 OF POPULATION PER ANNUM. |                        |                        |                        |                        |               |                      |                       |                        |                        |                        |                        |                        |                        |                        |
|                     |                          | DEATHS AMONG—           |         |             |            |                | DEATHS.       |                      |                       |                        |                        | RATIO PER 1,000 OF POPULATION PER ANNUM. |                        |                        |                        |                        |               |                      |                       |                        |                        |                        |                        |                        |                        |                        |
|                     |                          | Christians.             | Hindus. | Mahomedans. | Buddhists. | Other classes. | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years.                   | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and up-wards. | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and up-wards. |
| Burdwan             | Burdwan                  | 7                       | 9       | ...         | ...        | ...            | 2             | 2                    | 2                     | 3                      | 4                      | ...                                      | 1                      | 2                      | 2                      | 1                      | 1576          | 461                  | 446                   | 826                    | ...                    | ...                    | 75                     | 255                    | 454                    | 351                    |
| Midnapore           | Midnapore                | 9                       | 1       | ...         | ...        | ...            | 2             | ...                  | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | 3             | 1400                 | ...                   | ...                    | ...                    | 142                    | 183                    | ...                    | 454                    | 351                    |
| English             | English and Chinnurah    | 14                      | 8       | ...         | ...        | ...            | 4             | 4                    | 6                     | 6                      | ...                    | ...                                      | ...                    | 1                      | 2                      | 3                      | 2306          | 780                  | 896                   | ...                    | ...                    | 156                    | 101                    | 316                    | 682                    |                        |
| Memarsore           | Memarsore                | 21                      | 4       | ...         | ...        | ...            | 6             | 3                    | 1                     | ...                    | ...                    | ...                                      | ...                    | 3                      | 1                      | 3                      | 4394          | 864                  | 207                   | ...                    | ...                    | 138                    | 465                    | 272                    | 1131                   |                        |
| Uttarpara           | Uttarpara                | ...                     | ...     | ...         | ...        | ...            | ...           | ...                  | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Howrah              | Howrah                   | 24                      | 11      | ...         | ...        | ...            | 5             | 9                    | 1                     | 3                      | 2                      | ...                                      | ...                    | 3                      | 2                      | 4                      | 1260          | 845                  | 89                    | 237                    | 143                    | 63                     | 81                     | 133                    | 190                    | 555                    |
| Suburbs of Calcutta | Suburbs of Calcutta      | 6                       | 131     | 67          | ...        | ...            | 25            | 26                   | 10                    | 5                      | 11                     | 36                                       | 50                     | 15                     | 14                     | 37                     | 3036          | 837                  | 263                   | 145                    | 317                    | 340                    | 303                    | 330                    | 449                    | 366                    |
| Kishinagar          | Kishinagar               | 23                      | 11      | ...         | ...        | ...            | 2             | 10                   | 3                     | 1                      | ...                    | ...                                      | ...                    | ...                    | 1                      | 5                      | 2097          | 2198                 | 454                   | 185                    | ...                    | ...                    | 433                    | 487                    | 247                    | 1505                   |
| Snaghat             | Snaghat                  | ...                     | ...     | ...         | ...        | ...            | ...           | ...                  | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Seetipore           | Seetipore                | 1                       | 1       | ...         | ...        | ...            | ...           | 1                    | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | ...           | 179                  | ...                   | ...                    | ...                    | 234                    | ...                    | ...                    | ...                    | ...                    |
| Jessore             | Jessore                  | 2                       | 1       | ...         | ...        | ...            | 1             | ...                  | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | 2680          | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Rampore             | Rampore                  | 6                       | 7       | ...         | ...        | ...            | 1             | 2                    | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | 1261          | 733                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Darjiling           | Darjiling                | 6                       | ...     | ...         | ...        | ...            | ...           | ...                  | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Decca               | Decca                    | 11                      | 8       | ...         | ...        | ...            | 1             | ...                  | 1                     | 1                      | 1                      | ...                                      | ...                    | ...                    | ...                    | ...                    | 274           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Chittagong          | Chittagong               | 6                       | 3       | ...         | ...        | ...            | 1             | ...                  | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | 1864          | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Comillah            | Comillah                 | 2                       | 6       | ...         | ...        | ...            | 2             | 1                    | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | 1847          | 264                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Pattah              | Pattah                   | 2                       | 9       | ...         | ...        | ...            | 1             | ...                  | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | 1751          | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Pattah              | Pattah                   | 47                      | 17      | ...         | ...        | ...            | 7             | 5                    | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | 845           | 107                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Gya                 | Gya                      | 50                      | 10      | ...         | ...        | ...            | 23            | 5                    | 1                     | 4                      | 1                      | 4  | 6                      | 5                      | 4                      | 8                      | 3301          | 409                  | 74                    | 309                    | 99                     | 163                    | 103                    | 245                    | 251                    | 603                    |
| Shahabad            | Shahabad                 | 26                      | 12      | ...         | ...        | ...            | 11            | 2                    | 1                     | 3                      | 2                      | 6  | 1                      | 2                      | 6                      | 5                      | 4441          | 235                  | 101                   | 353                    | 330                    | 387                    | 81                     | 222                    | 849                    | 903                    |
| Memarsore           | Memarsore                | 6                       | 4       | ...         | ...        | ...            | 3             | ...                  | 2                     | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | 1634          | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Durbhanga           | Durbhanga                | 22                      | 20      | ...         | ...        | ...            | 13            | 6                    | 3                     | 2                      | 3                      | 6  | 3                      | 1                      | 5                      | 6                      | 4766          | 413                  | 332                   | 156                    | 259                    | 234                    | 140                    | 70                     | 693                    | 814                    |
| Chupra              | Chupra                   | 3                       | 2       | ...         | ...        | ...            | ...           | ...                  | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | ...           | 196                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Bhagalpore          | Bhagalpore               | 45                      | 9       | ...         | ...        | ...            | 11            | 11                   | 1                     | 3                      | 1                      | 6  | 7                      | 4                      | 4                      | 6                      | 4791          | 1065                 | 89                    | 243                    | 184                    | 205                    | 203                    | 284                    | 468                    | 868                    |
| Monghyr             | Monghyr                  | 41                      | 9       | ...         | ...        | ...            | 13            | 3                    | 6                     | 4                      | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | 4603          | 261                  | 443                   | 363                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Purneah             | Purneah                  | 9                       | 6       | ...         | ...        | ...            | ...           | 4                    | 1                     | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | ...           | 1732                 | 269                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Puri                | Puri                     | 37                      | ...     | ...         | ...        | ...            | ...           | ...                  | ...                   | ...                    | ...                    | ...                                      | ...                    | ...                    | ...                    | ...                    | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    |
| Total               | Total                    | 6                       | 570     | 132         | ...        | ...            | 138           | 98                   | 51                    | 30                     | 36                     | 111                                      | 96                     | 77                     | 61                     | 113                    | 2367          | 450                  | 203                   | 176                    | 157                    | 213                    | 216                    | 250                    | 283                    | 730                    |

R. LIDDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,  
The 30th November 1887.

## MEMORANDUM.

From the annexed table exhibiting the vital statistics of the principal Municipalities in Bengal, for the week ending 19th November 1887, it appears:—

1. That during the week in question births and deaths were registered in the proportions, respectively, of 26·8 and 29·8 per 1,000 of population, as opposed to 27·5 and 31·8 per 1,000, respectively, during the preceding week ending 12th November, indicating a retrogression in registration.

2. That births and deaths were recorded at the highest rates from the following Municipalities:—

| Births.             |     |     |                  | Deaths.             |     |     |                  |
|---------------------|-----|-----|------------------|---------------------|-----|-----|------------------|
|                     |     |     | Ratio per mille. |                     |     |     | Ratio per mille. |
| Arrah               | ... | ... | 49·0             | Puri                | ... | ... | 56·6             |
| Utterpara           | ... | ... | 47·2             | Purneah             | ... | ... | 48·5             |
| Gya                 | ... | ... | 44·4             | Suburbs of Calcutta | ... | ... | 47·6             |
| Beaulah             | ... | ... | 42·0             | Comillah            | ... | ... | 46·2             |
| Durbhanga           | ... | ... | 40·9             | Scrapore            | ... | ... | 45·1             |
| Bhagulpore          | ... | ... | 40·7             | Bhagulpore          | ... | ... | 41·6             |
| Scrapore            | ... | ... | 29·4             | Narsinganj          | ... | ... | 41·4             |
| Suburbs of Calcutta | ... | ... | 29·4             | Kishnaghur          | ... | ... | 39·8             |
| Howrah              | ... | ... | 29·2             | Gya                 | ... | ... | 38·3             |
| Patna               | ... | ... | 29·2             | Beaulah             | ... | ... | 34·2             |
|                     |     |     |                  | Howrah              | ... | ... | 29·8             |

3. That the only noticeable point, in connection with the incidence of the specific death-causes in comparison with the outcome of the preceding week, is a sensible abatement in the mortality from fever; *vide* subjoined table:—

|                  |     |     |     | Ratio per mille during the weeks ending— |                 |
|------------------|-----|-----|-----|--|-----------------|
|                  |     |     |     | 19th Nov. 1887.                          | 12th Nov. 1887. |
| Cholera          | ... | ... | ... | 2·7                                      | 3·0             |
| Small-pox        | ... | ... | ... | ·03                                      | ...             |
| Fever            | ... | ... | ... | 13·9                                     | 15·6            |
| Bowel-complaints | ... | ... | ... | 5·3                                      | 4·6             |
| Injury           | ... | ... | ... | ·2                                       | ·3              |
| Other causes     | ... | ... | ... | 7·6                                      | 8·3             |

4. That the following Municipalities returned conspicuously high mortality from cholera, fever and the maladies coming under the head of "Other causes," and no Municipality exhibited any noticeably high death-rate from the other diseases mentioned in the foregoing table, excepting Howrah, where 10·9 per 1,000 of population died from bowel-complaints:—

| Cholera.            |     |                  | Fever.              |     |                  | Other causes.       |     |                  |
|---------------------|-----|------------------|---------------------|-----|------------------|---------------------|-----|------------------|
|                     |     | Ratio per mille. |                     |     | Ratio per mille. |                     |     | Ratio per mille. |
| Puri                | ... | 31·4             | Comillah            | ... | 38·5             | Gya                 | ... | 21·2             |
| Scrapore            | ... | 7·8              | Purneah             | ... | 34·6             | Suburbs of Calcutta | ... | 13·6             |
| Howrah              | ... | 5·1              | Beaulah             | ... | 31·5             | Puri                | ... | 12·6             |
| Patna               | ... | 3·9              | Kishnaghur          | ... | 30·3             | Scrapore            | ... | 11·8             |
| Suburbs of Calcutta | ... | 3·5              | Santipore           | ... | 21·0             | Bhagulpore          | ... | 11·6             |
|                     |     |                  | Bhagulpore          | ... | 20·8             |                     |     |                  |
|                     |     |                  | Narsinganj          | ... | 20·7             |                     |     |                  |
|                     |     |                  | Suburbs of Calcutta | ... | 20·5             |                     |     |                  |
|                     |     |                  | Hughli              | ... | 20·1             |                     |     |                  |

5. That under the heads of *Sex*, *Class* and *Age*, the mortality stood as follows:—

| According to Sex.                               |     |                  | According to Class. |     |                  | According to Age.    |     |                  |
|---|-----|------------------|---------------------|-----|------------------|----------------------|-----|------------------|
|   |     | Ratio per mille. |                     |     | Ratio per mille. |                      |     | Ratio per mille. |
| Males   | ... | 31·2             | Christians          | ... | 30·4             | Under 1 year         | ... | 192·1            |
| Females   | ... | 28·3             | Hindus              | ... | 29·8             | 1 and under 5 years  | ... | 39·8             |
| Ratio of male deaths to every 100 female deaths | ... | 125              | Mahomedans          | ... | 30·1             | 5 " 10 "             | ... | 21·4             |
|   |     |                  | Other classes       | ... | 36·4             | 10 " 15 "            | ... | 14·9             |
|   |     |                  |                     |     |                  | 15 " 20 "            | ... | 25·6             |
|   |     |                  |                     |     |                  | 20 " 30 "            | ... | 17·5             |
|   |     |                  |                     |     |                  | 30 " 40 "            | ... | 22·5             |
|   |     |                  |                     |     |                  | 40 " 50 "            | ... | 28·5             |
|   |     |                  |                     |     |                  | 50 " 60 "            | ... | 21·8             |
|   |     |                  |                     |     |                  | 60 years and upwards | ... | 70·4             |

The 7th December 1887.

R. LADDERDALE, M.D., Deputy Surgeon-General,  
Sanitary Commissioner for Bengal.



|                      |     | 13            | 14      | 15          | 16         | MORTALITY ACCORDING TO—                  |               |                      |                       |                        |                        |                        |                        |                        |                        | RATIO PER 1,000 OF POPULATION PER ANNUM. |               |                      |                       |                        |                        |                        |                        |                        |                        |                       |
|----------------------|-----|---------------|---------|-------------|------------|--|---------------|----------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--|---------------|----------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|
|                      |     | Class.        |         |             |            | Deaths.                                  |               |                      |                       |                        |                        |                        |                        |                        |                        | Age.                                     |               |                      |                       |                        |                        |                        |                        |                        |                        |                       |
|                      |     | Deaths among— |         |             |            | Ratio per 1,000 of Population per annum. |               |                      |                       |                        |                        |                        |                        |                        |                        | Ratio per 1,000 of Population per annum. |               |                      |                       |                        |                        |                        |                        |                        |                        |                       |
|                      |     | Christians.   | Hindus. | Mahomedans. | Buddhists. | Other classes.                           | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and upwards.                    | Under 1 year. | 1 and under 5 years. | 5 and under 10 years. | 10 and under 15 years. | 15 and under 20 years. | 20 and under 30 years. | 30 and under 40 years. | 40 and under 50 years. | 50 and under 60 years. | 60 years and upwards. |
| Burman               | ... | 12            | 4       | ...         | ...        | ...                                      | 1             | 3                    | ...                   | 1                      | 1                      | 4                      | 4                      | 1                      | 1                      | ...                                      | 753           | 691                  | ...                   | 307                    | 169                    | 263                    | 302                    | 118                    | 212                    | ...                   |
| Midnapore            | ... | 4             | 3       | ...         | ...        | ...                                      | 2             | 1                    | ...                   | ...                    | 1                      | 1                      | ...                    | ...                    | ...                    | ...                                      | 1400          | 231                  | ...                   | ...                    | ...                    | 71                     | ...                    | ...                    | ...                    | ...                   |
| Hughli and Chinsurah | ... | 15            | 6       | ...         | ...        | ...                                      | 2             | 1                    | 4                     | 2                      | ...                    | 3                      | 3                      | 5                      | ...                    | ...                                      | 1103          | 195                  | 897                   | 344                    | 203                    | 203                    | 148                    | 804                    | ...                    | ...                   |
| Seraampore           | ... | 20            | 3       | ...         | ...        | ...                                      | 1             | 2                    | 3                     | 3                      | 1                      | 3                      | 1                      | 7                      | 1                      | ...                                      | 732           | 376                  | 631                   | 703                    | 371                    | 371                    | 105                    | 1079                   | 272                    | ...                   |
| Upperpara            | ... | ...           | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Kowrah               | ... | 33            | 18      | ...         | ...        | 215-3                                    | 4             | 8                    | 5                     | 3                      | 4                      | 10                     | 9                      | 3                      | 1                      | ...                                      | 1009          | 751                  | 413                   | 237                    | 234                    | 243                    | 153                    | 153                    | 85                     | ...                   |
| Bali                 | ... | 6             | ...     | ...         | ...        | ...                                      | 2             | ...                  | 1                     | ...                    | ...                    | 1                      | 3                      | ...                    | ...                    | ...                                      | 2373          | 676                  | 312                   | 174                    | 349                    | 186                    | 537                    | ...                    | ...                    | ...                   |
| Suburbs of Calcutta  | ... | 143           | 81      | ...         | ...        | ...                                      | 26            | 21                   | 13                    | 6                      | 16                     | 29                     | 47                     | 19                     | 20                     | ...                                      | 2357          | 676                  | 812                   | 402                    | 349                    | 475                    | 291                    | 613                    | ...                    | ...                   |
| Kishinagar           | ... | 16            | 5       | ...         | ...        | ...                                      | 5             | ...                  | 1                     | 1                      | ...                    | ...                    | 1                      | 5                      | 3                      | ...                                      | 5242          | ...                  | 151                   | 185                    | ...                    | 121                    | 797                    | 494                    | 180-6                  | ...                   |
| Ranaghat             | ... | ...           | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Santipur             | ... | 13            | ...     | ...         | ...        | ...                                      | 1             | ...                  | 2                     | 1                      | 1                      | ...                    | ...                    | 2                      | 1                      | ...                                      | 613           | ...                  | 275                   | 179                    | 234                    | ...                    | 296                    | 216                    | 1354                   | ...                   |
| Jessore              | ... | 1             | 1       | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | 1                      | ...                    | 1                      | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Rampore Beaulah      | ... | 6             | 7       | ...         | ...        | ...                                      | 1             | 5                    | 1                     | 1                      | ...                    | 2                      | ...                    | ...                    | ...                    | ...                                      | 1251          | 1854                 | 230                   | 299                    | 250                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Darjiling            | ... | 1             | 1       | ...         | ...        | ...                                      | 1             | ...                  | ...                   | ...                    | ...                    | ...                    | 1                      | ...                    | ...                    | ...                                      | 4297          | ...                  | ...                   | ...                    | ...                    | 363                    | ...                    | ...                    | ...                    | ...                   |
| Dacca                | ... | 17            | 13      | ...         | ...        | ...                                      | 1             | 1                    | 3                     | 1                      | 4                      | 4                      | 3                      | 5                      | ...                    | ...                                      | 274           | 71                   | 157                   | 03                     | 293                    | 136                    | 134                    | 310                    | ...                    | ...                   |
| Naraingunge          | ... | 5             | 5       | ...         | ...        | ...                                      | 3             | 2                    | ...                   | 1                      | ...                    | 1                      | ...                    | 1                      | ...                    | ...                                      | 5392          | 912                  | ...                   | 458                    | ...                    | 193                    | ...                    | ...                    | ...                    | ...                   |
| Chittagong           | ... | 1             | 8       | ...         | ...        | ...                                      | 2             | 2                    | 2                     | ...                    | ...                    | 1                      | 1                      | ...                    | ...                    | ...                                      | 1347          | 539                  | 416                   | ...                    | ...                    | 112                    | 156                    | ...                    | ...                    | ...                   |
| Comilla              | ... | ...           | ...     | ...         | ...        | ...                                      | 2             | 1                    | ...                   | 1                      | ...                    | ...                    | 1                      | ...                    | ...                    | ...                                      | 3202          | 308                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Pattin City          | ... | 60            | 9       | ...         | ...        | ...                                      | 7             | 8                    | 7                     | 2                      | 4                      | 10                     | 4                      | 8                      | 2                      | ...                                      | 813           | 285                  | 316                   | 72                     | 186                    | 190                    | 89                     | 231                    | 74                     | 680                   |
| Gya                  | ... | 48            | 8       | ...         | ...        | ...                                      | 17            | 0                    | 4                     | 2                      | 3                      | 7                      | 1                      | 4                      | 2                      | ...                                      | 4039          | 737                  | 303                   | 154                    | 298                    | 247                    | 41                     | 213                    | 158                    | 767                   |
| Arrah                | ... | 14            | 7       | ...         | ...        | ...                                      | 7             | 1                    | ...                   | 2                      | ...                    | 1                      | 3                      | 2                      | 4                      | ...                                      | 2826          | 117                  | ...                   | 535                    | ...                    | 66                     | 242                    | 323                    | 673                    | 130                   |
| Mourmpore            | ... | 3             | 1       | ...         | ...        | ...                                      | 1             | ...                  | 1                     | ...                    | ...                    | 1                      | ...                    | ...                    | ...                    | ...                                      | 344           | ...                  | 118                   | ...                    | 61                     | ...                    | ...                    | ...                    | ...                    | ...                   |
| Bhanga               | ... | 19            | 6       | ...         | ...        | ...                                      | 4             | 6                    | 3                     | 1                      | 5                      | 2                      | ...                    | ...                    | ...                    | ...                                      | 1356          | 410                  | 199                   | 93                     | 646                    | 78                     | ...                    | ...                    | ...                    | ...                   |
| Chupra               | ... | ...           | ...     | ...         | ...        | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                                      | ...           | ...                  | ...                   | ...                    | ...                    | ...                    | ...                    | ...                    | ...                    | ...                   |
| Bhagalpore           | ... | 35            | 11      | ...         | ...        | ...                                      | 11            | 6                    | 2                     | 3                      | 3                      | 1                      | 3                      | 7                      | 1                      | ...                                      | 4791          | 576                  | 177                   | 165                    | 273                    | 48                     | 168                    | 667                    | 132                    | 1444                  |
| Kroghy               | ... | 17            | 11      | ...         | ...        | ...                                      | 6             | 3                    | 3                     | 1                      | 3                      | 1                      | 2                      | 3                      | ...                    | ...                                      | 2103          | 251                  | 147                   | 91                     | 413                    | 50                     | 117                    | 163                    | ...                    | 1166                  |
| Purneah              | ... | 6             | 8       | ...         | ...        | ...                                      | 2             | 4                    | 1                     | 1                      | ...                    | ...                    | 2                      | 2                      | 1                      | ...                                      | 3675          | 1732                 | 3269                  | 435                    | ...                    | ...                    | 293                    | 669                    | 683                    | 643                   |
| Puri                 | ... | 27            | ...     | ...         | ...        | ...                                      | 3             | ...                  | ...                   | ...                    | ...                    | ...                    | 12                     | 10                     | 2                      | ...                                      | 5149          | ...                  | ...                   | ...                    | ...                    | ...                    | 1440                   | 1003                   | 466                    | 704                   |
| TOTAL                | ... | 7             | 534     | 237         | ...        | 364                                      | 113           | 86                   | 54                    | 33                     | 69                     | 91                     | 99                     | 83                     | 49                     | 109                                      | 1021          | 2978                 | 214                   | 149                    | 256                    | 175                    | 212                    | 365                    | 213                    | ...                   |

**R. LIDDERDALE, M.D., Deputy Surgeon-General,**

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,

*The 7th December 1887.*

## PUBLIC WORKS DEPARTMENT, BENGAL.

## IRRIGATION BRANCH.

IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1887-88.

Areas leased for Irrigation up to end of October 1887.

| CUTTING. | DRAINAGE. | CANAL. | Esti-<br>mated<br>fall dis-<br>charge.  | Average<br>discharge<br>in month.  | Discharge<br>utilised.  | Approxi-<br>mate<br>area of<br>land<br>irrigated<br>during<br>the year<br>up to<br>the end<br>of the<br>month. | DETAILS OF AREAS LEASED.  |  |  |  |  |  |   |   |   |   | RAINFALL,<br>1887-88.  |        | RAINFALL,<br>1886-87. |        | REMARKS.  |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|----------|-----------|--------|---|--|---|--|---|--|--|--|--|--|---|---|---|---|--|--------|-----------------------|--------|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|---|--------|-----------|--------|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|---|
|          |           |        |   |  |   |  | Five<br>years,<br>all crops.  | Five<br>years,<br>Kharif.  | ANNUAL LEASES.   |  |  |  |   |   | Grand<br>Total.   | Up to<br>end of<br>month.   | Up to<br>end of<br>month.  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  | Kharif.  | Rabi.  | Sugar-<br>cane.  | Ehadiol.   | Hot<br>weather.   | Total.  |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
| CANAL.   | DRAINAGE. | CANAL. | C. ft.<br>1,348<br>508<br>776<br>1,309<br>377.28<br>1,042<br>675<br>727.16<br>727.16<br>Total | C. ft.<br>526<br>95<br>423<br>935<br>17.36<br>451<br>353<br>54.16<br>189.26<br>Total | C. ft.<br>51.75<br>79.18<br>304.36<br>909<br>9.81<br>335<br>397<br>10.00<br>189.26<br>Total | Acres.<br>6,474<br>19,638<br>36,423<br>689<br>591<br>8,072<br>14,060<br>945<br>6,940<br>Total                  | Acres.<br>4,340<br>17,377<br>20,823<br>591<br>591<br>6,084<br>13,511<br>407<br>5,932<br>Total | Acres.<br>6,800<br>21,611<br>40,363<br>765<br>8,230<br>14,435<br>688<br>7,535<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>Total | .....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>Total |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  | BOOTS. | DRAINAGE.             | CANAL. | C. ft.<br>4,343<br>1,226<br>1,660<br>1,408<br>Total | C. ft.<br>2,694<br>767<br>1,472<br>983<br>Total | C. ft.<br>289<br>338<br>1,347<br>783<br>Total | Acres.<br>14,524<br>43,336<br>64,168<br>86,173<br>Total | Acres.<br>15,085<br>43,896<br>96,702<br>86,103<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>Total | .....<br>.....<br>.....<br>.....<br>Total |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   | BOOTS. | DRAINAGE. | CANAL. | C. ft.<br>4,343<br>1,226<br>1,660<br>1,408<br>Total | C. ft.<br>2,694<br>767<br>1,472<br>983<br>Total | C. ft.<br>289<br>338<br>1,347<br>783<br>Total | Acres.<br>14,524<br>43,336<br>64,168<br>86,173<br>Total | Acres.<br>15,085<br>43,896<br>96,702<br>86,103<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Acres.<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>Total | Inch.<br>.....<br>.....<br>.....<br>.....<br>Total | .....<br>.....<br>.....<br>.....<br>Total |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |
|          |           |        |   |  |   |  |   |  |  |  |  |  |   |   |   |   |  |        |                       |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |        |           |        |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |

A. D. McARTHUR, Major, &c.  
Under-Secretary to the Govt. of Bengal.

The 18th December 1887.

CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 10th December 1887, as compared with the corresponding week of the previous year.*

| NATURE OF CARGO.      | WEEK ENDING SATURDAY, THE<br>10TH DECEMBER 1887. |                     |          | WEEK ENDING SATURDAY, THE<br>11TH DECEMBER 1886. |                     |          |
|-----------------------|--|---------------------|----------|--|---------------------|----------|
|                       | Number of<br>boats.                              | Weight of<br>cargo. | Tollage. | Number of<br>boats.                              | Weight of<br>cargo. | Tollage. |
|                       | No.  | Mds.                | Rs.      | No.  | Mds.                | Rs.      |
| Rice and paddy ... .. | 1,175  | 1,25,335            | 1,887    | 792  | 68,410              | 1,070    |
| Jute ... ..           | 243  | 1,64,725            | 2,964    | 205  | 1,42,600            | 2,416    |
| Firewood ... ..       | 120  | 57,800              | 854      | 134  | 67,745              | 932      |
| Other articles . ...  | 1,008  | 2,37,145            | 4,239    | 1,093  | 2,24,070            | 3,656    |
| Total ... ..          | 2,546  | 5,85,005            | 9,944    | 2,224  | 5,02,825            | 8,074    |

## EAST INDIAN RAILWAY.

Statement of Goods Traffic in Staples carried during the 5 weeks ended 29th October 1887, as compared with the same period of 1886.

| STAPLES.  | 1887.     |           | 1886.     |           | Increase. |          | Decrease. |          |
|---|-----------|-----------|-----------|-----------|-----------|----------|-----------|----------|
|   | Weight.   | Freight.  | Weight.   | Freight.  | Weight.   | Freight. | Weight.   | Freight. |
|   | Mds.      | Rs.       | Mds.      | Rs.       | Mds.      | Rs.      | Mds.      | Rs.      |
| ANIMALS, LIVING, FOR SALE.  | No. 189   | 2,988     | No. 123   | 2,134     | No. 66    | 824      |           |          |
| Horses, ponies, and mules   | 817       | 5,405     | 485       | 2,841     | 334       | 2,564    |           |          |
| Sheep and goats   | 4,900     | 5,781     | 2,539     | 2,130     | 2,361     | 1,651    |           |          |
| Other kinds   |           |           |           |           |           |          |           |          |
| Rorax   | 618       | 253       | 618       | 253       |           |          | 5         | 31       |
| Canes and rattans   | 49        | 80        | 46        | 79        | 3         | 1        |           |          |
| Caoutchouc (Indian-rubber)  | 55        | 55        | 38        | 28        |           | 27       | 3         |          |
| Chinese and Japanese ware   | 5,38,403  | 2,00,259  | 5,39,403  | 2,30,509  |           |          | 51,000    | 30,250   |
| Coal and coke, up   | 19,40,304 | 2,70,232  | 18,58,100 | 2,56,982  | 1,04,100  | 18,250   |           |          |
| Ditto, down   | 29,873    | 29,859    | 46,028    | 43,511    |           |          | 16,155    | 13,053   |
| Cotton, raw   | 8,471     | 12,585    | 8,446     | 12,737    |           |          | 275       | 143      |
| Twist and yarn (European)   | 14,476    | 10,166    | 16,937    | 10,325    |           |          | 2,461     | 159      |
| Ditto (Indian)  | 2,08,618  | 2,46,056  | 2,06,558  | 2,57,170  | 2,060     |          |           | 12,120   |
| Piece-goods (European)  | 44,490    | 30,538    | 42,438    | 29,019    | 2,052     | 1,019    |           |          |
| Ditto (Indian)  | 277       | 147       | 207       | 184       | 70        |          |           | 87       |
| Drugs and Medicines.  | 1,453     | 2,155     | 1,413     | 2,191     | 40        |          |           | 38       |
| Antiseptics   | 535       | 381       | 1,444     | 543       |           |          | 809       | 232      |
| Other sorts, not intoxicating   |           |           |           |           |           |          |           |          |
| Intoxicating drugs (other than opium, &c., arsenic, bhanga, ganja, and churus, &c.) |           |           |           |           |           |          |           |          |
| Indigo  | 10,572    | 25,428    | 9,187     | 21,530    | 1,385     | 3,898    |           |          |
| Dyeing Materials.   |           |           |           |           |           |          |           |          |
| Madder or manjiti   | 166       | 78        | 223       | 61        |           | 15       |           |          |
| Safflower   | 11,619    | 10,341    | 10,919    | 9,825     | 671       | 413      | 57        |          |
| Turmeric  | 5,349     | 3,514     | 6,723     | 3,392     |           |          | 1,379     | 278      |
| Other kinds   | 654       | 1,356     | 698       | 1,317     |           | 39       | 44        |          |
| Earthenware and porcelain   | 62,184    | 10,339    | 10,083    | 7,437     | 46,108    | 2,892    |           |          |
| Ditto, raw  | 55,025    | 20,349    | 47,160    | 22,125    | 8,869     | 4,225    |           |          |
| Fibrous Products.   |           |           |           |           |           |          |           |          |
| Do., manufactured (gunny bags and cloths)   | 5,070     | 5,715     | 24,060    | 27,733    |           |          | 18,990    | 22,018   |
| Other fibres, raw   | 1,800     | 471       | 1,591     | 508       |           |          | 191       | 38       |
| Ditto, manufactured   | 8,216     | 7,214     | 4,601     | 4,277     | 4,125     | 2,937    |           |          |
| Fruits & Nuts   | 40,431    | 37,879    | 32,480    | 35,249    | 7,951     | 4,613    |           |          |
| All other kinds   | 2,68,365  | 56,157    | 6,75,005  | 1,53,107  |           |          | 4,14,640  | 96,950   |
| Wheat   | 3,44,202  | 73,715    | 3,53,002  | 1,07,012  | 8,800     |          |           | 31,200   |
| Gram and pulses   | 3,92,838  | 93,834    | 4,20,768  | 81,094    |           | 12,150   | 28,420    |          |
| Rice, husked  | 25,841    | 3,364     | 53,601    | 4,904     |           |          | 7,720     | 800      |
| Do., unhusked   | 2,61,974  | 58,267    | 1,64,234  | 35,627    | 97,040    | 25,740   |           |          |
| Other rain and spring crops   | 20,594    | 28,001    | 27,490    | 2,105     |           | 510      | 1,317     |          |
| Government stores   | 8,313     | 2,045     | 3,201     | 27,490    | 48        |          |           |          |
| Gums and resins   | 40,800    | 2,035     | 45,610    | 2,230     |           |          |           | 61       |
| Hides & Skins.  | 16,067    | 9,789     | 13,945    | 8,014     | 2,112     | 1,775    | 4,950     | 2,306    |
| Hides of cattle   |           |           |           |           |           |          |           |          |
| Skins of sheep, goats, and small animals  | 769       | 901       | 1,611     | 1,197     |           |          | 842       | 296      |
| Horns   | 1,391     | 761       | 491       | 321       | 900       | 440      |           |          |
| Lac   | 22,405    | 17,728    | 17,830    | 13,637    | 4,629     | 4,091    |           |          |
| Do. shell   | 26,493    | 7,109     | 25,128    | 8,010     | 1,365     |          |           |          |
| Do. stick and other kinds   | 2,212     | 4,333     | 2,536     | 4,581     |           |          | 324       | 910      |
| Leather   | 5,850     | 8,468     | 4,686     | 7,857     |           | 611      |           | 249      |
| Do., unmanufactured   | 14,780    | 14,758    | 21,152    | 18,920    | 664       |          | 6,379     | 4,102    |
| Ditto, manufactured   | 850       | 507       | 604       | 337       | 297       | 170      |           |          |
| Liquors   | 1,14,670  | 16,008    | 49,390    | 9,777     | 65,380    | 6,321    |           |          |
| Mats  | 40,050    | 30,062    | 45,173    | 32,149    |           |          |           |          |
| Minerals  | 1,14,046  | 72,603    | 97,598    | 60,109    | 17,544    | 12,494   | 5,123     | 2,087    |
| MANUFACTURES.   | 6,814     | 8,823     | 15,043    | 9,023     |           |          | 8,220     | 2,134    |
| Brass and copper  | 39,728    | 23,407    | 34,197    | 15,543    | 7,631     | 7,694    |           |          |
| Iron  | 2,492     | 1,576     | 894       | 1,392     | 1,598     | 104      |           |          |
| Other metals  | 4,097     | 1,800     | 2,326     | 1,668     | 2,671     | 222      |           |          |
| Oil   | 21,070    | 18,581    | 21,144    | 15,808    |           | 2,775    | 08        |          |
| Opium   | 10,233    | 8,038     | 9,976     | 7,377     | 277       | 801      |           |          |
| Paints and colours  | 20,638    | 1,426     | 2,66,085  | 6,547     |           |          | 2,60,047  | 5,121    |
| PROVISIONS  | 4,22,570  | 2,01,204  | 55,610    | 47,893    | 3,66,960  | 1,53,513 |           |          |
| Ghee  | 5,05,242  | 1,00,062  | 5,76,483  | 1,17,241  |           |          | 70,241    | 17,189   |
| Other kinds   | 64,128    | 26,314    | 51,373    | 19,610    | 12,755    | 6,701    |           |          |
| Construction Account  | 20,616    | 5,465     | 10,471    | 3,087     | 10,045    | 3,408    |           |          |
| Foreign   | 6,12,933  | 1,68,087  | 3,30,373  | 91,347    | 2,78,589  | 76,740   |           |          |
| Mustard and rape  | 1,19,620  | 29,938    | 1,15,850  | 28,098    | 3,670     | 940      |           |          |
| Til or gingelly   | 10,387    | 3,122     | 2,977     | 852       | 7,410     | 2,270    |           |          |
| Other oilseeds  | 1,12,094  | 32,774    | 1,26,430  | 42,274    |           |          | 13,500    | 5,500    |
| Indigo seed   | 8,71      | 879       | 13,051    | 5,219     |           |          | 10,580    | 4,500    |
| Tea seed  |           |           |           |           |           |          |           |          |
| Other kinds   | 27,080    | 10,373    | 21,270    | 9,533     | 5,810     | 840      |           |          |
| Silk, raw   | 1,572     | 1,197     | 1,363     | 1,363     |           |          | 312       | 108      |
| Do., manufactured (European)  | 315       | 402       | 308       | 873       | 7         | 20       |           |          |
| Do., ditto (Indian)   | 831       | 406       | 915       | 510       |           |          | 84        | 104      |
| Spices  | 6,238     | 5,403     | 10,452    | 6,156     |           |          | 1,214     | 753      |
| Stones and marble   | 78,767    | 11,138    | 94,553    | 9,052     |           | 2,056    | 15,788    |          |
| SUGAR   | 1,36,382  | 36,938    | 1,31,053  | 35,071    | 5,329     | 1,817    |           |          |
| Sugar, refined  | 54,651    | 12,206    | 54,140    | 10,783    | 535       | 1,483    |           |          |
| Do., unrefined  | 3,570     | 6,361     | 3,800     | 4,283     | 61        | 1,008    |           |          |
| Tea   | 2,380     | 73        | 2,828     | 92        |           |          | 448       | 16       |
| Tea, Indian   | 33,854    | 12,608    | 40,012    | 17,633    |           |          | 6,166     | 4,967    |
| Do., Foreign  | 23,877    | 4,530     | 22,070    | 6,502     | 1,807     |          |           | 1,968    |
| Tobacco   | 12,008    | 701       | 20,831    | 1,804     |           |          | 16,923    | 900      |
| WOOD  | 1,807     | 1,835     | 1,678     | 1,847     | 230       | 484      |           |          |
| Firewood  | 2,427     | 6,448     | 3,578     | 8,711     |           |          | 1,151     | 2,363    |
| Timber  |           |           |           |           |           |          |           |          |
| Wool, raw   |           |           |           |           |           |          |           |          |
| Do., manufactured (European)  | 5,722     | 6,002     | 5,403     | 5,875     | 319       | 127      |           |          |
| Wool, manufactured (Indian)   |           |           |           |           |           |          |           |          |
| Shawls  |           |           |           |           |           |          |           |          |
| ALL other articles of merchandise   | 2,05,779  | 1,86,420  | 2,99,616  | 1,90,198  |           |          | 5,837     | 9,777    |
| Total   | 73,89,946 | 23,90,091 | 72,87,561 | 23,12,429 | 10,76,147 | 3,64,518 | 9,73,702  | 2,77,256 |



*General remarks on the fluctuation of principal staples carried over the East Indian Railway  
.. during 5 weeks ended 29th October 1887.*

INCREASES.

*Jute, raw*.—This increase was entirely in the short lead traffic from the Eastern Bengal State Railway *via* the Jubilee Bridge to stations near Calcutta.

*Gunny*.—Due to despatches up-country to meet the increase in the *linseed* trade.

*Fruits, other kinds*.—The increase was chiefly in betelnuts from Sealdah and in myrabolams from stations on the Jubbulpore line for Bombay.

*Rice (husked and unhusked)*.—There was a decrease in the weight carried and an increase in the earnings due to despatches in the upward direction to meet partial failure of crops.

*Other resin and spring crops*.—Due to despatches from districts having a surplus over their requirements, to those where the stocks were exhausted owing to a partial failure of crops.

*Minerals*.—This increase was principally in lime traffic from Rajbandh, Durgapur, Ondal, Raueegunge and Barakar on account of the Kidderpore dock work.

*Iron*.—The increase was principally at Howrah due to the demand at nearly all principal marts being good.

*Oil*.—This was in the despatches of kerosine oil from Howrah despatched to nearly all the important trade centres on the line.

*Railway Material, Foreign*.—Due chiefly to despatches of material for the Indian Midland Railway to Cawnpore from Bombay *via* Jubbulpore.

*Saltpetre*.—The increase was in despatches to Howrah principally from Sultangunge, Mokameh, Digba Ghat and Cawnpore.

*Seeds*.—The increase was chiefly in *linseed* to Calcutta for export.

DECREASES.

*Coal and coke*.—There was a decrease in the upward despatches and an increase in the downward traffic; the former was due to less demands from foreign railways and the latter to considerable despatches of coal made to stations on the Eastern Bengal State Railway *via* the Jubilee Bridge.

*Piece-goods, European*.—There was an increase in weight and a decrease in earnings due to ordinary fluctuation after the Doorga Poojah Holidays.

*Cotton, raw*.—The season this year is considerably later than last year and the crop is below the average.

*Other fibres raw*.—The decrease was almost entirely in hemp from Ailahabad.

*Wheat*.—As reported last month, the stocks are almost exhausted, hence the decrease.

*Gram and Pulses*.—There was an increase in weight carried attended with a decrease in the earnings due to short lead traffic despatched in response to local demands.

*Salt*.—Due to decreased despatches from Howrah after the large business done in September 1887.

*Tobacco*.—This decrease may be attributed to the tobacco season being a bad one.

N. St. L. CARTER, *Traffic Manager*.

TRAFFIC MANAGER'S OFFICE, JAMALPUR, the 9th December 1887.

## Eastern Bengal State Railway.

*Abstract of principal commodities carried over the Eastern Bengal State Railway during the month of August 1887, as compared with the same month of the previous year.*

| STAPLES.   | 1887.  |        | 1886.  |        | TOTAL. |        | Increase. | Decrease. |
|--|--------|--------|--------|--------|--------|--------|-----------|-----------|
|  | Up.    | Down.  | Up.    | Down.  | 1887.  | 1886.  |           |           |
|  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.  | Tons.     | Tons.     |
| Coal ... ..                                      | 6,482  | 1,854  | 2,558  | 1,378  | 8,336  | 3,946  | 4,390     | .....     |
| Cotton, raw ... ..                               | 1      | 190    | 31     | 51     | 191    | 72     | 119       | .....     |
| Cotton, twist and yarn—                          |        |        |        |        |        |        |           |           |
| 1.—European ... ..                               |        |        |        |        |        |        |           |           |
| 2.—Indian ... ..                                 |        |        |        |        |        |        |           |           |
| Cotton piece-goods—                              |        |        |        |        |        |        |           |           |
| 1.—European—                                     | 3,956  | 285    | 1,548  | 178    | 4,341  | 1,726  | 2,515     | .....     |
| a.—In bales and bundles ... ..                   |        |        |        |        |        |        |           |           |
| b.—In boxes ... ..                               |        |        |        |        |        |        |           |           |
| Grains—  |        |        |        |        |        |        |           |           |
| 2.—Rice ... ..                                   | 1,014  | 3,247  | 311    | 2,634  | 4,911  | 2,045  | 1,966     | .....     |
| 5.—Others ... ..                                 | 615    | 1,044  | 164    | 1,307  | 2,339  | 1,371  | 868       | .....     |
| Hides and Skins—                                 |        |        |        |        |        |        |           |           |
| 1.—Hides of cattle—                              |        |        |        |        |        |        |           |           |
| a.—Dressed ... ..                                |        |        |        |        |        |        |           |           |
| b.—Undressed ... ..                              |        |        |        |        |        |        |           |           |
| 2.—Skins of sheep, &c.—                          | 10     | 398    | 5      | 685    | 398    | 670    | ...       | 27        |
| a.—Dressed ... ..                                |        |        |        |        |        |        |           |           |
| b.—Undressed ... ..                              |        |        |        |        |        |        |           |           |
| Jute—  |        |        |        |        |        |        |           |           |
| 1.—Raw—  |        |        |        |        |        |        |           |           |
| a.—Screwed ... ..                                | 6      | 6,730  | 3      | 1,345  | 6,736  | 1,108  | 5,628     | .....     |
| b.—Unscrewed ... ..                              | 29     | 40,449 | ...    | 21,008 | 40,498 | 21,008 | 25,400    | ...       |
| 2.—Gunny-bags and cloth ... ..                   | 87     | 1,091  | 55     | 818    | 1,178  | 873    | 305       | .....     |
| Metals—  |        |        |        |        |        |        |           |           |
| 1.—Copper, unwrought ... ..                      |        |        |        |        |        |        |           |           |
| 2.—Brass, unwrought ... ..                       |        |        |        |        |        |        |           |           |
| 3.—Brass and copper, wrought ... ..              |        |        |        |        |        |        |           |           |
| 4.—Iron ... ..                                   | 864    | 223    | 407    | 43     | 1,087  | 540    | 547       | ...       |
| 5.—Tin ... ..                                    |        |        |        |        |        |        |           |           |
| 6.—Others ... ..                                 |        |        |        |        |        |        |           |           |
| Oils—  |        |        |        |        |        |        |           |           |
| 2.—Kerosine ... ..                               | 524    | 6      | ...    | ...    | 530    | ...    | 530       | ...       |
| 3.—Others ... ..                                 | 245    | 54     | 228    | ...    | 299    | 228    | 71        | .....     |
| Oilseeds—  |        |        |        |        |        |        |           |           |
| 1.—Linseed ... ..                                |        |        |        |        |        |        |           |           |
| 2.—Rape and mustard ... ..                       |        |        |        |        |        |        |           |           |
| 3.—Til or gingelly ... ..                        |        |        |        |        |        |        |           |           |
| 4.—Niger ... ..                                  | 377    | 1,235  | 380    | 1,171  | 1,612  | 1,551  | 61        | .....     |
| 5.—Castor ... ..                                 |        |        |        |        |        |        |           |           |
| 6.—Poppy ... ..                                  |        |        |        |        |        |        |           |           |
| 7.—Others ... ..                                 |        |        |        |        |        |        |           |           |
| Provisions—                                      |        |        |        |        |        |        |           |           |
| 2.—Peanuts ... ..                                | 60     | 229    | 24     | 28     | 289    | 52     | 237       | .....     |
| 3.—Others ... ..                                 | 346    | 164    | 153    | 103    | 510    | 346    | 164       | .....     |
| Railway plant and rolling-stock ... ..           | 5,693  | 1,188  | 4,383  | 441    | 4,841  | 4,817  | 24        | ...       |
| Salt ... ..                                      | 3,951  | 28     | 2,914  | 2      | 3,979  | 2,916  | 1,063     | .....     |
| Sugar—   |        |        |        |        |        |        |           |           |
| 1.—Drained ... ..                                | 626    | 268    | 230    | 421    | 894    | 651    | 243       | .....     |
| 2.—Undrained ... ..                              |        |        |        |        |        |        |           |           |
| Tea—   |        |        |        |        |        |        |           |           |
| 1.—Foreign ... ..                                |        | 2,631  | .....  | 1,682  | 2,631  | 1,682  | 949       | ...       |
| 2.—Indian ... ..                                 |        |        |        |        |        |        |           |           |
| Wood—  |        |        |        |        |        |        |           |           |
| 1.—Timber ... ..                                 | 191    | 204    | ...    | ...    | 395    | ...    | 395       | .....     |
| 2.—Firewood ... ..                               | 1,495  | 22     | 1,377  | 25     | 1,517  | 1,402  | 115       | ...       |
| Tobacco ... ..                                   | 107    | 3,375  | 66     | 943    | 2,481  | 1,009  | 1,472     | .....     |
| All other articles of merchandise—               |        |        |        |        |        |        |           |           |
| 1.—Unmanufactured ... ..                         | 2,018  | 1,068  | 1,391  | 631    | 3,114  | 2,322  | 892       | .....     |
| 2.—Manufactured ... ..                           |        |        |        |        |        |        |           |           |
| Hay, straw, and wool (U. & S. E. Section) ... .. | 408    | 7      | 309    | ...    | 475    | 309    | 166       | .....     |
| Total ... ..                                     | 27,845 | 71,543 | 16,610 | 34,864 | 99,300 | 51,474 | 47,826    | 27        |

## INCREASES.

|  | Tons.  |
|--|--------|
| Coal ... ..  | 4,390  |
| From East Indian Railway <i>via</i> Naihati principally for railway and steamer purposes.  |        |
| Cotton piece-goods ... ..  | 2,515  |
| The Chamber of Commerce reports the principal business in piece-goods during August to have been done by traders for Eastern Bengal.   |        |
| Rice ... ..  | 868    |
| For export to Mauritius and the West Indies.   |        |
| Jute ... ..  | 31,088 |
| Goolundo contributed about one-fourth of this increase.  |        |
| The other increases were from Naraingunge, Sorajgunge, and the Dacca section principally. There was a falling off from stations on the Northern section with the exception of Demar and Haldibari. |        |
| Metals ... ..  | 547    |
| Under this head are included manufactures for domestic purposes.   |        |
| Kerosine-oil ... ..  | 530    |
| For up-country consumption.  |        |
| Salt ... ..  | 1,063  |
| For curing purposes, principally for Dacca and the hide-exporting stations on the Northern section.  |        |
| Tea ... ..   | 949    |
| Due to extended area of cultivation and development of trade.  |        |
| Timber ... ..  | 395    |
| For building purposes.   |        |
| Tobacco ... ..   | 1,472  |
| Mungpore contributed principally towards this increase.  |        |

## DECREASES.

|  | Tons. |
|--|-------|
| Hides ... ..                                 | 274   |
| This was the only decrease during the month. |       |

Bengal Central Railway.

Abstract of principal commodities carried over the Eastern Bengal State Railway during the month August 1887, as compared with the same month of the previous year.

| STAPLES.                           | 1887. |       | 1886. |       | Total. |       | Increase. | Decrease. |
|------------------------------------|-------|-------|-------|-------|--------|-------|-----------|-----------|
|                                    | Up.   | Down. | Up.   | Down. | 1887.  | 1886. |           |           |
|                                    | Tons. | Tons. | Tons. | Tons. | Tons.  | Tons. | Tons.     | Tons.     |
| Coal ... ..                        | 965   | ..... | 318   | ..... | 965    | 318   | 647       | .....     |
| Cotton, raw ... ..                 | ..... | 1     | ..... | 3     | 1      | 3     | .....     | .....     |
| Cotton twist and yarn—             |       |       |       |       |        |       |           |           |
| 1.—European ... ..                 | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 2.—Indian ... ..                   | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| Cotton piece-goods—                |       |       |       |       |        |       |           |           |
| 1.—European—                       | 184   | 9     | 86    | ..... | 193    | 86    | 107       | .....     |
| a.—in bales and bundles            |       |       |       |       |        |       |           |           |
| b.—in boxes ... ..                 | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| Grains—                            |       |       |       |       |        |       |           |           |
| 2.—Rice ... ..                     | 4     | 467   | 4     | 12    | 501    | 16    | 485       | .....     |
| 5.—Others ... ..                   | 27    | 65    | 60    | 7     | 90     | 67    | 23        | .....     |
| Hides and Skins—                   |       |       |       |       |        |       |           |           |
| 1.—Hides of cattle—                |       |       |       |       |        |       |           |           |
| a.—Dressed ... ..                  | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| b.—Undressed ... ..                | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 2.—Skins of sheep, &c.—            | ..... | 36    | ..... | 42    | 36     | 42    | .....     | .....     |
| a.—Dressed ... ..                  | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| b.—Undressed ... ..                | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| Jute—                              |       |       |       |       |        |       |           |           |
| 1.—Raw—                            |       |       |       |       |        |       |           |           |
| a.—screwed ... ..                  | ..... | ..... | ..... | 133   | .....  | 133   | .....     | 13        |
| b.—Unscrewed ... ..                | ..... | 4,080 | ..... | 24    | 4,080  | 24    | 4,056     | .....     |
| 2.—Gunny-bags and cloth ... ..     | 8     | 3     | 13    | 2     | 11     | 5     | 6         | .....     |
| Metals—                            |       |       |       |       |        |       |           |           |
| 1.—Copper, unwrought ... ..        | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 2.—Brass, unwrought ... ..         | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 3.—Brass and copper, wrought       | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 4.—Iron ... ..                     | 59    | 17    | 43    | 4     | 76     | 47    | 29        | .....     |
| 5.—Tin ... ..                      | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 6.—Others ... ..                   | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| Oil—                               |       |       |       |       |        |       |           |           |
| 2.—Kerosine ... ..                 | 81    | ..... | ..... | ..... | 81     | ..... | 81        | .....     |
| 3.—Others ... ..                   | 95    | ..... | 81    | ..... | 95     | 81    | 12        | .....     |
| Oilseeds—                          |       |       |       |       |        |       |           |           |
| 1.—Linsed ... ..                   | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 2.—Rape and mustard ... ..         | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 3.—Til or gingelly ... ..          | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 4.—Niger ... ..                    | 310   | 125   | 242   | 34    | 355    | 260   | 85        | .....     |
| 5.—Castor ... ..                   | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 6.—Poppy ... ..                    | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| 7.—Others ... ..                   | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| Provisions—                        |       |       |       |       |        |       |           |           |
| 2.—Betelnuts ... ..                | 2     | 198   | 1     | 25    | 200    | 26    | 174       | .....     |
| 3.—Others ... ..                   | 41    | 62    | 23    | 23    | 103    | 54    | 49        | .....     |
| Railway plant and rolling-stock    | 114   | 98    | 41    | 11    | 212    | 52    | 160       | .....     |
| Salt ... ..                        | 185   | ..... | 180   | ..... | 165    | 180   | .....     | 15        |
| Sugar—                             |       |       |       |       |        |       |           |           |
| 1.—Drained ... ..                  | 40    | 248   | 14    | 357   | 297    | 401   | .....     | 104       |
| 2.—Undrained ... ..                | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| Wood—                              |       |       |       |       |        |       |           |           |
| 1.—Timber ... ..                   | 16    | 25    | 28    | 7     | 41     | 35    | 6         | .....     |
| 2.—Firewood ... ..                 | 48    | 21    | 57    | 8     | 69     | 65    | 4         | .....     |
| Tobacco ... ..                     | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| All other articles of merchandise— |       |       |       |       |        |       |           |           |
| 1.—Unmanufactured ... ..           | 229   | 217   | 179   | 105   | 448    | 284   | 162       | .....     |
| 2.—Manufactured ... ..             | ..... | ..... | ..... | ..... | .....  | ..... | .....     | .....     |
| Total ... ..                       | 2,295 | 5,709 | 1,365 | 839   | 3,660  | 2,199 | 1,461     | 1,461     |

INCREASES.

|  |       |
|--|-------|
| Coal ... ..                                  | Tons. |
| For Railway and Flotilla purposes.           | 647   |
| Cotton piece-goods ... ..                    | 107   |
| Despatches to Jessore and Khoolna.           | ..... |
| Rice ... ..                                  | 485   |
| For export to Mauritius and the West Indies. | ..... |
| Jute ... ..                                  | 4,056 |
| Principally from Khoolna.                    | ..... |
| Betelnuts ... ..                             | 174   |
| For British Burmah.                          | ..... |

DECREASES.

|  |       |
|--|-------|
| Jute screwed ... ..  | 133   |
| There was no consignment of screwed jute during the month. | ..... |
| Sugar ... ..   | 104   |
| Continued depression in the trade in this industry.        | ..... |

CALCUTTA, the 10th December 1887.

F. P. QUINLAN, Examiner of Accounts.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 3rd December 1887, on 1,613½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |                 | Other earnings (estimated). | Total earnings.  | TRAFFIC TRAIN-MILES RUN. |              |           |
|---|-----------------------|--------------------|----------------------------------|-----------------|-----------------------------|------------------|--------------------------|--------------|-----------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.       |                             |                  | Coaching.                | Merchandise. | Total.    |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.       | Rs. A. P.                   | Rs. A. P.        |                          |              |           |
| Total traffic for the week ...                              | 221,048               | 2,56,798 9 0       | 28,08,589 0                      | 6,71,774 3 0    | 18,726 11 6                 | 9,47,299 7 0     | 64,779                   | 94,069       | 158,848   |
| Or per mile of railway ...                                  | ...                   | 169 10 4           | ...                              | 448 12 6        | 12 5 11                     | 625 12 9         | ...                      | ...          | ...       |
| For previous 51 weeks of half-year ...                      | 5,082,519             | 53,61,876 10 9     | 4,04,06,987 80                   | 1,03,80,399 4 8 | 3,5,383 12 5                | 1,00,94,289 11 1 | 1,398,507                | 1,786,840    | 3,185,347 |
| Total for 52 weeks ...                                      | 5,303,567             | 5,018,675 3 0      | 4,02,15,476 30                   | 1,10,62,773 7 8 | 3,70,110 7 11               | 1,70,41,589 2 7  | 1,431,284                | 1,880,909    | 3,312,193 |
| COMPARISON.   |                       |                    |                                  |                 |                             |                  |                          |              |           |
| Total for corresponding week of previous year ...           | 198,006               | 2,33,383 7 4       | 23,55,164 30                     | 6,36,729 12 0   | 18,256 2 3                  | 8,93,368 5 7     | 65,510                   | 104,206      | 169,716   |
| Per mile of railway corresponding week of previous year ... | ...                   | 157 5 7            | ...                              | 420 4 6         | 13 0 10                     | 589 10 11        | ...                      | ...          | ...       |
| Total to corresponding date of previous year ...            | 5,081,952             | 58,50,407 12 11    | 4,02,17,916 20                   | 1,18,00,936 4 8 | 3,60,837 7 11               | 1,80,18,181 9 6  | 1,512,802                | 2,037,756    | 3,550,558 |

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 4TH DECEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD DECEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 4TH DECEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 3RD DECEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Mean mileage worked.   | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 1,515                                       | 8,93,368  | 590              | 1,513½                                      | 9,47,299  | 628              | 1,515  | 2,08,03,764     | 581              | 1,517½   | 2,94,40,105     | 584              | .....                   | 13,52,059               |

## PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 3rd December 1887, on 57½ miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |             | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |        |
|---|-----------------------|--------------------|----------------------------------|-------------|-----------------------------|-----------------|--------------------------|--------------|--------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.   |                             |                 | Coaching.                | Merchandise. | Total. |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.   | Rs. A. P.                   | Rs. A. P.       |                          |              |        |
| Total traffic for the week ...                              | 10,178                | 5,332 11 0         | 37,764 30                        | 2,865 8 0   | 28 6 0                      | 8,224 9 0       | 1,805                    | 589          | 2,394  |
| Or per mile of railway ...                                  | 178                   | 93 3 8             | 660 10                           | 50 1 7      | 0 7 11                      | 143 13 2        | ...                      | ...          | ...    |
| For previous 51 weeks of half-year ...                      | 303,080               | 1,63,636 4 0       | 7,77,202 10                      | 51,228 3 0  | 693 10 0                    | 2,15,578 1 0    | 38,557                   | 14,064       | 52,621 |
| Total for 52 weeks ...                                      | 313,258               | 1,69,968 15 0      | 8,14,938 0                       | 54,093 11 0 | 723 0 0                     | 2,23,804 10 0   | 40,462                   | 14,654       | 55,116 |
| COMPARISON.   |                       |                    |                                  |             |                             |                 |                          |              |        |
| Total for corresponding week of previous year ...           | 8,876                 | 4,250 1 7          | 39,093 10                        | 2,820 13 0  | 26 10 9                     | 7,097 9 4       | 1,705                    | 689          | 2,394  |
| Per mile of railway corresponding week of previous year ... | 155                   | 74 4 10            | 683 20                           | 49 5 0      | 0 7 0                       | 124 1 4         | ...                      | ...          | ...    |
| Total to corresponding date of previous year ...            | 312,411               | 1,70,540 7 7       | 8,30,304 10                      | 58,313 2 0  | 1,289 8 6                   | 2,40,152 2 1    | 40,047                   | 16,766       | 56,813 |

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

| RECEIPTS FOR WEEK ENDING 4TH DECEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 3RD DECEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO 4TH DECEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO 3RD DECEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|---|-----------|------------------|---|-----------|------------------|--|-----------------|------------------|--|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                        | Receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Mean mileage worked.                                     | Total receipts. | Per mile worked. | Rs.                     | Rs.                     |
| 57½   | 7,096     | 124              | 57½   | 8,227     | 144              | 57½  | 3,00,849        | 168              | 57½  | 3,43,064        | 171              | .....                   | 23,776                  |

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS).

Approximate Return of Traffic for week ended 26th November 1887, on 645 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |               | Other earnings (estimated), including Steam-boat. | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |          |
|---|-----------------------|--------------------|----------------------------------|---------------|---|-----------------|--------------------------|--------------|----------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.     |   |                 | Coaching.                | Merchandise. | Total.   |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.     | Rs. A. P.   | Rs. A. P.       |                          |              |          |
| Total traffic for the week ...                                | 116,590               | 57,397 0 0         | 5,74,022 0                       | 1,85,900 0 0  | 13,833 0 0  | 2,57,146 0 0    | 21,282                   | 27,297       | 48,579   |
| Or per mile of railway ...                                    | 181                   | 89 0 0             | 890 0                            | 288 0 0       | 2 0 0†  | 379 0 0         | ...                      | ...          | ...      |
| For previous 26 weeks of half-year ...                        | 2,589,428*            | 10,60,472 0 0      | 1,22,00,084 0                    | 27,41,312 0 0 | 2,54,643 0 0                                      | 40,55,427 0 0   | 304,782                  | 500,377      | 805,159* |
| Total for 31 weeks ...  | 2,516,018             | 11,17,829 0 0      | 1,29,04,108 0                    | 29,27,278 0 0 | 2,68,486 0 0                                      | 41,13,573 0 0   | 418,064                  | 538,664      | 956,728  |
| COMPARISON.   |                       |                    |                                  |               |   |                 |                          |              |          |
| Total for corresponding week of previous year ...             | 114,657               | 54,948 0 0         | 6,08,489 0                       | 1,37,696 0 0  | 16,480 0 0  | 2,09,124 0 0    | 18,723                   | 25,399       | 44,092   |
| Per mile of railway corresponding period of previous year ... | 189                   | 91 0 0             | 1,103 0                          | 227 0 0       | ...   | 318 0 0         | ...                      | ...          | ...      |
| Total to corresponding date of previous year ...              | 2,508,762             | 11,01,727 0 0      | 1,12,91,396 0                    | 22,17,210 0 0 | 2,51,875 0 0                                      | 35,70,812 0 0   | 383,485                  | 454,694      | 838,179  |

\* Audited up to week ending 1st October 1887.

† Rs. 12,500 excluded from calculation.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

| RECEIPTS FOR WEEK ENDING 27TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 26TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 27TH NOVEMBER 1886. |                           |                           | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 26TH NOVEMBER 1887. |                           |                           | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|---------------------------|---------------------------|---|---------------------------|---------------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts, 32 weeks. | Per mile worked per week. | Mean mileage worked.  | Total receipts, 31 weeks. | Per mile worked per week. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.                       | Rs.                       |   | Rs.                       | Rs.                       | Rs.                     |                         |
| 606  | 2,09,124  | 345              | 645  | 2,57,146  | 399              | 606   | 64,14,253                 | 263                       | 615   | 61,09,196*                | 279                       | 6,94,945                | ...                     |

\* Audited up to week ending 1st October 1887.

## BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 26th November 1887, on 125 miles open.

|   | COACHING TRAFFIC.     |                    | MERCHANDISE AND MINERAL TRAFFIC. |            | Other earnings (estimated). | Total earnings. | TRAFFIC TRAIN-MILES RUN. |              |         |
|---|-----------------------|--------------------|----------------------------------|------------|-----------------------------|-----------------|--------------------------|--------------|---------|
|   | Number of passengers. | Coaching receipts. | Weight carried.                  | Receipts.  |                             |                 | Coaching.                | Merchandise. | Total.  |
|   |                       | Rs. A. P.          | Mds. s.                          | Rs. A. P.  | Rs. A. P.                   | Rs. A. P.       |                          |              |         |
| Total traffic for the week ...                                | 22,396                | 8,659 0 0          | 39,832 0                         | 3,011 0 0  | 35 0 0                      | 11,705 0 0      | 3,501                    | 1,709        | 5,210   |
| Or per mile of railway ...                                    | 179                   | 69 0 0             | 316 0                            | 25 0 0     | ...                         | 94 0 0          | ...                      | ...          | ...     |
| For previous 26 weeks of half-year ...                        | 402,560*              | 1,65,817 0 0       | 8,90,580 0                       | 73,080 0 0 | 1,785 0 0                   | 2,41,323 0 0    | 73,054                   | 37,065       | 110,149 |
| Total for 31 weeks ...  | 514,975               | 1,74,476 0 0       | 9,19,912 0                       | 76,071 0 0 | 1,820 0 0                   | 2,52,907 0 0    | 70,555                   | 39,804       | 110,359 |
| COMPARISON.   |                       |                    |                                  |            |                             |                 |                          |              |         |
| Total for corresponding week of previous year ...             | 22,095                | 8,387 0 0          | 28,630 0                         | 2,398 0 0  | 32 0 0                      | 10,817 0 0      | 4,016                    | 1,195        | 5,210   |
| Per mile of railway corresponding period of previous year ... | 177                   | 67 0 0             | 229 0                            | 19 0 0     | ...                         | 88 0 0          | ...                      | ...          | ...     |
| Total to corresponding date of previous year ...              | 403,934               | 1,65,553 0 0       | 4,13,494 0                       | 32,622 0 0 | 548 0 0                     | 1,98,753 0 0    | 63,554                   | 28,179       | 111,713 |

\* Audited up to week ending 1st October 1887.

## FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

| RECEIPTS FOR WEEK ENDING 27TH NOVEMBER 1886. |           |                  | RECEIPTS FOR WEEK ENDING 26TH NOVEMBER 1887. |           |                  | TOTAL RECEIPTS FROM 1ST APRIL 1886 TO WEEK ENDING 27TH NOVEMBER 1886. |                 |                  | TOTAL RECEIPTS FROM 1ST APRIL 1887 TO WEEK ENDING 26TH NOVEMBER 1887. |                 |                  | Total increase in 1887. | Total decrease in 1887. |
|--|-----------|------------------|--|-----------|------------------|---|-----------------|------------------|---|-----------------|------------------|-------------------------|-------------------------|
| Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.                         | Receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. | Mean mileage worked.  | Total receipts. | Per mile worked. |                         |                         |
|  | Rs.       | Rs.              |  | Rs.       | Rs.              |   | Rs.             | Rs.              |   | Rs.             | Rs.              | Rs.                     |                         |
| 125  | 10,817    | 87               | 125  | 11,705    | 94               | 125   | 3,74,311        | 88               | 125   | 4,18,002*       | 98               | 48,691                  | ...                     |

\* Audited up to week ending 1st October 1887.

## DARJEELING-HIMALAYAN RAILWAY COMPANY.

|   |  |  |  |  |  |  |           |
|---|--|--|--|--|--|--|-----------|
|   |  |  |  |  |  |  | Rs.       |
| Approximate earnings for week ending 26th November 1887. ... .. |  |  |  |  |  |  | 11,892    |
| Corresponding week last year ... ..                             |  |  |  |  |  |  | 10,446    |
| Increase ... ..   |  |  |  |  |  |  | 1,446     |
| Receipts from 1st July to 26th November 1887 ... ..             |  |  |  |  |  |  | 2,09,067  |
| From 1st July to 27th November 1886 ... ..                      |  |  |  |  |  |  | 2,12,164  |
| Decrease ... ..   |  |  |  |  |  |  | 3,097     |
|   |  |  |  |  |  |  | Miles.    |
| Miles open, week ending 26th November 1887 ... ..               |  |  |  |  |  |  | 51        |
| Corresponding week last year ... ..                             |  |  |  |  |  |  | 51        |
|   |  |  |  |  |  |  | Rs. A. P. |
| Receipts per mile open, week ending 26th November 1887 ... ..   |  |  |  |  |  |  | 233 2 10  |
| Corresponding week last year ... ..                             |  |  |  |  |  |  | 204 13 2  |
| Increase ... ..   |  |  |  |  |  |  | 28 5 8    |

GENERAL OFFICE, D.-H. RY., DARJEELING, the 5th December 1887.

W. STEVENSON, Secretary, D.-H. Railway.



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, DECEMBER 21, 1887.

## OFFICIAL PAPERS.

*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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### RESOLUTION ON THE BOARD'S REPORT ON THE ROAD AND PUBLIC WORKS CESS OPERATIONS FOR THE PERIOD FROM THE 1ST OCTOBER 1886 TO THE 31ST MARCH 1887.

#### FINANCIAL DEPARTMENT—ROAD CESS.

*Calcutta, the 6th December 1887.*

#### RESOLUTION.

#### READ—

Letter from the Board of Revenue, No. 752A, dated the 29th October 1887, the Report on Road and Public Works Cess operations for the period from the 1st October 1886 to the 31st March 1887.

The present report deals only with cess operations for a period of six months, from 1st October 1886 to the 31st March 1887. Formerly the annual report of the Board embraced a period of 12 months beginning from the 1st October in each year. But in consequence of the recent introduction of the Local Self-Government Act into most of the districts of the Lower Provinces, it has been decided that the Cess year shall coincide with the Financial year, and run from the 1st April to the 31st March, and it is the interval between the old

and the new cess year that is now under review. For the districts of the Orissa Division only the report furnishes returns for the nine months last preceding the current financial year. The only districts in which the Local Self-Government Act is not yet in force are those of Darjeeling, Hazaribagh, Lohardugga, Manbhoom and Singbhoom.

2. Both the Road and Public Works Cesses were levied in all the districts in which Act IX (B.C.) of 1880 is in force at the maximum rates, except in the district of Backergunge, where the Public Works Cess was levied at full and the Road Cess at half rates. The figures contained in the Report under review being only for the half-year, no useful purpose would, the Board remark, be served by comparing them with the figures of previous years. The current demand for the half-year amounted to—

|                          | Rs.       |
|--------------------------|-----------|
| Road Cess ... ..         | 20,66,279 |
| Public Works Cess ... .. | 21,11,356 |
| Total ...                | 41,77,635 |

The arrear balance outstanding on the 30th September 1886 amounted to Rs. 14,28,853. The gross demand for both cesses for the half-year thus amounted to (Rs. 41,77,635 + Rs. 14,28,853) Rs. 56,06,488, of which Rs. 40,21,956 were collected and Rs. 6,164 remitted, leaving an outstanding balance of Rs. 16,00,365 at the close of the half-year. The closing balance of the half-year under review was accordingly greater than its opening balance by (Rs. 16,00,365—Rs. 14,28,853) Rs. 1,71,512. The Lieutenant-Governor accepts the explanation offered by the Board that, as regards the current demand, there was hardly time to complete the collection of the kists which fell due on the 12th January and the 28th March in some districts.

3. In reviewing the report of the Board for the cess year 1885-86, the Board were requested to take measures to prevent large accumulations of arrears becoming a regular feature of the yearly returns. The conditions under which the present returns have been furnished are exceptional; but the Lieutenant-Governor trusts that in their report for the current year the Board will be able to show that the instructions given last year have been acted upon.

In 32 districts as against 17 in the previous year, the arrear collections during the half-year under review fell short of 90 per cent., and in nine of these the collections were below 60 per cent. This year as last year the Burdwan record is the worst. The question of a general revaluation of the district is under the consideration of Government, and the Board have recommended that at first a revaluation of lakhiraj holdings only should be made. The short collections in the districts of Durbhunga, Cuttack, Singbhoom, Chittagong and Moorshedabad have been sufficiently explained by the Board. Measures should be taken for realizing the dues from the sirdars of ghatwali estates in Bankoora, and the nature of the new form of rent receipts should be clearly explained to the zemindars of Shahabad. The only district in which the whole of the arrear demand was collected was Hazaribagh. The results of the following districts as regards arrear collections are satisfactory: viz. Darjeeling (93.9), Julpigoree (97.5), Dinagepore (97.3), Purneah (96.8), Chumparun (96.1), Bogra (94.9), Maldah (94.3), Noakholly (93.4) and Lohardugga (91.1).

4. In addition to showing short arrear collections, the following districts failed to collect 60 per cent. of the current demand: viz. Singbhoom (nil) Chittagong (56.6), Mozufferpore (52.8), Dacca (59.3), Tipperah (58.1), Furreedpore (19.3) and Manbhoom (38.8). The general reasons assigned by the Board have been alluded to above. In Tipperah heavy floods spoil the harvests and interrupted collections.

In the following districts, though the arrear collections were not less than 90 per cent., the current collections were below that figure: Chumparun (63.2), Dinagepore (65.8), Maldah (69.5), Noakholly (75.4), Julpigoree (78.5), Bogra (84.4). The current collections of the following districts were good: Darjeeling (99.6), Lohardugga (98.9), Hazaribagh (92.4), and Purneah (92.4).



The advance collections during the half-year amounted to Rs. 1,83,900 against Rs. 1,70,178 in the corresponding period of 1885-86.

5. During the half-year 36,535 certificates were filed for the recovery of cess arrears, and, adding to this number the 35,240 pending at the close of 1885-86, the total number of certificates for disposal amounted to 71,775. The number of certificates disposed of was 38,651, leaving 33,154 pending at the end of March 1887. The sale of moveable and immoveable property was resorted to in about 1,259 cases. The number of objections filed against certificates was 1,348, of which 1,136 were disposed of. In 171 cases the certificates objected to were cancelled, and in 84 cases the amount certified was reduced. In Chota Nagpore, as usual, the smallest number of certificates were filed, viz. 259. Next comes the Rajshahye Division with 1,716. The largest numbers occur in the Patna and Burdwan Divisions—9,846 and 6,781 respectively.

6. A complete revaluation of the district of Pooree has resulted in an increase in the annual demand for cess by Rs. 11,144. Some mistakes are reported to have crept into the statement, which should be rectified at once. The only other districts in which revaluations have been attended by a substantial increase in revenue are Bogra, where an increase of Rs. 2,728 has been made in the cess demand, and Julpigoree, where 66 new tea gardens have been assessed at an annual total of Rs. 2,822. During the period under review, 1,977 separate accounts were opened under section 44 of the Act for Rs. 28,717 payable as cess. On the 31st March 1887 the number of accounts remaining open was 33,963 for Rs. 12,31,581 payable as cess. The number of separate accounts opened in revenue-free estates under section 46 of the Act was 20 for Rs. 533.

ORDER—Ordered that a copy of the Resolution, with a copy of the Board's Report, be submitted to the Government of India, Department of Finance and Commerce, for information.

Ordered also that a copy of the Resolution be forwarded to the Board of Revenue, and a copy of the Resolution and of the Report to the Revenue and Appointment Departments of Government, for information.

By order of the Lieutenant-Governor of Bengal,

COLMAN MACAULAY,

*Secretary to the Government of Bengal.*

**RESOLUTION ON THE REPORT OF THE BOARD OF REVENUE ON  
WARDS' AND ATTACHED ESTATES IN THE LOWER PROVINCES  
FOR THE YEAR 1886-87.**

**REVENUE DEPARTMENT—LAND REVENUE.**

*Calcutta, the 16th December 1887.*

**RESOLUTION.**

**READ—**

The Report of the Board of Revenue on Wards' and Attached Estates in the Lower, Provinces for the year 1886-87.

The reports of the Commissioners were received by the Board after the prescribed date, except that for the Orissa Division which was punctually submitted. In the case of the Encumbered Estates in the Chota Nagpore Division the delay extended to the lengthened period of two months, and returns for two estates in the Presidency Division and one estate in Tipperah were not received in time for incorporation in the Board's tabular statement. No explanation of the delays on the part of the Managers concerned has been given, but the Lieutenant-Governor hopes that proper notice of the neglect has been taken by the Board in each case. In consequence of the late submission of returns, the figures given in the appendices to the Board's communication differ considerably from those given in the text which includes later information.

2. The report contains a great deal of matter which appears to be superfluous, and the Lieutenant-Governor has satisfied himself that in future years it may be reduced to about half its size without the omission of anything of real value. In order to effect this curtailment, some departure will, however, be necessary from the traditional plan upon which the Court of Wards' annual reports have for many years been compiled. On this subject a separate communication will be addressed to the Board, pointing out in detail the alterations in the tabular forms inserted, and the modifications in the general arrangement by which it would appear that future reports can be made more concise.

3. The defect noticed in the Resolution on last year's report, viz., the failure of some Managers to pay Government revenue when they held funds available for the purpose, has received attention, and the arrears outstanding now are due only from estates temporarily insolvent. These arrears, though reduced in amount, are still considerable, exceeding as they do a lakh of rupees, and it is for the Board to consider whether such defaults cannot be prevented in future by timely arrangements to provide funds, by expediting collections, and by refusing to retain charge of defaulting estates some of the owners of which are of age and able to see to their own interests. The greater part of the balance is due from a single property, that of Sultangacha, of which the Court of Wards has voluntarily retained the management after two out of the three proprietors have attained their majority. The youngest of the sharers will soon be of age, and it is proposed to release the estate in April. The Lieutenant-Governor hopes that care will be taken to prevent any ultimate loss of revenue accruing to Government, and, if possible, to secure payment of public dues before the release of the estate.

4. The number of private estates under the management of the Revenue authorities during the year 1886-87 was 164; of these 87 were Wards' Estates and 77 Attached, including encumbered and trust estates. The rental of these estates for the year was Rs. 96,56,888, and the collections amounted to Rs. 90,98,928, or 94.2 per cent. on the current demand. The remissions amounted to Rs. 2,89,039, and the balances outstanding increased from Rs. 77,82,737 to Rs. 79,45,544. The percentage of collections is better than that of the three previous years, and the Lieutenant-Governor gladly welcomes any improvement in this important matter, which is, indeed, the foundation of all satisfactory management of Wards' Estates. He notices with particular satisfaction the good results which have in successive years been attained in the Chittagong Division, under circumstances of exceptional difficulty, by the care and attention of the chief revenue officers. It is, however, to be remembered that a large proportion of the land under the Court's management is let out, in putni or similar tenures, to middlemen who take on themselves all the trouble and risk of collection. On the estates managed directly, the proportion of realizations to rental seems unduly low, and the balances outstanding are very large. These results are produced by the short collections on certain estates, of which the Board instance two, Dhankoor and Srinagar, in the Dacca and Bhagulpore Divisions, on which the realizations are only 79 and 63 per cent. of the rental. It appears from correspondence before the Bengal Government that both these estates were left by their former proprietors without accounts showing in a trustworthy manner what rent was due yearly from each tenant. This confirms the statement, made by the Board in the annual report for the year 1884-85, that the really bad cases of failure to collect occur where the owners have left the accounts, which should show the rent due, in confusion, either the result of bad management, or purposely created to conceal unauthorized enhancement. Further evidence in support of this conclusion is afforded by the results obtained on other estates, the accounts of which are known to be in disorder, as the Cossimbazar Estate on which only 76 per cent. was realized, the Sunkerpore Estate and the Sultangacha Estate, with realizations of 88 per cent. and 67 per cent. respectively. The Board added in the report of 1884-85 that the only efficient remedy for the evil was to be found, in making a survey and record of rights of the estates in which this uncertainty as to the demand due prevailed, and in this also subsequent events have strengthened the conviction expressed. On the Dhankoor Estate, in

Mymensingh, an attempt was made to adjust perplexed accounts, and make out a proper rent-roll without a survey, and in the report of the year 1885-86 it was stated that order had been restored. But it now appears that this allegation was prematurely accepted, as in the present report the Board state that the collections were only 79 per cent. of the rental, and that "until a general measurement of the lands is made, and a record of rights prepared under the Bengal Tenancy Act, correct rent-rolls cannot be prepared." Special attention is needed to this point since the passing of the Bengal Tenancy Act, which, by enforcing in an effectual manner the previous law requiring a landlord to indicate the amount of rent when giving a receipt, renders it more difficult to realise where the landlord does not know what his own rent is, or has not arrived at an understanding on the subject with his tenants. Moreover, one estate was during the year made over to the Court of Wards by the District Judge of Backergunge under section 95 (a) of the Act, precisely because it had got out of hand for want of accounts, and there may be other instances in the future of similar references. If the Act has accentuated the difficulty, it also supplies the remedy, by giving the means of authoritatively ascertaining and fixing rents at moderate cost.

5. The Board in the general section with this heading reproduce the orders passed during the year for future guidance. These orders inculcate greater activity in ascertaining

Surveys.

rents where they are unknown, and collections suffer in consequence, as indicated in the last paragraph. From the notices of particular estates given in the Board's report, it appears that surveys were in progress in the Sunkerpore and Churamun Estates, Dinagore district, and in the Chota Nagpore Division. In Sunkerpore it is said that the ryots, instead of throwing obstacles in the way of the operations which were conducted under the Bengal Tenancy Act by the Director of the Department of Agriculture and Land Records, agreed in a meeting to give free labour. Surveys have hitherto been unpopular in the majority of instances because they were made with a view to the enhancement of rent; but in the few cases in which they were conducted simply in order to ascertain existing rents for the benefit of all parties, there is no reason to believe that they were disliked by the ryots, although they must have been distasteful to the zemindari amlah, who are believed to find in uncertainty as to rentals, and the confusion of accounts, an opportunity for illicit profit.

6. The only information given under this heading is that the expenditure amounted to Rs. 69,662 against Rs. 54,763 in the preceding year, and larger sums in the three

Works of improvement.

previous years. From the notices of estates it is gathered that in Churamun one ryot succeeded so well with Buxar wheat, to the superior quality of which the Agricultural Department has drawn prominent attention, that applications have been received from several villages on the river banks for a supply of seed which the Manager has undertaken to furnish. The Beheea sugar-cane mills have been introduced in several places. As an illustration of the slowness with which the most profit-giving improvements are adopted, the following statement is made by the Collector of Rungpore:—

"In 1881-82 two Beheea sugar-cane mills were purchased by the estate and, although they were lent to the people free of cost, they would not use them. But it is satisfactory to observe that their aversion has gradually disappeared. During the last sugar-cane season both of these mills were incessantly at work and earned a sum of Rs. 128-8 as hire. A well-to-do ryot has also purchased a mill for his own use at a cost of Rs. 100, and it seems probable that these mills will come into general use in a few years' time."

Other attempts to introduce Buxar wheat, superior ploughs, and bone manure were unsuccessful. It is understood that these attempts were made on the part of the Agricultural Department, and that the trifling cost involved did not fall on the estates. Where this is the case, the Managers should not be discouraged because the first efforts made obtain only negative results, such being the necessary issue of the majority of agricultural experiments. In these cases a single success more than compensates for many failures. The real expenditure on improvements is incurred in digging tanks, repairing sluices, and similar works, and the Lieutenant-Governor would be glad to receive in future annual reports some information as to the results obtained from this

outlay. The execution of such works is a branch of their duties in which many Managers are imperfectly trained, and require sympathetic assistance.

7. The management charges of the year, under which are included the pay of the Manager and of his establishment, construction and repairs of cutcherry buildings, and charges for survey and settlement, came to Rs. 9,43,692, or about 10 per cent. of the current rent and cess demand. This percentage is below the average of the last four years, but it is favourably affected by the single estate of the Burdwan Raj, which is managed at a small proportionate cost, being for the most part let out at quit-rents on the putni system.

8. The litigation of Wards' Estates in the year under review has been noticed in the Resolution on the report submitted by the Superintendent and Remembrancer of Legal Affairs. The results, in so far as regards the number of cases decided in favour of the estates, would have been satisfactory but for the decision against the Dighapatea Estate of 210 suits instituted by the Manager. Appeals have been preferred in those cases. The percentage of recovery on decrees was exceedingly bad, and it is noticed that while Rs. 2,44,632 were spent in litigation during the year, only Rs. 1,63,806 were recovered under decrees.

9. The Board make the following remarks on the condition of the tenantry during the year:—

"The year under report was one of general average prosperity for the ryots on the estates under the Court of Wards throughout the Province. There were, as usual, some local calamities in the form of outbreaks of cholera and floods. Special mention is made of the latter in the Patna, Bhagulpore, Chittagong and Dacca Divisions. The Sarail ryots of the Cossimbazar Estate suffered severely from the overflow of the Megna in August 1886, which resulted in extensive damage to the jute and aus harvests; but no organized measures of relief were required: a sum of Rs. 600 was sanctioned by the Board to tide the tenantry over their immediate distress. The reports of these and similar occurrences naturally dwell with more vividness on the present sufferings than on the recuperative power inherent in the rural population; the destruction of a harvest is depicted in striking colours, but little or no mention is made of the benefit accruing to the future crops from the passing inundation. The Kanika ryots are said to be still to some extent feeling the effects of the cyclone and storm-wave of 1885. In a few instances there were local opposition and disputes on the subject of rent, and in the Dhanwar Estate in Chota Nagpore a feeling of unrest arising from the long protracted resettlement operations was manifest; this should subside now that the proceedings have been completed and the confirmation of Government has been received. The attitude of the ryots is Conservative with regard to the adoption of any suggested improvements or new staples, but there are some indications of a more enlightened spirit which give hope for the future. There is every reason to suppose that the ryots on the estates under notice form a prosperous and contented peasantry."

10. With regard to the education of Wards the Board's report is generally satisfactory.

11. The principal estate under management during the year was that of the Burdwan Raj, with a current demand of Rs. 45,65,865, and liability on account of revenue, &c., of Rs. 34,82,162. The collections amounted to 98.2 per cent. of the current demand. It was noticed in last year's Resolution that two important questions in connection with this property were under discussion—the adoption of an heir by the widow proprietor, and the settlement of disputes as to property with the Dowager Maharani. The first matter was decided in July last by the Lieutenant-Governor giving his consent to the adoption by Maharani Benodeyi Devi of the only son of Lala Bun Behari, and the second by the execution of a deed of compromise, the terms of which are now being carried out.

12. The thanks of the Lieutenant-Governor are conveyed to the Board for their careful supervision of Wards' estates during the year.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secretary to the Govt. of Bengal.

**RESOLUTION ON ADMINISTRATION OF THE DEPARTMENT OF LAND RECORDS AND AGRICULTURE FOR THE YEAR 1886-87.**

**REVENUE DEPARTMENT—AGRICULTURE.**

*Calcutta, the 19th December 1887.*

**RESOLUTION.**

**READ—**

The Director's report of the Department of Land Records and Agriculture for the year 1886-87.

The Director was employed during the year on surveying, with a view to settlement, the Government estates of Nulcheera and Angul, the Wards' estates of Sunkerpore and Churamon, and in making a survey and record of rights in a tract, the property of private persons, in the district of Mozufferpore, the whole area dealt with amounting to 1,845 square miles. The latter operations were of the nature of an experiment, conducted at the public expense, with a view to ascertaining how far it might be practicable and desirable to carry out similar work on a large scale, and at the cost of the locality benefited. Although the whole of the area originally selected was not measured, the object with which the task was undertaken seems to have been obtained, inasmuch as it has been shewn, so far as a conclusion can be drawn in a matter of this kind from a single instance, that the difficulties in the way of such operations are not insuperable. It was moreover found that in the great majority of villages much uncertainty existed as to the amount of the existing rent, so that positive good was done by ascertaining and making an authentic record of what was before indeterminate. No formal applications were made for the enhancement of rent, which was, however, in some instances, raised by private agreement between the parties. On the whole, the experience gained is favourable to the prosecution of the work of survey and record, but it appears desirable, in view of the Secretary of State's decision conveyed in the Government of India's letter No. 603R—27-11, dated the 3rd September 1886, to confine this, for the present at least, to estates the property of Government, or on which those interested appreciate and offer to pay for the advantages of a settlement. Even within these limits it is anticipated that employment will be found during the next cold season for the whole of the trained agency which Government can command. The conduct of these settlements now constitutes the principal duty of the Director of the Department of Land Records and Agriculture, an appointment which has recently been made permanent with the sanction of the Secretary of State.

2. Enquiries were made during the year by Mr. A. C. Sen and Mr. Sakhawat Hossein as to the agricultural practices of the districts of Dacca and Mymeusingh.

Analysis of districts. These investigations should be made, and their statistical results recorded in such a manner as to be of use in connection with the revision now being made of the Gazetteer of Bengal. Mr. Sen has made a very high estimate of the agricultural capabilities of the large tract of land which forms and surrounds the Madhupore jungle, and considers it particularly suitable for the cultivation of sugarcane, cotton, rhea, and mulberry; but for want of capital and enterprise its resources remain at present undeveloped.

3. Much anxiety has been felt by those interested in the silk industry in Bengal on account of the spread of diseases among worms, particularly of what is known to the rearers as *kata*, and is pronounced by Mr. Wood-Mason to be the same as the *pebrine*, which has in recent times broken out in an epidemic form in Europe. A French expert, Monsieur Clement, has recently been engaged for two years to investigate and deal with the subject upon the system introduced by Monsieur Pasteur. In the meanwhile, Mr N. G. Mookerjee, a Cirencester scholar, has been engaged on the work; his labours are, as the Lieutenant-Governor ascertained when on tour, much appreciated by those best able to form a judgment, and seem to have met with some actual success. The Director states that—

"The native rearers have shown a preference for the seed reared and microscopically examined by Mr. Mookerjee to that reared in the ordinary way, and went so far as to incur

the expense of buying, according to his advice, untainted mulberry leaf at a high price, rejecting leaf in their possession, which is believed to be tainted by use on the land, on which it was grown, of manure containing excreta of diseased silkworms. Mr. Mookerjee now thinks that he has eradicated disease from his experimental Madraai at ok, and he is probably right; but it remains to be decided by the expert from Europe, who is soon expected, whether he has really done so. If it should prove that he has, then the question of the extension of the methods adopted by him will have to be carefully considered. Enquiries are also being made on the subject of the natural history and ravages of the silkworm fly, of which little is at present known."

4. The cost to Government of the agricultural enquiries and experiments

Agricultural experiments.

conducted during the year, including the distribution of implements and seeds, was Rs. 6,860.

Some work of this nature was also done by private individuals, particularly by the Maharajah of Doomraon, at their own expense, but with the assistance of the Department. The results obtained were, in many instances, valuable rather for future comparison than for immediate application. It is stated that Mr. Sen sold during the year under report more than a hundred maunds of bone-meal to ryots of the villages in which he had distributed small quantities *gratis* during the previous year, and that the purchasers are keenly watching the effects of the manure. The introduction of the superior Buxar wheat into Bhagulpore was not so successful this year as last, but nevertheless it appears to be in that Division an improvement likely to have permanent results. Beyond Bhagulpore the seed has not hitherto done well. It is stated that 486 of the improved Burrakar ploughs were sold during the year, but that they have not in general been very favourably received, as they require strong bullocks to work them, and cannot be used for paddy cultivation. Further efforts are being made to supply a plough adapted to the peculiar conditions of agriculture in this country. As to improving the breed of cattle Mr. Finucane remarks:—

"Two Hissar bulls were supplied for use on the Government estates in Arrah and Sassem, and two half-bred English bulls were presented to Government by Dr. Greenhill. Of these, one, out of a fine country cow by Zooloo, an imported Jersey bull, has been made over to the Manager of the Burdwan Raj, and the other, out of a fine Hansy cow by an imported Durham bull, was given to the Arrah Municipality, that body having undertaken to provide for the maintenance and custody of the animal, and to report through their Chairman whether any improvement in the local breed of cattle may be effected by means of it. These are but isolated and insignificant efforts, but to anybody who is acquainted with the improvement effected by Mr. Tayler, when Commissioner of Patna, in the breed of cattle in that locality by the introduction of one or two English bulls—an improvement which is visibly marked up to this day—it will be apparent that even isolated efforts of this kind may effect some good, and if other municipalities and public bodies would follow the example set by the Arrah Municipality, and would interest themselves in seizing and weeding out such of those wretched country bulls as are diseased, and now roam about spreading disease wherever they go, and if they would keep for public use, in local pounds or elsewhere, a suitable and superior class of sires, which might be procured for them at their expense by Government, much might be effected towards improving the breed of cattle in these Provinces, without entailing any expenditure on the State."

This is a subject to which the attention of Agricultural officers is invited with a view to further suggestions, for the guidance of zemindars and others who take an interest in improving the breed of cattle. It is understood that sires are now generally provided by individuals who do not seek any profit for themselves, but to benefit the public, and to observe a custom to some extent connected with religion. Persons acting from such motives would probably be in many instances amenable to well-considered advice. The Director expresses himself much indebted to the Chamber of Commerce for the cordial co-operation and the ready aid they have rendered in appraising the value of different samples of wheat; in furnishing valuable information and suggestions regarding various economic products, and also in preparation of forecasts. The Agri-Horticultural Society also gave some assistance in procuring samples of economic products.

5. The thanks of the Lieutenant-Governor are given to Mr. Finucane for his efficient performance of his duties during the year. He states that all the officers employed in the Department continued to give satisfaction.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secretary to the Govt. of Bengal.



The following communication is published for general information.

P. NOLAN,  
*Secretary to the Govt. of Bengal.*

#### METEOROLOGICAL SUMMARY OF THE MONSOON PERIOD OF 1887.

THE following remarks are intended to give a very brief history of the more important features which have characterised the south-west monsoon period and the preceding months of 1887 in the province of Bengal.

The month of January was very remarkable from the fact that no less than five barometric depressions, which were formed in Upper India, advanced over Bengal and gave moderate rain. The third of these storms lasting from 19th January to the 22nd, was one of the largest which has been known to have been formed since the meteorology of India has been studied, and in addition to the heavy rainfall it brought over Bengal, it would appear that it gave rise to heavy snowfall along the Himalayas, and the fall at Darjeeling was the largest experienced for many years. January was therefore characterised by rainfall very much larger than the normal, a mean temperature very decidedly lower than usual, and with very large fluctuations, and a pressure rather considerably below the normal. The effect of the heavy snowfall in the hills to the north of Bengal in January seems to have shown itself in the particularly low temperatures which were recorded in February, and the mean temperature in this month was exceptionally low; rainfall was, however, practically absent, while pressure, though showing some remarkable oscillations during the month, was on the average nearly equal to the normal.

At the end of February strong southerly moist winds were blowing across the Bengal and Orissa coasts towards an area of low pressure in the north-east of the province, and local storms or nor'westers commenced in North and East Bengal early in March. Hot weather conditions became established over the whole of Bengal about the same time, and during the middle and the end of the month disturbed conditions, accompanied by local storms and rain, set in over the whole province, and the rainfall in March was decidedly large in all districts, except Chutia Nagpur. The mean pressure for the month in March was below the normal, while the temperature variations were extremely large, though the mean temperature was nearly normal. The principal feature of interest in April was that the mean temperature was decidedly lower than usual, and that rainfall in Orissa, South-West and East Bengal was considerably below the normal, though in other districts there was a slight excess fall. In this month, however, the mean pressure was decidedly in excess.

The earlier part of May presented no features of much importance; local storms were fairly numerous, but the rainfall brought up by them was rather light, as the majority of these storms were not of a violent character. About the middle of May the usual inrush of strong south-westerly monsoon winds took place in the south of the Bay, which advanced up the centre of the Bay as far as the Andaman Islands, and on the 19th a cyclonic storm commenced to form in front of this inrush, which afterwards developed and strengthened rapidly, and then travelled in a north-westerly direction, striking the Orissa coast close to Balasore on the morning of the 26th. It subsequently passed through Chutia Nagpur into South Behar, where it dispersed on the 28th. The intense area of the cyclone was of very small size, but the storm was remarkably fierce near its centre, and it caused much destruction. The inrush of monsoon winds following after the storm spread over Bengal, and gave general and heavy rainfall over the whole of the province, the rainfall being particularly heavy near the track of the centre, and generally the rainfall in May was about twice as large as usual. Owing to the influence of the storm the mean pressure of May was decidedly below the normal, though temperature was rather above it. This inrush of monsoon winds following the cyclone cannot be taken to have been the commencement of the rainy season in Bengal; for with the dispersion of the storm, conditions became again almost those of the hot weather, and thus the monsoon rains did not commence at what would have been an abnormally early period.

The main features of interest in the meteorology of the period antecedent to the rains appear to have been, first the occurrence of the heavy snowfall in

the Himalayan region to the north of Bengal. It is apparently now established that an unusual accumulation of snow in the Himalayas tends to retard the advance of the south-west monsoon humid current over Upper India; and hence to diminish considerably the rainfall of the south-west monsoon season. Thus the existence of this condition rendered it possible, or even probable, that the monsoon current in 1887 would not establish itself in Bengal till rather later than usual, and that it would be rather feeble, and, as a matter of fact, the current did not establish itself till a week later than the average date of commencement; throughout its existence it was weak, and finally it retired considerably earlier than usual. The second point of interest was that temperature had generally been decidedly below the normal (possibly also caused by the heavy snowfall in the Himalayas), and for certainly three or nearly four months out of the five, the mean temperature was distinctly in defect. Pressure had also been in defect, but not quite to the same extent, while on the other hand the rainfall of three or four out of the five months had been decidedly larger than the normal.

The inrush of the humid winds, due to the advance of the Balasore cyclone, having died away at the end of May and commencement of June, rainfall to a great extent ceased over the province. In the Bay, however, another strong advance of monsoon winds took place during the early part of June, and a cyclonic storm was formed off the Pegu coast on about the 10th. The storm drifted slowly in a westerly direction, and crossed the south Orissa and Ganjam coasts to the south of Gopalpore on the night of the 13th and morning of the 14th. The storm was of considerable intensity, and after it had passed inland, the monsoon winds gradually advanced over Bengal, and rainfall commenced in the southern districts on the 13th, and gradually spread inland, reaching Behar on the 15th. This advance initiated the rains in Bengal which were thus a few days later than usual in establishing themselves, and though the wind velocity registered during the month was approximately normal, rainfall was decidedly below it in all districts, except North Bengal and North Behar where it was considerably above it. Besides the above storm which crossed the South Orissa coast, there was only one other feeble barometric depression in June which formed over the Sunderbuns, and which passed through West Bengal into Behar, giving heavy rain in its advance.

In July the south-west monsoon current, considered as a rain-bearing current, was again weak, and except in South West Bengal, which received a normal fall, rainfall was very decidedly in defect in all districts. Four barometric depressions were formed in this month, and passed through Bengal. These were generally rather feeble, though they brought up moderate rain. One of them passed through Bengal into the North-West Provinces, while another, which was generated over the head of the Bay of Bengal, advanced through Bengal and Central India into Sind, and disappeared in Beluchistan, and thus it travelled over a distance of at least fifteen or sixteen hundred miles quite unbroken.

In August again rainfall was below the normal in all districts, except North Behar. In this month only one barometric depression of any importance was formed, and during its formation there was a distinct break in the rains in Bengal, which lasted almost a week from the 12th up to about the 19th, but when the depression passed inland near Gopalpore good general rain was again received over the province. In August wind velocities were decidedly smaller than usual at the majority of stations, pointing clearly to the fact that the monsoon, blowing from the Bay of Bengal, was a feeble one. In September also rainfall was remarkably light, the general fall not being larger than about 74 per cent. of the normal, and during the month only three very feeble barometric depressions were formed in the Bay, which passed over Bengal. The most important point, however, was that in the latter half of September the monsoon current diminished in strength very rapidly, and at the close of the month, the current from the Bay of Bengal had almost ceased to flow over the province.

Thus from the commencement of October the whole of Bengal was practically rainless till the 7th, when a few showers commenced to fall. A period of rainfall shortly afterwards began, which was of the utmost importance.



to the province. This burst of rainfall resulted from the formation of a cyclonic storm in the south of the Bay which crossed the coast a little to the north of Madras. The disturbed conditions then advanced northwards and brought up a fresh advance of the south-west monsoon and a wave of moist winds, bringing heavy rainfall, flowed over the province, and for about a week during the middle of October, good general rain was received in all districts. The moist winds were, however, again driven back, and from the 16th rain practically entirely ceased over the province up till the end of October and commencement of November, when again moderate rain was brought up to the southern districts by the disturbed conditions accompanying another cyclonic storm which advanced towards the Madras coast. Rainfall was, however, rather largely below the normal in October in all districts, except North Behar, though from the fact that the rain in October occurred just at the most critical time when it was urgently required, it was more valuable than if a larger amount had fallen at a different period.

Speaking generally with reference to the monsoon of 1887, it may be said that the current blowing from the Arabian Sea was very much stronger than usual. This caused the current blowing from the Bay over Bengal to become more westerly in direction than in normal years. The rainfall bearing current was therefore deflected from Bengal, probably towards the Burmah coast, and the combination of the strong westerly current blowing, with the fact that the current from the Bay of Bengal was weak throughout its existence, caused the south-west monsoon current to retreat from Bengal, at least ten or fifteen days earlier than usual. The Bay of Bengal current was thus late in establishing itself, feeble while it lasted, and it retreated much earlier than usual.

The occurrence and general distribution of the monsoon rainfall of 1887 has been thus briefly described, and it only remains to state more fully, month by month, the variation of the district rainfall from the normal fall as shown in the detailed figures in the monthly Meteorological Reports. In the results thus obtained due allowance has been made for the area which each rainfall reporting station represents, which method of calculation it may be assumed gives very reliable figures.

In the month of May the rainfall was mainly brought up by the Balasore cyclone, and by the inrush of monsoon winds following in its rear. Rainfall was exceptionally heavy in South Behar and Chutia Nagpur: South Behar receiving about four times the normal fall, and Chutia Nagpur about three times the usual amount. Orissa, North Behar (except Chumparun) and North Bengal (except Pubna) received amounts largely in excess of the normal, and in South-West Bengal the fall was also in excess but only by about one-third of the usual quantity, though in this district Jessore and 24 Pargannas showed decidedly defective falls. The only large district which received a deficient fall was East Bengal, where the general defect equalled 29 per cent., but in the Furreedpore, Dacca, and Comilla districts, the falls were 40 per cent. in defect. In June, which is the first month of the actual south-west monsoon period, the whole of the Province, except North Bengal and North Behar, was in defect, and, as is frequently the case, the distribution of the rainfall in June roughly foretold the distribution for the whole monsoon season, for, while on the average of the whole monsoon season North Bengal has received a fall in slight excess of the normal and North Behar has received a normal fall, all other districts have shown defects as they did in June. The excess fall in North Bengal and North Behar in June was equal to from about 20 up to 50 per cent. of the normal, except in Rajshahye and Sarun, where the falls were slightly defective. This determination of the rainfall to Behar and North Bengal and to the Moorshedabad district was a prominent feature in the distribution of the monsoon rainfall of 1887. The general defects in the other large districts of the province varied from about 20 to 35 per cent. of the normal falls, but in some of the smaller districts the deficiency was even more serious, and defects larger than 35 per cent. were reported in the following districts:—Pooree, Balasore, Howrah, Burdwan, Chittagong, Backergunge, Noakholly, Shāhabad, Lohardugga, and Munbhoom. The amount of the defective falls in this month in such districts as Chittagong, Backergunge, and Noakholly was no less than about 10 inches of rain, while similar excess falls were reported in the Rungpore and Julpigomee districts.

In July the general falls in Orissa, South-West Bengal, and Chutia Nagpur were about equal to the normal, though the Pooree, Jessore, Nuddea, and Manbhoom districts showed defects. East Bengal and South Behar showed defects of about 20 per cent., while North Bengal and North Behar received falls about 40 per cent. less than the normal, thus to a certain extent neutralizing the heavy falls in June. In this month extremely large defects were shown in North Bhagulpore, Purneah, Julpigoree, Kungpore, and Commilla districts, the defects generally equalling about half the normal fall.

In August North Behar received a fall 11 per cent. in excess of the normal, North Bengal and Chutia Nagpur received about normal falls, while South-West and East Bengal, Orissa, and South Behar received defective falls varying from about 20 to 30 per cent. from the normal. In this month the smaller districts which were most largely in defect, and where the defect usually exceeded about 40 per cent. of the normal fall, were Howrah, Hooghly, Jessore, Furreedpore, Pubna, Bogra, and Maldah.

In September the defective rainfall which had characterised the previous monsoon months became still more strongly marked. Not a single large division of the province received a fall even within 10 per cent. of the normal. South-West Bengal and North Bengal received falls from 10 to 15 per cent. in defect. Over the whole of Behar and Chutia Nagpur the defects were from 20 to 30 per cent., while over the whole of Orissa and East Bengal the defects were from 40 to 50 per cent. of the normal fall. Defects of more than 50 per cent. were registered in the districts of Balasore, Furreedpore and Dacca, while in the Commilla district the defect amounted to more than 70 per cent. of the usual fall.

In October, as has been previously stated, the rainfall was brought up by the occurrence of a small cyclonic storm which crossed the Coast near Madras, and, though the rainfall of October was generally largely below the normal, from the fact that it occurred at a critical period when it was most urgently wanted, its value was immensely increased. In October only one large district, North Behar, received an excess fall amounting to about 30 per cent., while in South Behar the fall was almost normal; South-West, East, and North Bengal received falls from about 20 to 25 per cent. in defect of the normal; in Orissa the defect was nearly 40 per cent., and in Chutia Nagpur the defect was from 50 to 60 per cent. The defects in the following smaller districts indeed equalled 60 per cent. and upwards:—Cuttack, Howrah, Burdwan, Bankoora and Cooch Behar, while in Singbhoom the defect was about 90 per cent. of the usual rainfall.

The most important features of the monsoon season of 1887 may be thus briefly summed up—

1. Abundant rainfall was brought up in May by the passage of a fierce cyclone through Orissa and Chutia Nagpur into Behar, and the rainfall brought up by the storm particularly when it broke up in Behar and North Bengal, was so heavy that almost the precise path of the cyclone is marked out by the fact that the general rainfall in those districts from May to October has been either almost normal or in excess of the normal, while the remainder of the province has received a defective fall during this period.

2. The actual monsoon current from the Bay of Bengal was about a week late in setting in over the Province, it was rather feeble throughout its existence, and it retired about ten days earlier than usual, while the Arabian Sea current was stronger than usual, and deflected the Bay of Bengal monsoon current away from Bengal to the eastward.

3. The monsoon period was rather free from the formation of barometric depressions of any importance in the Bay, though several small and persistent whirls were formed at the head of the Bay, which deflected the rain-bearing current away from the land.

4. There was a distinct determination of the rainfall towards the north of the Province to Behar and North Bengal, while Orissa, parts of the Chutia Nagpur and West Bengal and East Bengal in particular received extremely scanty falls, and thus in East Bengal the average fall from May to October was 20·75 inches less than the normal, in Orissa it was 9·60 inches less than the normal, and in South-West Bengal and Chutia Nagpur it was about 5 inches below it.

5. The rainfall which occurred in the middle of October, and which was brought up by a cyclonic storm after the monsoon current had practically retired from the province was very important, as, though only moderate in amount, the rainfall came when it was urgently wanted.

6. The following tables give briefly the amount and variation of the rainfall in each of the seven meteorological divisions of the province, month by month:—

*Actual Rainfall.*

| METEOROLOGICAL DIVISION. | May.  | June. | July. | August. | September. | October. | Year. |
|--------------------------|-------|-------|-------|---------|------------|----------|-------|
| Orissa ...               | 7.10  | 6.00  | 11.53 | 9.38    | 6.32       | 3.92     | 44.25 |
| South-West Bengal ...    | 7.32  | 8.34  | 12.34 | 9.86    | 8.02       | 3.29     | 49.17 |
| East Bengal ...          | 6.75  | 14.50 | 13.32 | 11.71   | 7.37       | 4.36     | 58.01 |
| North Bengal ...         | 13.31 | 23.90 | 9.13  | 13.74   | 12.01      | 3.63     | 75.72 |
| North Behar ...          | 5.06  | 11.52 | 7.52  | 12.79   | 7.48       | 4.60     | 48.97 |
| South Behar ...          | 8.58  | 4.56  | 10.05 | 9.44    | 6.38       | 3.14     | 42.45 |
| Chutia Nagpur ...        | 7.05  | 6.03  | 12.37 | 11.96   | 6.35       | 1.46     | 45.22 |

*Variation of actual Rainfall from the average in inches.*

| METEOROLOGICAL DIVISION | May.   | June.  | July.  | August. | September. | October. | Year.   |
|-------------------------|--------|--------|--------|---------|------------|----------|---------|
| Orissa ...              | + 3.42 | — 3.10 | — 1.13 | — 1.92  | .4.49      | — 2.38   | — 9.60  |
| South-West Bengal ...   | + 2.05 | — 1.86 | + 0.39 | — 3.07  | .1.11      | — 1.14   | — 4.74  |
| East Bengal ...         | — 2.77 | — 3.93 | — 3.28 | — 4.45  | .5.21      | — 1.11   | — 20.75 |
| North Bengal ..         | + 4.90 | + 6.69 | — 5.32 | — 0.43  | .1.66      | — 1.06   | + 3.12  |
| North Behar ...         | + 2.20 | + 3.01 | — 5.17 | + 1.27  | .2.52      | + 1.08   | — 0.13  |
| South Behar ...         | + 6.55 | — 2.05 | — 2.13 | — 1.98  | .1.71      | — 0.19   | — 1.51  |
| Chutia Nagpur ...       | + 4.62 | — 2.26 | — 0.87 | — 1.35  | .2.56      | — 1.78   | . 4.20  |

*Variation expressed in a percentage.*

|                       |       |      |      |      |      |      |      |
|-----------------------|-------|------|------|------|------|------|------|
| Orissa ...            | + 93  | — 34 | — 9  | — 17 | — 42 | — 38 | — 18 |
| South-West Bengal ... | + 39  | — 18 | + 4  | — 24 | — 12 | — 26 | — 9  |
| East Bengal ...       | — 29  | — 22 | — 20 | — 28 | — 42 | — 20 | — 26 |
| North Bengal ...      | + 58  | + 39 | — 37 | — 3  | — 12 | — 23 | + 4  |
| North Behar ...       | + 78  | + 35 | — 41 | + 11 | — 25 | + 31 | 0    |
| South Behar ...       | + 323 | — 30 | — 18 | — 18 | — 21 | — 6  | — 3  |
| Chutia Nagpur . . .   | + 190 | — 27 | — 7  | — 10 | — 29 | — 55 | — 9  |

7. Finally the rainfall of the whole Province from May to October has averaged 51.97 inches, while the normal fall would be 57.37 inches, or the actual fall has been 5.40 inches less than the normal. Expressed as a percentage, the actual rainfall in Bengal for this period has been 9 per cent. in defect of the normal.

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METEOROLOGICAL OFFICE, BENGAL,

*The 20th November 1887.*

TABLE III.

*The variation of the average district Monthly Rainfall expressed as a percentage of the normal rainfall for the months May to October 1887.*

| DIVISION.          | DISTRICT.                                     | May. | June | July. | August. | September. | October. | TOTAL. |
|--------------------|---|------|------|-------|---------|------------|----------|--------|
| ORISSA             | Pooree ...                                    | +78  | -56  | -13   | -18     | -36        | -10      | -20    |
|                    | Cuttack ...                                   | +81  | -5   | -1    | -14     | -34        | -61      | -12    |
|                    | Balasore ...                                  | +93  | -46  | -9    | -21     | -48        | -42      | -20    |
| SOUTH-WEST BENGAL. | South Midnapore and South-West 24-Pergunnahs. | -19  | -27  | +18   | -24     | +2         | -32      | -11    |
|                    | Midnapore ...                                 | +14  | -13  | +41   | -22     | -18        | -48      | -3     |
|                    | 24-Pergunnahs ...                             | +13  | -38  | +6    | -23     | -18        | +3       | -11    |
|                    | Hooghly and Howrah ...                        | +3   | -31  | +2    | -44     | -37        | -56      | -26    |
|                    | Bankoora ...                                  | +27  | -15  | +10   | +19     | -40        | -75      | -5     |
|                    | Beerbhoom ...                                 | +162 | -27  | +1    | -18     | -25        | -24      | -5     |
|                    | Burdwan ...                                   | +105 | -29  | +16   | -29     | -14        | -57      | -6     |
|                    | Nuddea ...                                    | +41  | -32  | -21   | -31     | +11        | -15      | -12    |
|                    | Moorsshedabad ...                             | +128 | +30  | +19   | -9      | +6         | -17      | +19    |
| EAST BENGAL        | Khoolna and Jessore                           | -15  | -21  | -24   | -33     | -6         | +5       | -19    |
|                    | Chittagong ...                                | -16  | -40  | +2    | -5      | -38        | -29      | -19    |
|                    | Chittagong Hill Tracts                        | -21  | -27  | -20   | -23     | -15        | -63      | -25    |
|                    | Backergunge ...                               | +6   | -52  | -3    | -34     | -6         | -24      | -22    |
|                    | Noakholly ...                                 | -15  | -42  | -27   | -7      | -48        | -28      | -19    |
|                    | Furreedpore ...                               | -4   | -11  | -39   | -39     | -57        | -3       | -33    |
|                    | Dacca ...                                     | -39  | -25  | -18   | -36     | -59        | -7       | -32    |
|                    | Tipperah ...                                  | -35  | -22  | -45   | -24     | -68        | -28      | -36    |
|                    | Mymensingh ...                                | -36  | +37  | -24   | -33     | -28        | -5       | -12    |
| NORTH BENGAL.      | Pubna ...                                     | -28  | +14  | -21   | -46     | -15        | -9       | -18    |
|                    | Bogra ...                                     | +12  | +51  | -27   | -40     | +8         | -5       | -0     |
|                    | Rajshahye ...                                 | +28  | -13  | -29   | -6      | -8         | -25      | -11    |
|                    | Maldah ...                                    | +134 | +7   | -37   | -50     | -16        | -30      | -12    |
|                    | Dinapore ...                                  | +139 | +34  | -22   | +8      | -17        | +19      | +18    |
|                    | Rungpore ...                                  | +46  | +46  | -47   | +3      | -13        | -19      | +8     |
|                    | Julpigoree and Cooch Behar.                   | +38  | +30  | -48   | +28     | -11        | -54      | +4     |
|                    | Darjeeling Hill ...                           | +72  | -12  | -20   | +1      | -8         | -25      | -3     |
| NORTH BEHAR        | Purneah and North Bhagulpore.                 | +231 | +18  | -52   | +16     | -20        | +2       | +10    |
|                    | Durbhunga ...                                 | +156 | +56  | -24   | +32     | -46        | +12      | +12    |
|                    | Mozufferpore ...                              | +181 | +55  | -35   | +19     | -34        | +41      | +11    |
|                    | Chumparun ...                                 | 0    | +52  | -39   | -22     | +14        | +101     | +4     |
|                    | Sarun ...                                     | +114 | -2   | -29   | -10     | -21        | +31      | -6     |
| * SOUTH BEHAR      | Shahabad ...                                  | +345 | -35  | -39   | -1      | -32        | +51      | -7     |
|                    | Gya ...                                       | +217 | -17  | -14   | -18     | -17        | +5       | -5     |
|                    | Patna ...                                     | +287 | -17  | -26   | -33     | -31        | -16      | -11    |
|                    | Monghyr and South Bhagulpore.                 | +260 | -2   | -10   | -16     | -11        | -28      | +3     |
|                    | Sonthal Pergunnahs...                         | +221 | -29  | 0     | -10     | -23        | -22      | +4     |
| CHUTIA NAGPUR.     | Hazaribagh ...                                | +132 | -30  | 0     | -5      | -24        | -57      | -7     |
|                    | Lohardugga and Manbhoom.                      | +235 | -17  | -3    | -5      | -14        | -46      | +0     |
|                    | Singbhoom ...                                 | +195 | -31  | -2    | +4      | -28        | -89      | +0     |

TABLE IV.

*Monthly Rainfall of the Sub-divisional Rainfall-recording Stations in the Province of Bengal for the months of May to October 1887.*

| METEOROLOGICAL DIVISION. | District.      | Station.            | May.  | June. | July. | August. | September. | October. | TOTAL. |
|--------------------------|----------------|---------------------|-------|-------|-------|---------|------------|----------|--------|
| ORISSA                   | Pooree         | Pooree ...          | 2.45  | 1.81  | 6.30  | 8.07    | 7.48       | 6.20     | 32.31  |
|                          |                | Khurdah ...         | 2.82  | 4.88  | 13.30 | 7.93    | 5.14       | 5.16     | 39.23  |
|                          |                | Banpur ...          | 2.91  | 6.05  | 10.04 | 12.80   | 3.13       | 4.92     | 39.85  |
|                          |                | False Point ...     | 13.34 | 2.19  | 11.97 | 10.82   | 10.59      | 12.51    | 61.42  |
|                          |                | Gap ...             | 5.20  | 3.38  | 4.51  | 5.06    | 8.03       | 2.89     | 29.07  |
|                          |                | Pipli ...           | ?     | ?     | ?     | 12.05   | 9.10       | 2.25     | 23.40? |
|                          | Cuttack        | Jagatsingapore ...  | 6.73  | 3.09  | 7.89  | 7.08    | 6.99       | 1.04     | 32.82  |
|                          |                | Banki ...           | 2.01  | 8.55  | 12.33 | 10.57   | 5.21       | 3.65     | 42.32  |
|                          |                | Cuttack ...         | 4.38  | 15.23 | 11.70 | 10.56   | 7.14       | 0.98     | 49.99  |
|                          |                | Kendrapara ...      | 7.03  | 11.15 | 15.38 | 8.46    | 8.77       | 3.02     | 53.81  |
|                          |                | Jajpore ...         | 10.48 | 8.00  | 14.00 | 8.51    | 5.19       | 2.47     | 48.65  |
|                          |                | Dharmasalla ...     | 6.93  | 7.22  | 11.45 | 4.81    | 11.64      | 2.11     | 44.16  |
|                          |                | Salipore ...        | 8.82  | 12.05 | 12.11 | 7.79    | 11.47      | 3.10     | 50.34  |
|                          | Balasore       | Chandbali ...       | 13.55 | 1.35  | 7.58  | 5.96    | 5.35       | 5.95     | 39.74  |
|                          |                | Bhuddruak ...       | 11.33 | 4.73  | 10.85 | 12.00   | 4.54       | 1.78     | 45.23  |
|                          |                | Sorah ...           | 8.94  | 6.82  | 9.71  | 8.98    | 5.31       | 0.98     | 40.74  |
|                          |                | Balasore ...        | 11.85 | 4.98  | 12.89 | 10.30   | 5.43       | 4.40     | 49.85  |
|                          |                | Jellasure ...       | 2.70  | 4.57  | 15.04 | 7.70    | 6.47       | 2.96     | 39.44  |
|                          |                | Baripodah ...       | 6.02  | 5.68  | 13.81 | 8.72    | 8.71       | 2.73     | 45.67  |
|                          | Midnapore      | Contai ...          | 3.78  | 7.51  | 13.64 | 10.98   | 9.43       | 3.87     | 49.21  |
|                          |                | Saugor Island ...   | 3.91  | 8.68  | 19.91 | 11.97   | 13.43      | 9.60     | 67.50  |
|                          |                | Tumlook ...         | 4.40  | 9.50  | 20.50 | 9.10    | 7.40       | 0.70     | 51.60  |
|                          |                | Midnapore ...       | 6.69  | 5.99  | 16.30 | 11.13   | 5.04       | 3.19     | 48.34  |
|                          |                | Ghatal ...          | 6.70  | 10.06 | 16.93 | 12.40   | 8.48       | 2.80     | 57.37  |
|                          |                | Derog ...           | 4.93  | 5.26  | 20.57 | 9.85    | 10.60      | 2.67     | 53.97  |
|                          |                | Heria ...           | 4.00  | 8.54  | 13.87 | 7.83    | 4.23       | 2.59     | 41.06  |
|                          |                | Bhagwanpore ...     | 2.80  | 6.35  | 16.64 | 6.56    | 8.17       | 1.99     | 42.51  |
|                          |                | Garbeta ...         | 4.82  | 3.28  | 13.64 | 17.03   | 8.75       | 1.33     | 48.85  |
|                          |                | Diamond Harbour ... | 3.85  | 6.94  | 20.21 | 11.09   | 13.49      | 2.23     | 57.81  |
| SOUTH-WEST BENGAL.       | 24-Pergunnahs. | Canning Town ...    | 6.43  | 9.79  | 11.73 | 10.83   | 8.09       | 3.90     | 50.77  |
|                          |                | Alipore Jail ...    | 6.49  | 6.76  | 18.01 | 11.11   | 9.52       | 2.81     | 54.70  |
|                          |                | Barrackpore ...     | 7.44  | 6.07  | 12.95 | 9.16    | 6.31       | 2.49     | 44.42  |
|                          |                | Dum-Dum ...         | 9.51  | 7.66  | 10.09 | 8.40    | 6.06       | 5.01     | 46.73  |
|                          |                | Baraset ...         | 5.12  | 3.71  | 11.54 | 8.17    | 6.80       | 4.63     | 39.97  |
|                          |                | Buseerhat ...       | 4.58  | 11.46 | 12.19 | 11.71   | 7.35       | 5.74     | 53.03  |
|                          |                | Howrah ...          | 7.71  | 4.81  | 13.96 | 9.14    | 5.11       | 2.21     | 42.94  |
|                          | Howrah         | Mohesreka ...       | 3.23  | 6.70  | 16.83 | 5.92    | 6.69       | 0.83     | 40.80  |
|                          |                | (Oolberiah).        |       |       |       |         |            |          |        |
|                          |                |                     |       |       |       |         |            |          |        |
|                          | Hooghly        | Serampore ...       | 6.53  | 4.46  | 12.09 | 7.62    | 5.36       | 2.20     | 38.26  |
|                          |                | Hooghly ...         | 4.28  | 13.75 | 11.84 | 5.95    | 3.89       | 2.34     | 42.05  |
|                          |                | Jehanabad ...       | 5.81  | 4.36  | 9.61  | 9.06    | 5.62       | 1.43     | 35.89  |
|                          | Burdwan        | Culna ...           | 7.23  | 5.08  | 11.00 | 5.98    | 6.76       | 1.66     | 37.71  |
|                          |                | Burdwan ...         | 10.04 | 2.95  | 12.22 | 11.49   | 8.94       | 1.55     | 47.19  |
|                          |                | Cutwa ...           | 14.12 | 11.80 | 15.18 | 8.04    | 4.25       | 2.09     | 55.48  |
|                          |                | Raneegunge ...      | 6.99  | 6.63  | 12.80 | 14.22   | 5.67       | 1.05     | 47.36  |
|                          |                | Mankur ...          | 5.50  | 7.18  | 11.01 | 12.77   | 4.63       | 3.15     | 44.24  |
|                          | Bankoora       | Bankoora ...        | 4.27  | 6.28  | 13.12 | 15.57   | 3.54       | 1.40     | 44.18  |
|                          |                | Bishenpore ...      | 4.43  | 7.78  | 14.92 | 19.72   | 7.72       | 1.35     | 55.92  |
|                          |                | Maliara ...         | 7.14  | 5.68  | 18.04 | 14.65   | 3.77       | 0.94     | 50.22  |
|                          |                | Khatra ...          | 3.76  | 13.40 | 13.13 | 15.21   | 5.71       | 1.45     | 52.66  |
|                          |                | Indas ...           | 6.77  | 4.14  | 7.26  | 11.52   | 11.89      | 1.45     | 43.03  |
|                          |                | Kotalpore ...       | 4.06  | 6.19  | 8.59  | 15.66   | 7.36       | 2.94     | 44.80  |

| METEOROLOGICAL<br>DIVISION.           | District.                  | Station.                       | May.  | June. | July. | August. | September. | October. | TOTAL. |
|---------------------------------------|----------------------------|--------------------------------|-------|-------|-------|---------|------------|----------|--------|
| SOUTH-<br>WEST<br>BENGAL—<br>concl'd. | Bankoora,—<br>concluded.   | Anda ...                       | 1.45  | 3.10  | 12.35 | 14.87   | 6.82       | 0.45     | 39.04  |
|                                       |                            | Gangajalghati ...              | 5.90  | 3.83  | 15.52 | 19.68   | 4.26       | 0.27     | 49.46  |
|                                       |                            | Raipore ...                    | 7.42  | 7.15  | 9.81  | 21.27   | 5.39       | 3.12     | 54.16  |
|                                       |                            | Sonamukhi ...                  | 3.89  | 4.90  | 11.22 | 8.98    | 4.93       | 1.69     | 35.61  |
|                                       | Beerbhoom...               | Bh. Soory ...                  | 10.68 | 7.17  | 12.28 | 9.63    | 8.32       | 3.30     | 51.38  |
|                                       |                            | Hotampore ...                  | 6.46  | 5.79  | 16.36 | 11.83   | 7.97       | 3.63     | 52.04  |
|                                       |                            | Rampore Haut...<br>Bolpore ... | 10.57 | 9.32  | 10.68 | 6.72    | 7.35       | 2.54     | 47.18  |
|                                       |                            | ...                            | 4.67  | 6.43  | 15.33 | 6.71    | 4.31       | 5.46     | 42.91  |
|                                       | Nuddea ...                 | Ranaghat ...                   | 5.89  | 6.83  | 8.09  | 7.45    | 10.45      | 2.10     | 40.81  |
|                                       |                            | Kishnaghur ...                 | 10.83 | 8.53  | 8.07  | 4.60    | 9.38       | 4.75     | 46.16  |
|                                       |                            | Chooandanga ...                | 7.08  | 5.32  | 9.44  | 8.00    | 9.47       | 4.41     | 43.72  |
|                                       |                            | Meherpore ...                  | 15.21 | 5.97  | 7.53  | 12.42   | 8.39       | 2.62     | 52.14  |
|                                       |                            | Kooshtea ...                   | 7.46  | 7.04  | 6.79  | 8.62    | 10.05      | 4.32     | 44.28  |
|                                       | Khoolna ...                | Satkhiria ...                  | 7.04  | 7.39  | 12.78 | 12.26   | 6.00       | 5.90     | 51.37  |
|                                       |                            | Bagirhat ...                   | 7.98  | 10.79 | 14.68 | 8.55    | 6.83       | 6.59     | 55.47  |
|                                       |                            | Khoolna ...                    | 8.67  | 13.46 | 7.69  | 7.50    | 9.63       | 3.29     | 50.29  |
|                                       | Jessore ...                | Narail ...                     | 3.59  | 6.00  | 4.99  | 6.14    | 3.89       | 1.56     | 26.17  |
|                                       |                            | Jessore ...                    | 8.24  | 9.78  | 6.16  | 7.27    | 11.34      | 2.93     | 45.72  |
|                                       |                            | Jhenidah ...                   | 4.96  | 10.36 | 6.57  | 7.01    | 6.74       | 7.56     | 43.20  |
|                                       |                            | Magooria ...                   | 3.99  | 10.32 | 6.16  | 4.79    | 3.78       | 3.86     | 32.90  |
|                                       |                            | Bongong ...                    | 2.19  | 9.54  | 8.89  | 10.24   | 18.78      | 6.41     | 56.05  |
|                                       | Moorshed-<br>abad.         | Kandi ...                      | 7.98  | 13.18 | 11.08 | 7.14    | 6.54       | 2.75     | 48.67  |
|                                       |                            | Berhampore ...                 | 9.23  | 8.95  | 12.40 | 10.34   | 9.60       | 7.23     | 57.75  |
|                                       |                            | Lalbagh ...                    | 12.20 | 9.44  | 14.12 | 14.42   | 12.13      | 7.57     | 69.88  |
|                                       |                            | Amizgunge ...                  | 10.94 | 10.32 | 14.74 | 10.70   | 12.37      | 2.36     | 61.43  |
|                                       |                            | Jungipore ...                  | 13.30 | 11.70 | 13.74 | 11.81   | 12.35      | 0.70     | 63.60  |
|                                       |                            | Lalgola ...                    | 13.77 | 18.59 | 11.57 | 9.34    | 11.17      | 1.37     | 66.01  |
|                                       |                            | Akhrigunge ...                 | 10.72 | 12.08 | 11.34 | 8.38    | 6.66       | 1.72     | 50.90  |
|                                       | Chittagong...              | Cox's Bazar ...                | 7.93  | 19.20 | 39.18 | 28.01   | 10.94      | 5.50     | 110.76 |
|                                       |                            | Chittagong ...                 | 8.33  | 15.69 | 23.15 | 17.58   | 6.85       | 4.11     | 75.71  |
|                                       |                            | Kutubdia ...                   | 3.76  | 14.47 | 21.99 | 18.94   | 6.65       | 3.00     | 68.81  |
|                                       |                            | Satkanya ...                   | 6.36  | 12.88 | 21.27 | 13.06   | 8.19       | 3.06     | 64.82  |
|                                       | Chittagong<br>Hill Tracts. | Rangamati ...                  | 9.32  | 16.04 | 16.79 | 12.91   | 9.29       | 1.88     | 66.23  |
|                                       |                            | Ruma ...                       | 5.68  | 13.28 | 11.32 | 12.03   | 12.52      | 3.31     | 58.14  |
|                                       | Backer-<br>gunge.          | Patuakhally ...                | 6.94  | 9.80  | 19.25 | 13.27   | 16.80      | 2.41     | 68.47  |
|                                       |                            | Perozepore ...                 | 9.81  | 9.26  | 19.86 | 9.97    | 7.26       | 4.91     | 61.07  |
|                                       |                            | Burrisal ...                   | 9.10  | 9.04  | 14.95 | 8.07    | 11.76      | 6.04     | 58.96  |
|                                       |                            | Bhola ...                      | 6.46  | 9.27  | 17.15 | 10.44   | 9.64       | 3.22     | 56.18  |
|                                       |                            | Gournaddi ...                  | 8.06  | 10.52 | 10.66 | 9.21    | 4.69       | 3.52     | 46.66  |
|                                       |                            | Bauphal ...                    | 5.67  | 10.53 | 18.76 | 15.66   | 8.69       | 3.94     | 63.25  |
| EAST<br>BENGAL.                       | Noakholly...               | Noakholly ...                  | 8.55  | 12.96 | 20.20 | 22.69   | 8.50       | 2.38     | 75.28  |
|                                       |                            | Fenny ...                      | 8.77  | 17.32 | 11.57 | 21.16   | 8.59       | 7.17     | 74.58  |
|                                       |                            | Harishpore ...                 | 16.28 | 13.51 | 20.52 | 14.94   | 10.02      | 10.44    | 85.71  |
|                                       |                            | Ramganj ...                    | 8.12  | 14.50 | 17.94 | 10.82   | 7.95       | 6.25     | 65.58  |
|                                       | Furreedpore                | Madaripore ...                 | 5.10  | 12.87 | 6.13  | 4.96    | 5.38       | 3.11     | 37.55  |
|                                       |                            | Furreedpore ...                | 5.89  | 10.26 | 8.97  | 8.00    | 4.07       | 4.93     | 42.12  |
|                                       |                            | Goulundo ...                   | 4.00  | 10.33 | 7.39  | 8.92    | 1.94       | 5.04     | 37.62  |
|                                       | Dacca ...                  | Munshigunge ...                | 6.25  | 12.95 | 9.87  | 6.52    | 3.25       | 4.21     | 43.05  |
|                                       |                            | Dacca ...                      | 6.36  | 8.40  | 14.74 | 9.42    | 5.49       | 4.36     | 48.77  |
|                                       |                            | Naraingunge ...                | 4.62  | 10.41 | 11.53 | 7.20    | 4.38       | 5.84     | 43.98  |
|                                       |                            | Manickgunge ...                | 4.69  | 7.82  | 8.57  | 8.34    | 3.93       | 3.67     | 37.32  |
|                                       |                            | Joydebpore ...                 | 5.96  | 14.78 | 14.62 | 12.49   | 2.46       | 4.42     | 54.73  |
|                                       | Hill Tipperah...           | Agartola ...                   | 8.26  | 13.26 | 8.16  | 11.84   | 4.54       | 3.95     | 49.11  |

| METEOROLOGICAL DIVISION. | District.        | Station.           | May.  | June. | July. | August. | September. | October. | TOTAL. |
|--------------------------|------------------|--------------------|-------|-------|-------|---------|------------|----------|--------|
| EAST<br>BENGAL.          | Tipperah ...     | Gomilla ...        | 4.55  | 15.68 | 7.70  | 14.41   | 3.78       | 5.09     | 51.21  |
|                          |                  | Chandpore ...      | 6.20  | 8.93  | 10.36 | 9.95    | 2.71       | 4.22     | 42.37  |
|                          |                  | Brahmunheria ...   | 8.21  | 14.47 | 4.82  | 11.94   | 3.52       | 2.77     | 45.73  |
|                          |                  | Ramchandrapore ... | 5.85  | 12.56 | 8.77  | 6.24    | 4.57       | 2.60     | 40.59  |
|                          |                  | Nasirnagar ...     | 4.89  | 16.76 | 6.26  | 4.84    | 3.93       | 3.90     | 40.58  |
|                          |                  | Danakandi ...      | 8.02  | 10.45 | 10.34 | 6.89    | 3.78       | 3.08     | 42.56  |
|                          |                  | Kasba ...          | 3.96  | 15.03 | 6.88  | 12.82   | 3.70       | 2.69     | 45.08  |
|                          |                  | Laksham ...        | 4.40  | 6.86  | 2.06  | 9.08    | 3.57       | 6.22     | 32.19  |
|                          | Mymensingh ...   | Kishoregungo ...   | 5.27  | 24.73 | 9.61  | 8.54    | 6.82       | 4.11     | 59.08  |
|                          |                  | Atia (Tangail) ... | 3.19  | 15.14 | 8.34  | 8.13    | 3.01       | 4.27     | 42.08  |
|                          |                  | Mymensingh ...     | 8.39  | 28.61 | 10.89 | 8.09    | 11.41      | 6.14     | 73.53  |
|                          |                  | Jamalpore ...      | 7.84  | 23.25 | 8.37  | 10.33   | 10.93      | 4.94     | 65.66  |
|                          |                  | Notrokona ...      | 5.78  | 23.12 | 11.79 | 11.55   | 14.22      | 6.49     | 77.95  |
|                          |                  | Subarnakhally ...  | 5.40  | 17.56 | 8.60  | 5.96    | 10.73      | 4.86     | 53.11  |
|                          |                  | Durgapore ...      | 12.00 | 43.86 | 21.20 | 20.48   | 21.50      | 3.90     | 122.94 |
|                          |                  | Deuaganj ...       | 11.47 | 34.14 | 5.50  | 8.64    | 16.61      | 5.97     | 81.33  |
|                          | Pubna ...        | Pubna ...          | 3.03  | 5.42  | 10.91 | 6.82    | 9.08       | 3.28     | 38.54  |
|                          |                  | Serajgunge ...     | 7.45  | 20.95 | 6.12  | 6.07    | 8.89       | 5.08     | 54.56  |
|                          | Bogra ...        | Sherpore ...       | 6.66  | 17.32 | 5.78  | 3.95    | 11.41      | 3.81     | 48.93  |
|                          |                  | Nowkhilla ...      | 5.62  | 21.22 | 9.07  | 6.27    | 11.39      | 6.14     | 59.71  |
|                          |                  | Bogra ...          | 10.75 | 24.75 | 12.34 | 5.51    | 10.99      | 3.01     | 67.35  |
|                          |                  | Panchbibi ...      | 13.01 | 15.40 | 10.78 | 12.40   | 12.11      | 4.31     | 68.01  |
|                          | Rajshahye ...    | Beaulah ...        | 8.94  | 9.75  | 8.68  | 8.36    | 11.95      | 4.92     | 52.60  |
|                          |                  | Nattore ...        | 6.09  | 8.47  | 8.10  | 13.14   | 8.62       | 2.12     | 47.44  |
|                          |                  | Nongnon ...        | 10.24 | 16.60 | 7.19  | 12.52   | 13.32      | 4.07     | 63.94  |
|                          |                  | Lalpure ...        | 7.69  | 3.36  | 6.26  | 5.48    | 8.66       | 3.28     | 34.73  |
|                          |                  | Manda ...          | 10.10 | 14.71 | 12.63 | 13.64   | 12.52      | 1.85     | 65.45  |
|                          | Maldah ...       | Maldah ...         | 12.57 | 11.37 | 8.06  | 4.76    | 12.53      | 1.53     | 50.82  |
|                          |                  | Chanchal ...       | 7.98  | 12.95 | 6.50  | 7.24    | 5.66       | 3.65     | 43.98  |
|                          |                  | Gujol ...          | 10.92 | 15.20 | 8.00  | 8.90    | 7.59       | 2.30     | 52.91  |
|                          |                  | Sibganj ...        | 11.55 | 10.26 | 9.92  | 9.40    | 9.68       | 3.32     | 54.13  |
| NORTH<br>BENGAL.         | Dinapore ...     | Mohadebporo ...    | 15.77 | 12.35 | 10.82 | 10.08   | 12.17      | 3.13     | 64.32  |
|                          |                  | Churamon ...       | 16.07 | 20.23 | 6.76  | 7.29    | 6.19       | 3.91     | 60.15  |
|                          |                  | Raigunge ...       | 11.91 | 21.23 | 12.45 | 14.36   | 7.11       | 6.91     | 73.97  |
|                          |                  | Dinapore ...       | 20.32 | 24.38 | 8.61  | 21.78   | 11.16      | 4.94     | 91.19  |
|                          |                  | Baloorghat ...     | 12.32 | 16.01 | 8.26  | 10.23   | 11.42      | 3.21     | 61.45  |
|                          | Rungpore ...     | Bhawanigunge ...   | 13.16 | 26.43 | 5.81  | 4.85    | 13.85      | 5.94     | 70.04  |
|                          |                  | (Gyabanda) ...     |       |       |       |         |            |          |        |
|                          |                  | Rungpore ...       | 16.02 | 27.93 | 7.68  | 17.43   | 10.76      | 3.70     | 83.52  |
|                          |                  | Kurigram ...       | 13.61 | 31.91 | 5.68  | 16.36   | 10.39      | 1.49     | 79.44  |
|                          |                  | Bagdogra ...       | 23.27 | 40.90 | 10.10 | 12.91   | 11.61      | 3.94     | 102.73 |
|                          |                  | (Nilphamari) ...   |       |       |       |         |            |          |        |
|                          |                  | Ulipore ...        | 10.55 | 23.29 | 7.71  | 6.76    | 13.96      | 2.74     | 65.01  |
|                          | Julpigoree ...   | Julpigoree ...     | 22.79 | 37.42 | 12.94 | 31.03   | 21.11      | 4.09     | 129.38 |
|                          |                  | Alipore Doar ...   | 24.87 | 47.88 | 14.40 | 27.10   | 28.57      | 3.58     | 146.40 |
|                          |                  | Fallacotta ...     | 15.74 | 44.66 | 14.89 | 38.79   | 30.38      | 1.68     | 146.14 |
|                          |                  | Debiganj ...       | 20.24 | 32.20 | 5.10  | 21.72   | 18.57      | 3.49     | 101.32 |
|                          | Goock Behar ...  | Dinhatta ...       | 19.97 | 37.80 | 7.55  | 24.24   | 15.95      | 1.40     | 106.91 |
|                          |                  | Cooch Behar ...    | 17.64 | 54.25 | 13.84 | 21.31   | 17.52      | 2.48     | 127.04 |
|                          |                  | Mickligunge ...    | 19.50 | 33.01 | 8.17  | 35.36   | 28.58      | 1.78     | 126.40 |
|                          |                  | Matabhanga ...     | 14.54 | 42.19 | 13.15 | 27.98   | 19.40      | 2.30     | 119.56 |
|                          | Darjeeling Hill. | Buxa ...           | 28.80 | 26.11 | 33.87 | 50.72   | 29.66      | 5.28     | 174.44 |
|                          |                  | Siliguri ...       | 20.03 | 32.42 | 15.93 | 20.35   | 16.37      | 7.89     | 112.99 |
|                          |                  | Darjeeling ...     | 19.64 | 22.27 | 28.23 | 28.90   | 13.84      | 3.45     | 116.33 |
|                          |                  | Kalimpong ...      | 9.82  | 18.60 | 21.08 | 19.07   | 9.45       | 8.27     | 81.29  |

## PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

|            |               | QUANTITIES PER RUPEE IS |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                    |                        |                                    |                 |                        |                                    |
|------------|---------------|-------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|------------------------------------|------------------------|------------------------------------|-----------------|------------------------|------------------------------------|
|            |               | WHEAT.                  |                        |                                    | BAJUNT.         |                        |                                    | RICE, BEST SORT. |                        |                                    | RICE, COMMON.   |                        |                                    | JOWAR or CHOLUR (Sorghum Vulgare). |                        |                                    |                 |                        |                                    |
| DISTRICTS. |               | Present return.         | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.  | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. | Present return.                    | Next preceding return. | Corresponding return of last year. | Present return. | Next preceding return. | Corresponding return of last year. |
| Number     |               | BENGAL.                 |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                    |                        |                                    |                 |                        |                                    |
|            |               | Western Districts.      |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                    |                        |                                    |                 |                        |                                    |
|            |               | S. Ch.                  | S. Ch.                 | S. Ch.                             | S. Ch.          | S. Ch.                 | S. Ch.                             | S. Ch.           | S. Ch.                 | S. Ch.                             | S. Ch.          | S. Ch.                 | S. Ch.                             | S. Ch.                             | S. Ch.                 | S. Ch.                             | S. Ch.          | S. Ch.                 | S. Ch.                             |
| 1          | Burdwan       | 15 0                    | 16 2                   | 14 4                               | 30 0            | ...                    | ...                                | 15 0             | 16 2                   | 20 8                               | 22 8            | 22 14                  | 26 10                              | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 2          | Bankura       | 15 0                    | 15 0                   | 18 8                               | 19 0            | 20 0                   | 24 0                               | 17 8             | 17 0                   | 22 0                               | 19 6            | 20 5                   | 26 4                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 3          | Paarbhoom     | 15 12                   | 16 8                   | 20 0                               | ...             | ...                    | ...                                | 16 8             | 16 8                   | 18 0                               | 21 12           | 22 0                   | 25 8                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 4          | Midnapore     | 15 0                    | 16 0                   | 17 0                               | ...             | ...                    | ...                                | 18 0             | 18 0                   | 17 0                               | 23 0            | 22 0                   | 25 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 5          | Hooghly       | 14 0                    | 14 0                   | 16 0                               | ...             | ...                    | ...                                | 10 0             | 10 0                   | 10 0                               | 16 8            | 15 8                   | 17 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
|            | Howrah        | 14 0                    | Nil                    | 15 4                               | ...             | ...                    | ...                                | 13 0             | 13 4                   | 13 4                               | 18 0            | 18 0                   | 18 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
|            |               | Central Districts.      |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                    |                        |                                    |                 |                        |                                    |
|            | Calcutta      | 14 0                    | 14 2                   | 16 2                               | 20 0            | 20 4                   | 21 4                               | 8 14             | 8 13                   | 9 8                                | 16 8            | 16 8                   | 16 9                               | 19 12                              | ...                    | ...                                | ...             | ...                    | ...                                |
| 6          | 24-Pergunnahs | 14 0                    | 14 0                   | 15 0                               | 22 8            | 26 8                   | 21 4                               | 8 0              | 8 0                    | 8 0                                | 17 8            | 17 8                   | 16 13                              | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 7          | Nudda         | 17 4                    | 16 10                  | 16 0                               | 36 0            | 32 0                   | 32 0                               | 14 8             | 13 5                   | 15 0                               | 19 6            | 18 12                  | 18 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 8          | Khacina       | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | 16 0             | 18 0                   | 17 0                               | 18 0            | 21 0                   | 21 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 9          | Jessore       | 12 0                    | 11 8                   | 16 0                               | ...             | ...                    | ...                                | 14 0             | 16 0                   | 14 0                               | 22 12           | 23 0                   | 21 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 10         | Moorshedabad  | 17 0                    | 17 0                   | 17 0                               | ...             | ...                    | ...                                | 14 0             | 14 0                   | 13 5                               | 23 0            | 23 0                   | 23 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 11         | Binagore      | 16 8                    | 16 0                   | 11 0                               | 22 8            | 25 0                   | 20 0                               | 16 2             | 17 14                  | 21 9                               | 24 0            | 21 6                   | 27 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 12         | Rajshahye     | 18 12                   | 18 0                   | 20 0                               | 45 0            | 45 0                   | 44 0                               | 16 2             | 16 8                   | 15 12                              | 22 8            | 24 0                   | 21 12                              | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 13         | Rangpore      | 17 12                   | 17 12                  | 18 0                               | ...             | ...                    | ...                                | 14 4             | 14 4                   | 16 0                               | 21 0            | 20 0                   | 17 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 14         | Bogra         | 15 0                    | 12 0                   | 16 8                               | ...             | ...                    | ...                                | 15 0             | 15 0                   | 15 0                               | 26 4            | 26 4                   | 24 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 15         | Pabna         | 18 0                    | 18 0                   | 21 0                               | ...             | ...                    | ...                                | 8 0              | 8 0                    | 8 0                                | 22 8            | 23 8                   | 23 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 16         | Darjeeling    | 10 0                    | 10 0                   | 10 0                               | 11 0            | 12 0                   | 10 0                               | 5 0              | 5 0                    | 5 0                                | 18 0            | 12 0                   | 16 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 17         | Jalpigore     | 12 0                    | 12 0                   | 13 0                               | 16 0            | 16 0                   | 20 0                               | 13 0             | 13 0                   | 13 0                               | 21 0            | 20 0                   | 26 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
|            |               | Eastern Districts.      |                        |                                    |                 |                        |                                    |                  |                        |                                    |                 |                        |                                    |                                    |                        |                                    |                 |                        |                                    |
| 18         | Dum           | 16 0                    | 16 0                   | 16 0                               | 26 0            | 26 0                   | 26 0                               | 18 0             | 17 0                   | 14 0                               | 20 0            | 20 0                   | 17 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 19         | Faridpore     | 14 0                    | 14 0                   | 20 0                               | 40 0            | 40 0                   | 26 0                               | 18 0             | 18 0                   | 16 0                               | 20 0            | 20 0                   | 22 0                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 20         | Bachangunge   | ...                     | ...                    | ...                                | ...             | ...                    | ...                                | ...              | ...                    | ...                                | ...             | ...                    | ...                                | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |
| 21         | Nymatong      | 12 0                    | 12 0                   | 12 0                               | ...             | ...                    | ...                                | 12 8             | 13 0                   | 10 8                               | 19 0            | 18 8                   | 15 8                               | ...                                | ...                    | ...                                | ...             | ...                    | ...                                |

\* Return not received.

By the divisions retail prices of salt per rupee were:—Cuttack 12 seers, Cutwa 13 seers, and Bachangunge 12 seers.  
At Rampore H.M. retail price is 12 1/2 seers per rupee.











